Overseas Production Accelerates

Overseas production of electronic machinery is increasing. In a recent survey of electronic machinery companies, nearly 90% of the respondents said they have transferred production to East Asian countries including China, member states of the Association of Southeast Asian Nations (ASEAN) and newly industrializing economies (NIES) in the past five years. The destinations of production shifts differ slightly according to items. The production of personal computers and peripheral equipment was moved solely to East Asia. Meanwhile, some manufacturers of telecommunications equipment, including cellular phones, have set up production bases in North America and Europe.

Fig. Production Shifts in the Past 5 Years

Note: Personal computers and peripheral equipment include: desktop PCs, notebook PCs, mainframes, mid-range computers, magnetic disk drives, optical disk drives, inkjet printers, laser printers, cathode-ray tube (CRT) monitors, liquid crystal display (LCD) monitors, automatic teller machines (ATMs), cash dispensers (CDs) and other financial terminals. Telecommunications equipment include: telephones, cellular phones and facsimile machines. Copiers include: electrostatic copiers, digital copiers and color copiers.


Global Strategies for Advanced Production Processes

It has been regarded as a typical pattern of overseas production that manufacturers shift the labor-intensive final-assembly process to countries where labor costs are
lower. For instance, lots of U.S. manufacturers produce highly technologically advanced components in the U.S. They export the components to Mexico, where they are assembled and then re-imported as completed products to the U.S.

Will this model of a vertical in-house division of labor apply to the strategies of Japanese corporations in transferring production to East Asia? To find an answer, we looked into the status of production shifts by processes through a questionnaire. We asked respondents about such details of their production shifts as: how domestic and overseas plants share front-end and back-end processing; and whether they turn out products in-house or commission production to other firms. The replies indicated that the global strategies of Japanese corporations are more complicated than expected. Respondents seem to have been locating their production bases, striding national boundaries, in an optimum arrangement for each process, by making the most of differences in degree of economic development between regions in East Asia; that is, tactfully incorporating different personnel costs and technological manufacturing capabilities of East Asian countries/regions. Diversified electronic equipment markets, formed due to differences in economic levels of countries and regions within East Asia, also appear to be working favorably for Japanese corporations.

Overseas Shift Boosts Productivity of Corporations

The hollowing-out of domestic industries, resulting from the transfer of production out of the country, is often emphasized. Actually, corporations going offshore have changed the domestic production structure considerably and have had a serious impact on employment. However, more attention should be paid to the fact that Japanese corporations have pushed forward with dynamic global strategies and realized high productivity to win in international competition.

It has been verified by research conducted in Europe and the U.S. in the past that corporations with high productivity relocate production bases overseas, but it has not been made clear whether moving abroad will raise the productivity of companies. However, when we verified the influence of overseas shifts on productivity of Japanese corporations, we found out that direct overseas investment contributes to growth in productivity for firms. We may conclude that transfer of production offshore is favorably affecting the productivity growth of Japanese corporations.

Research & Development and Manufacturing Know-how to Be Decisive Factors

Another reason why the misgivings about hollowing-out are not necessarily reasonable is that research and development, strategically the most important function in the electronic machinery industry, is unlikely to be shifted overseas easily. The questionnaire also asked respondents how they position research and development bases. The results of the survey showed that even those corporations that have relocated manufacturing processes overseas are also cautious about transferring research and development functions outside the country. While there is a possibility that research and development functions may partially be shifted overseas in the future, many corporations attach particular importance to research and development and manufacturing know-how, and such operations are viewed as the core of manufacturing and not easily transferable overseas. Recognition of the importance
of these factors in maintaining competitiveness in the electronic machinery industry is apparently behind this industry-wide stance.

Although corporations are building manufacturing process networks throughout East Asia, their domestic bases for research and development and the accumulation of manufacturing technologies are positioned at the center of these networks. There may be no need for too much worry regarding the hollowing-out of these industries.

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