

Premia of Offshoring:  
Evidence from Japanese Manufacturing Firms  
(Summary)

Ryuhei Wakasugi, Kyoto University

Offshoring of Japanese firms to China and other East Asian countries is resulting in a dramatic change of corporate activities as well as the trade structure in Japan. It is notable that the global offshoring of tasks is revolutionizing the paradigm of international trade<sup>1</sup>. As international division of tasks through offshoring causes the reallocation of resources from a task of low productivity to one of higher productivity within or between firms, it is predictable that offshoring raises the productivity. We find some previous studies on the effect of offshoring on productivity. (e.g. Egger and Egger (2001) for EU firms, Amiti and Wei (2004) for US firms, Görg and Hanley (2003, 2005) for Irish firms, and with regard to Japanese firms, Head and Ries (2002), Hijzen, Inui and Todo (2006), Tomiura (2007) ) In spite of recent increase of offshoring of Japanese firms, we find few studies on the exact impact of Japanese offshoring on productivity. This is due to the limitation of availability in firm-level data of offshoring of Japanese firms.

The first purpose of this paper is to introduce the features of offshoring of Japanese firms in material production and analyze premia of offshore sourcing of Japanese firms, by linking our survey data of offshore sourcing with the firm-level data of business activities. Our survey on Japanese offshoring presents that 20 percent of Japanese companies in total are performing offshore sourcing and more than 50 percent of companies with 300 or more

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<sup>1</sup> See Grossman and Rossi-Hansberg (2006) and Baldwin and Nicoud (2007) for theoretical discussion on this issue.

employees are conducting offshore sourcing in China and other East Asian countries mainly for the tasks of their manufacturing parts and intermediate goods or assembling final goods. It also finds that in average, offshoring firms recorded 2.5 percent points higher in growth rate of total sales and 1 percent points higher in growth rate of labor productivity than the firms that did not engage in offshoring. The annual growth rate of wage in firms engaged in offshoring was higher than that in firms that did not engage in offshoring by 0.5 percent points. These figures evidence that offshoring has enabled firms to raise their production efficiency. However, it is also notable that offshoring affect negatively the wage share. In spite of a rise of wage share in non-offshoring firms by 0.1 percent, wage share in offshoring firms declined by 0.2 percent.

The second purpose of the paper is to estimate the impact of offshoring on labor productivity using Japanese firm-level data. The results of our empirical estimation presents a clear evidence that the productivity differs by 3 percent between offshoring and non-offshoring firms, and that offshoring raises the productivity by 5 percent *ceteris paribus*. They are consistent with the results in the previous studies using EU, US or other country firm-level or industry-level data.

As Baldwin (2006) suggests, offshore sourcing accompanies a rapid and large-scale movement of employment and adjustment of industry structure. To cope with the structural change of a number of workers in offshoring firms, appropriate policy instrument will be needed to supply the education and training program suitably fitting to the changing job opportunity and realizing the smooth reallocation of workers. As a basis of such policy formation, internationally comparable data including not only firm-level production data but also firm-level trade data by production stage across countries will be necessary.