Production Relocation and the Effect of Monetary Policy

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Abstract

This paper analyzes the macroeconomic effect of production relocation by using an open economy macroeconomic model. Our analysis shows, paradoxically, that acceleration in production relocation might have an expansive effect on the home economy. We also show that monetary expansion has welfare-enhancing effects even in an economy where production relocation exists. However, advancing production relocation amplifies the effect of monetary policy on the exchange rate. On the other hand, it reduces the effect on the relative home income by advancing production relocation.

- JEL Classification: F23, F41, F42
- Key words: Monetary policy, Production relocation, Hollowing out, Beggar-thy-neighbor

I. Introduction

Recently, a large number of Japanese firms have shifted their production location abroad, especially to China most recently. Hence, many economists and policy makers worry about the “hollowing out” of Japanese industry.

According to the conventional wisdom, production relocation substitutes for domestic investment in plant and machinery; therefore, it is certainly regarded as the main factor of the “hollowing out” of domestic industry. However, for instance, the Japanese economy experienced an unprecedented boom in the second half of
the 1980’s in spite of an increase in foreign direct investment (and production relocation). More recently, Japanese export of intermediate products (steel, aluminum etc.) to China is increasing as Japanese multinational enterprises (MNEs) advance their production relocation to China. Moreover, the economy of Taiwan experienced long-run growth until recently, despite accelerating production relocation. How should we regard these phenomena? As well, how should the government respond to the situation, in case production relocation affects the domestic economy in a deflationary way?

In recent years, some Japanese economists have asserted the effectiveness of the depreciation strategy (of Japanese Yen) as a way to escape from Japan’s economic stagnation. Certainly, it seems that depreciation of Yen is an effective measure to re-vitalize the Japanese economy through an expansion of Japanese exports. However, if many of the domestic production processes are relocated abroad, the depreciation of the currency may not aid in the expansion of exports. In addition, we should note that this depreciation strategy (which contains the macroeconomic policy that induces depreciation,) might be rejected by foreign governments, because it is believed that this policy may become a beggar-thy-neighbor policy.

According to the standard theoretical inference of the beggar-thy-neighbor problem presented by the Mundell-Fleming-Dornbusch model, a country benefits from depreciation of their currency (and expansion of their exports), but other countries suffer. On the other hand, Obstfeld and Rogoff (1995, 1996) point out that a macroeconomic policy that induces the depreciation of domestic currency is equally beneficial to all countries.

The main purpose of this paper is to make clear the impact of the existence of production relocation on macroeconomy. Specifically, we will focus on whether the shift of production location affects the efficacy of macroeconomic policy.

The paper is organized as follows: In section 2 we construct a two-country macroeconomic model that contains the production relocation mechanism. The

1 Despite that the impact of production relocation has already been recognized, all but a few theoretical analyses of MNEs or FDI concern trade theory. For instance, Markusen and Maskus (2001) is an up to date survey.

2 Many empirical studies have noticed the degree of exchange rate pass-through to prices. See, for instance, Goldberg and Knetter (1997).

3 Tille (2001) presents a more generalized model that focuses on the intermediaries, and shows the possibility that monetary expansion causes either a beggar-thy-neighbor/prosper-thyself or a beggar-thyself/prosper-thy-neighbor effect.