INWARD AND OUTWARD FOREIGN DIRECT INVESTMENT: 
THE CASE OF U.S. FOREST INDUSTRY

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Abstract: Foreign direct investment in the U.S. forest industry increased 54 percent, but the U.S. forest industry direct investment abroad nearly doubled, both in real terms, in the 13 years preceding 1995. The forest industry's share of total foreign investment in the U.S. manufacturing industry declined, but its share of foreign investment abroad increased. During the same time the industry attracted only about one-fourth as much as the foreign direct investment in the Canadian forest industry although its size is six times as big as its Canadian counterpart. Foreign investors both in the U.S. and other countries have been attracted to the paper and allied sector much more than the wood products sector. The relatively stable political and economic system and the size of the U.S. market appear to be the main attractions for foreign investors. The continuing decline in timber availability is the main cause for U.S. forest industry firms to invest abroad, especially in timber-rich countries. Market structure and economies of scale explain the concentration of investment in paper and allied industry. This pattern of foreign investment has important implications for economic development and the long-term competitiveness of the industry.

Introduction

The influence of foreign capital in the U.S. economy has become controversial. It was an issue during the 1988 and 1992 Presidential races (Ondrich and Wasylenko 1993). Since the early 1980s, the U.S. export-import account has been in deficits. This could have been resulting from a lack of private and government savings and government deficits. Foreign investment inflows balance the deficits in the export-import account.

Public debate focuses on two aspects of this issue. One is the trend in foreign investment, especially whether it is increasing or decreasing, in terms of both its absolute level and its relative share in particular industries. The other is the form of the investment, particularly whether it represents passive portfolio investment or control of U.S. firms and resources. A pessimistic view regards a surplus in the capital account as foreign control of U.S. resources. On the other hand, some policy makers see this as a good thing, because foreign capital helps boost the employment and productivity of U.S. industry. The parties to the debate tend to be polarized and their arguments political and uncompromising. Yet the issues can be evaluated only through careful analysis of the magnitude and form of foreign investment in particular industries, how it affects the U.S. political economy, and its related consequences for Americans with reference to the broad objectives of public policy.

This debate has taken place in some developing countries for many years, mainly about firms from the U.S. and other developed countries takeover of their resources. This paper examines recent trends in foreign direct investment in the U.S. forest products industry and the industry's investment abroad. This industry historically has not been the focus of much of the broader debate about foreign

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investment and control. However, as we will show, recent developments in public policy, especially spillovers from protection of the endangered species and others, have drawn attention to the outflow and the consequences of foreign investment by American firms (American Forest and Paper Association 1994).

The paper consists of three main parts. The first, beginning in the next section, documents trends in foreign direct investment in forest industry in the U.S. and the industry’s direct investment abroad. The amount and proportion of foreign investment in recent years are traced, the trends in each of the major sectors of the industry—wood products and pulp and paper manufacturing—are analyzed. The second part offers an explanation of the observed trends in terms of changing international circumstances in forest products production and marketing and the incentives of foreign investors. The final section discusses the policy implications of the observed trends.

Recent Trends in Foreign Investment

Level and Form of Foreign Investment

Foreign direct investment means the direct or indirect ownership of foreign enterprises in amounts or in kinds which enable the foreign investor to influence the management of the enterprise (U.S. Department of Commerce (USDC) 1994). Investment is classified as direct where the investor owns at least 10 percent of the voting securities of an incorporated business enterprise, or an equivalent interest in an unincorporated business enterprise, or a 10 percent or more interest in real property transaction (Slemrod 1989, USDC 1994). However, it includes, in addition to the equity owned, any other long-term claims against the enterprise in such forms as bonds, debentures, loans, and advances. This is in contrast with portfolio investment which usually consists of financial assets such as stocks and bonds in amounts considered unlikely to convey a controlling influence in decision-making within the enterprise. Portfolio investors are less concerned with influencing policy and the operations of an enterprise. However, it is important to note that, under this classification, both direct and portfolio investors may hold both equity and debt issued by an enterprise. This paper focuses only on direct investment due to its importance and data availability.

The USDC provides detailed foreign direct investment in forest industry in the U.S. since 1980 and the industry’s investment abroad since 1982 (USDC various years a). Direct foreign investment in forest industry in the U.S. over the last 15 years and U.S. investment abroad in forest industry over the last 13 years, measured in current dollars, are shown in Figure 1. The figure suggests that the level of foreign direct investment in the U.S. and U.S. direct investment abroad rose fairly steadily during the study period, and U.S. direct investment abroad is roughly three times that of foreign direct investment in the U.S. Over the period from 1980 to 1994, foreign investment increased from $1.2 billion to $4.1 billion and U.S. overseas investment increased from $4.2 billion in 1982 to $13.0 billion in 1994 (USDC various years a).

To illustrate the real trend in foreign investment, adjusted for inflation, Figure 1 also shows these annual flows expressed in constant 1982-84 dollars. This shows that one-third of the apparent increase over the study period is attributable to inflation, and that the real value of foreign investment in the U.S. actually only increased 54 percent in 13 years. However, the U.S. investment abroad rose steadily until 1988, then accelerated, and increased 86 percent during the same time. (For the purpose of comparison, this paper will use the 1982 figures as baseline for both foreign investment in the U.S. and U.S. investment abroad.)
Figure 1. Inward and outward foreign investment in U.S. forest industry.

Share of Foreign Direct Investment

These trends in foreign investment were undoubtedly influenced by a variety of factors in addition to government policies. One is the pattern of overall investment in the manufacturing industry. This can be traced with the help of data from the same source, by comparing the share of forest industry over the manufacturing industry as a whole. These are reflected in Figure 2.

Figure 2 reveals that the U.S. forest industry's share of the U.S. manufacturing industry's investment abroad increased about 0.5 percent during the 13 years, while the industry's share of foreign investment declined by about 1.5 percent. This happened during the period when the industry's contribution to total manufacturing output in the U.S. increased only slightly, from 6.3 percent in 1982 to 7.3 percent in 1994 (USDC various years b).

Another significant finding is revealed by comparing foreign direct investment in the U.S. forest industry with that in the Canadian forest industry, using data from a different source (Pearse et al. 1995).2 While the size of U.S. forest industry is about six times as big as its Canadian counterpart, it only attracts about one-fourth of the foreign direct investment as Canadian forest industry (Figure 3). This suggests that the U.S. forest industry is not as competitive as Canadian forest industry as far as foreign investors are concerned. Since data for Canadian forest industry's investment abroad are not available, no comparison is made for the industry’s direct investment abroad from the two countries.

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2The definition of foreign direct investment is consistent in Canada and the U.S. (Statistics Canada various years a, b).
Figure 2. Share of forest industry in U.S. manufacturing industry.

Figure 3. The relative size and direct foreign investment in U.S. and Canadian forest industry (U.S. forest industry / Canadian forest industry).

<table>
<thead>
<tr>
<th>Year</th>
<th>Foreign Forestry Investment in the U.S. ($Million, nominal value)</th>
<th>U.S. Forestry Investment Abroad ($Million, nominal value)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1980</td>
<td>58</td>
<td>69</td>
</tr>
<tr>
<td>1981</td>
<td>89</td>
<td>70</td>
</tr>
<tr>
<td>1982</td>
<td>95</td>
<td>77</td>
</tr>
<tr>
<td>1983</td>
<td>132</td>
<td>70</td>
</tr>
<tr>
<td>1984</td>
<td>144</td>
<td>57</td>
</tr>
<tr>
<td>1985</td>
<td>145</td>
<td>63</td>
</tr>
<tr>
<td>1986</td>
<td>169</td>
<td>n.a.</td>
</tr>
<tr>
<td>1987</td>
<td>82</td>
<td>n.a.</td>
</tr>
<tr>
<td>1988</td>
<td>-5</td>
<td>n.a.</td>
</tr>
<tr>
<td>1989</td>
<td>64</td>
<td>n.a.</td>
</tr>
<tr>
<td>1990</td>
<td>278</td>
<td>77</td>
</tr>
<tr>
<td>1991</td>
<td>81</td>
<td>n.a.</td>
</tr>
<tr>
<td>1992</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
<tr>
<td>1993</td>
<td>25</td>
<td>n.a.</td>
</tr>
<tr>
<td>1994</td>
<td>25</td>
<td>n.a.</td>
</tr>
</tbody>
</table>

n.a. = Not available (Suppressed to avoid disclosure of data of individual company).

Source: USDC various years a.

Foreign Investment by Industry Sector

The USDC reports also provide data that enable tackling certain trends in foreign investment in the U.S. and U.S. direct investment abroad within the principal sectors of the forest industry: forestry (Standard Industrial Classification Code or SIC 08), lumber and wood products (SIC 24), and paper and allied industry (SIC 26). Investment in forestry includes timber and land acquisition, improvement and management. It represents control of raw material supply. Thus the difference in forestry direct investment in and outside the U.S. is an important parameter of resource availability in the country.

Unfortunately the data on direct foreign forestry investment in the U.S. and U.S. forestry investment abroad are incomplete since the reports suppress data to avoid disclosure about information of individual companies in seven years. The problem is more serious for U.S. investment abroad (for lack of data in six of the 13 years) than foreign investment in the U.S. (lack of data in 1992 only). However, based on the limited information, it is observable that U.S. investment abroad has slightly increased over the 13 years (Table 1). On the other hand, foreign investment in the U.S. increased sharply until 1986, then plunged for three years, before reaching a historical high of $278 million in 1990. In the last three years, it declined dramatically.

For this reason, total direct foreign investment in forest industry, shown in Figures 1-4, excludes forestry investment. This practice was used by other researchers (Pearse et al. 1995). Moreover, it is obvious from Table 1 and Figure 1 that forestry investment represents less than 1 percent of foreign investment in forest industry in the U.S. and the industry's investment abroad. Therefore this practice does not affect any conclusion of this paper.
Figure 4 shows foreign investment in the U.S. and U.S. direct investment abroad in the pulp and paper industry and the wood products industries (mainly sawmilling). It indicates that paper and allied industry dominates foreign investment both in the U.S. and abroad even it only represents some 60 percent of the value of shipments of forest industry as a whole. Table 2 shows limited information on U.S. direct investment abroad in paper and allied industry by countries that have been provided by the USDC since 1989. Three timber-rich countries—Canada, Brazil, and Mexico—accounted for more than 50 percent of U.S. foreign investment in paper and allied industry from 1989 to 1993. Many country-specific data on wood products industry were suppressed, and no data are available on the origins of foreign country investing in the U.S.

Data from the USDC also reveals that, while foreign investment in the U.S. wood products industry stayed roughly the same over the 13 year period, U.S. investment in overseas wood products industry has increased 72 percent during the same time. On the other hand, foreign investment in the U.S. paper and allied industry and U.S. overseas investment in paper and allied industry nearly doubled. This indicates that both foreign and U.S. investors appeared to have preferred to invest in the paper and allied sector over the wood products sector. Moreover, foreign investment in the paper and allied sector is of a much bigger magnitude than the overall size of the industry implied. More analysis of this is warranted.

**Interpretation**

The forces shaping these changes in foreign participation in the U.S. forest industry and the industry's engagement overseas are inevitably varied and complicated. However, it is possible to explain the main trends in terms of the determinants of international capital movement generally, developments in regional patterns of supply and demand for forest products, the structural character of the forest
Table 2. U.S. investment abroad in paper and allied industry by country. 1989-1994 (nominal value).

<table>
<thead>
<tr>
<th>Year</th>
<th>Canada</th>
<th>%</th>
<th>Brazil</th>
<th>%</th>
<th>Mexico</th>
<th>%</th>
<th>Total</th>
<th>$Million</th>
</tr>
</thead>
<tbody>
<tr>
<td>1989</td>
<td>4,720</td>
<td>50.12</td>
<td>1,040</td>
<td>11.04</td>
<td>478</td>
<td>5.08</td>
<td>9,419</td>
<td></td>
</tr>
<tr>
<td>1990</td>
<td>5,080</td>
<td>51.03</td>
<td>1,031</td>
<td>10.36</td>
<td>594</td>
<td>5.97</td>
<td>9,954</td>
<td></td>
</tr>
<tr>
<td>1991</td>
<td>4,743</td>
<td>43.37</td>
<td>1,074</td>
<td>9.82</td>
<td>637</td>
<td>5.82</td>
<td>10,936</td>
<td></td>
</tr>
<tr>
<td>1992</td>
<td>4,795</td>
<td>42.50</td>
<td>1,117</td>
<td>9.90</td>
<td>667</td>
<td>5.91</td>
<td>11,282</td>
<td></td>
</tr>
<tr>
<td>1993</td>
<td>3,393</td>
<td>34.38</td>
<td>1,038</td>
<td>10.52</td>
<td>638</td>
<td>6.46</td>
<td>9,869</td>
<td></td>
</tr>
<tr>
<td>1994</td>
<td>4,206</td>
<td>35.22</td>
<td>n.a.</td>
<td>n.a.</td>
<td>622</td>
<td>5.21</td>
<td>11,942</td>
<td></td>
</tr>
</tbody>
</table>

n.a. = Not available (Suppressed to avoid disclosure of data of individual company).

Source: USDC various years a.

industry, and governmental policies. The following paragraphs review these influences to elucidate the observed changes.

Financial Returns

In making investment decisions, investors, foreign or domestic, can be assumed to be guided in the first instance by their expectations about returns and risks on capital invested in alternative ways. Many also seek to diversify risk in whole portfolios of investments. Investors' decisions about foreign investment in a country's forest products industry are thus guided primarily by the expected financial performance of the industry relative to other possible investments.

In comparing U.S. and Canadian forest products companies Schwindt (1985) found that "... financial performance, both in aggregate, and by product specialization group, is roughly similar across countries." His results suggested that, although Canadian companies lagged slightly in return on equity, they performed slightly better in return on total capital employed. This is consistent with the finding of this paper that foreign investors have found the Canadian forest industry more attractive than the U.S. counterpart in terms of direct investment.

The Policy Environment

When considering investments in foreign countries, direct investors also look carefully for political stability, sound economic and trade policies, favorable tax policies, the availability of a competent labor force, secure supplies of energy and raw materials, and suitable infrastructures (Porter 1991). In these respects, broadly referred to as the "investment climate," the U.S. is generally considered to offer an attractive environment for foreign investors.

However, a governmental policy such as protection of endangered species can be expected to affect direct investment. The case in the U.S. is unique in this respect since the controversy regarding Northern Spotted Owls has reduced timber supply from federal and state lands in the Pacific Northwest by 80 percent (Bowyer 1995). In fact, the spurt of U.S. forest industry's investment abroad coincides with the court challenge and subsequent listing of the Owls as endangered species in the late 1980s, suggesting that this policy has contributed to the increase of foreign investment by U.S. firms to secure raw material supply and maintain market shares through production in foreign countries.
This also explains, at least partly, the decline in foreign investment in the U.S. forestry by foreign firms in the early 1990s.

Regional Supply and Demand

The disparity between demand for forest products and resource supply among world regions is significant and increasing. While demand has continued to grow in the traditional consuming areas of Europe and the United States, consumption has expanded vigorously in the Asia Pacific region in recent years. On the supply side, the scope for expanded production of timber, particularly softwoods, is limited mainly to Canada, questionably Russia, and the countries with expanding plantation forestry such as New Zealand and Chile (Bowyer 1995, Pearse et al. 1995). The imbalance between regional supplies and demands has been aggravated by the elimination of some traditional sources of supply for industrialized countries of the Asia-Pacific region. Prohibitions on log exports have been adopted in countries such as Indonesia, Malaysia and Thailand (Marchak 1991).

As a source of supply of raw material for Asia-Pacific countries for many years, U.S. export of forest products to that region has dramatically declined (Warren 1995). Although timber supply in Canada has been reduced in recent years, its magnitude is much smaller than the U.S. (Reed 1986, Pearse et al. 1995). Therefore, investors from Asia-Pacific regions, including the U.S., continue to increase their investment in Canada. Although disputes about lumber subsidies occur between Canadian and American lumber producers, the recently signed North America Free Trade Agreement generally gives producers in Canada access to the U.S. market. Thus, it is not necessary for Canadian producers to invest in the U.S. in order to secure their share of U.S. markets and avoid tariffs. Again, government policies have influenced investors' foreign investment decisions.

Although no data are available on the sources of foreign investment in the U.S. and the host countries of U.S. foreign investment are limited to a few, causal observations and conversations with industry executives suggest that U.S. forest industry's foreign investment is concentrated in relatively timber-rich countries such as Canada, Brazil, Argentina, Mexico and Russia (S. Bond, personal communication, 1995). This is understandable for firms that seek to secure their raw material supply for the U.S. mills and for firms that look for new opportunities to apply their technical, financial, managerial, or marketing skills to maintain and expand their market share by producing forest products in other countries if their opportunity in the U.S. is limited.

Capital Intensity and Market Structure

Earlier analysis of trends reveals that foreign investment in the U.S. paper and allied industry has greatly exceeded that in the wood products industries. The U.S. investment overseas shows the same trends. These reflect, in part, the fact that the paper and allied industry accounts for much more assets than the wood product sector, the former being both larger and more capital intensive.

A conspicuous characteristic of the paper and allied industry is its economy of scale. The combination of scale economy and capital intensity means that pulp and paper ventures involve huge amounts of capital and large plant size, much more and larger than solid wood processing ventures. Foreign-owned plants are larger and more capital intensive than U.S.-owned plants in the U.S., because the income and other benefits that normally accrue to large plants are sought out to offset the inherent disadvantages of foreign investors tend to face when investing and subsequently operating their businesses in the U.S. (Howenstine and Zeile 1994). The preference of foreign investors to invest in capital intensive industry means that the paper and allied industry is naturally more attractive than wood products industry.
The scale economy and capital intensiveness of the pulp and paper sector also serve as barriers to new entrants in the industry, and contribute to its characteristic oligopolistic industrial structure (Booth 1990). Also, paper is highly varied products, lending itself to the development of market imperfection. On the other hand, the bulk of lumber is a commodity and the wood products industry is relatively competitive, at least in North America. In this more highly competitive international lumber industry, monopolistic rents cannot be gained, nor can market share be secured. These differences undoubtedly help to explain the much greater activity of foreign investors in the paper and allied industry than in the wood products industry, both in and outside of U.S.

Another factor contributing to the preference for the paper and allied industry may be the expectation of faster growth in this sector. Pulp and paper consumption is considerably more responsive to rising incomes than is the demand for solid wood products (Buongiorno 1978, 1979). Thus, FAO (1991) predicts relatively strong growth in pulp and paper demand in the near future.

Summary and Policy Implications

Measured in constant dollars, foreign investment in the U.S. forest industry has increased 54 percent in the past 13 years. However, the industry's overseas investment was even greater, with the result that the industry's share of investment abroad in the manufacturing industry increased. On the other hand, the industry's share of foreign investment in the manufacturing industry declined. Compared to Canada's forest industry, the industry only received about one-fourth inward foreign investments in spite of its much larger size. Foreigners and the U.S. investors both preferred investment in paper and allied industry over the wood industries.

Policy Spillover

These trends suggest that the forest industry, unlike other industries, does not have much foreign investment, and foreign investors have not "taken over" U.S. forest resources. On the contrary, the industry has increased its investment abroad, and thus drawn attention about the adequacy of its domestic investment. Yet the industry cannot take all of the blame for the decline in domestic investment.

These trends have important implications for several issues of public policy. Most apparent are the impacts of protecting endangered species on timber supply and foreign investment. It is not the position of this paper to deliberate the merits and costs of the Endangered Species Act or establishment of critical habitats for endangered species. It is noticeable, however, that the listing of several endangered species such as Northern Spotted Owls, has had a dramatic impact on timber supply and sent investors to other countries. Moreover, the North America Free Trade Agreement and proliferations of international trade and capital movement might have contributed to these impacts.

Promotion of U.S. Competitiveness

Attracting foreign and domestic investment is one element in a broader economic policy aimed at promoting the U.S. competitiveness in the emerging global economic order. This objective has dominated federal and state governments' economic agenda in recent years, evidenced by attention to free trade, tax reform and the "Incentive legislation." It has been given urgency by the decline in productivity growth in the 1980s, especially in manufacturing, relative to other industrial countries (USDC 1994).

In this context, new capital is seen as a key to improved competitiveness of U.S. industry through its effect in enhancing the productivity of labor and other inputs in production. For the longer term, new
capital investment—domestic and foreign—is regarded as a means of introducing the advanced equipment, new production technologies and research and development needed to build a stronger and more diversified economy (USDC 1994). To attract this investment capital, the U.S. needs a favorable investment climate. Among other conditions that contribute to the perception that the U.S. is a good place to invest (such as political and economic stability, skilled labor, good infrastructure, social security and so on) is a hospitable policy toward foreign investment.

These issues were analyzed in an economic model for competitiveness in an increasingly global world economy by Michael Porter and his colleagues (Porter 1991). In Porter's model, continuing growth of a competitive industry or economy depends on the strength of the interconnected elements in his "diamond," which includes factor endowments, domestic demand, support industries and competition, as well as government policy. Although a rich natural resource base is not sufficient to sustain international competitive advantage, resources are still a necessity for development. Facing decreasing supply of raw materials, the forest industry has to rely on strengthening the other elements of the diamond and continuing to advance technology and innovation. Having realized this, the industry has set a research agenda and called for government-industry partnership to upgrade its competitive advantage in sustainable forest management, capital effectiveness, and others (American Forest and Paper Association 1994).

Foreign Investment and Economic Development

Investment also relates to economic development. More U.S. firms investing abroad means less capital available for economic development in the U.S. For this reason, state governments should be alarmed that it may be harder for them to recruit forest industry. This may have serious consequences on economic development of forest resource dependent regions and communities.

Resource-based economic progress depends on the development of linkages from the resource sectors forward and backward to other industries to generate a process of continuing economic growth and diversification. International capital flows can accelerate this process. The current globalization is characterized by multinational enterprises which link investment and trade: a growing proportion of trade is intra-enterprise, resulting from foreign investment. U.S. investment abroad may generate a positive increase in export of U.S. equipment, technology, and products. However, U.S. investment in foreign forest industry is unlikely to bring more U.S. export of forest products.

Finally, since foreign-owned plants tend to be larger, concentrated in the capital intensive paper and allied industry, the security of timber supply is a bigger concern for foreign investors than domestic investors. Increases in environmental regulations have decreased timber supply from public lands, and may limit timber supply from private lands. Considerable efforts have been made in the federal and state legislatures in protecting private property rights from government regulatory takings in recent years (Zhang 1996). These efforts in defining the boundary of government police power and takings of private property rights may make private landowners feel that it is secure to grow and harvest timber on their lands, and therefore, provide more timber in the future.

Literature Cited


