The International Distribution of FDI Income And Its Impact on Income Inequality

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Abstract

Income generated by foreign direct investments (FDI) has grown since the 1990s, and now represents a substantial portion of many countries' current accounts. Some of these flows are routed through Special Purpose Entities in financial centers that multinational firms use to minimize their tax liabilities. We use IMF and OECD data to ascertain which countries receive FDI-generated income, and find that a few advanced economies are the recipients of the largest shares. We also distinguish between FDI equity income and FDI interest income arising from intra-firm lending. We investigate the impact of these flows on income distribution within the recipient countries. FDI equity income contributes to the income share of the top 1% of households in advanced economies. FDI interest income, on the other hand, has no impact in these economies. FDI equity income also contributes to the income share of the top 1% in financial centers, but interest income is inversely linked to their income share. FDI income, therefore, increases inequality both among and within countries.

Key words: FDI income, multinational firms, inequality

JEL: F21, F23

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The growing cosmopolitanism of capital has been the greatest economic change of recent generations. Every advanced industrial nation has been tending to place a larger share of its capital outside the limits of its own political area, in foreign countries, or its colonies, and to draw a growing income from this source. Hobson (1902, 1965)

1. Introduction

The composition of capital flows changed in the wake of the v financial crisis of 2008-09. While bank lending contracted in some areas, particularly in Europe, foreign direct investment (FDI), which had been growing since the early 1990s, continued to expand. Between the years 2000 and 2016, for example, the total stock of FDI increased from 46% to 57% of global GDP (Lund et al. 2017).[1]

The increase in the stock of direct investment has been accompanied by a rise in the income payments that flow from these investments. These are part of total international investment income, which is reported in the current account of the balance of payments as a component of primary income. While most analyses of the current account focus on the balance of trade, Forbes, Hjortsoe and Nenova (2017) have shown that investment income has become an increasingly significant element of the current account. In Japan, for example, the surpluses on investment income more than offset the trade account deficits which occurred for several years after the global crisis. In the United Kingdom, on the other hand, the deficit in primary income has been the largest contributor to its current account deficits.

However, some of the flows of investment are channeled through countries that serve as financial centers before the funds are routed to their ultimate destinations. These funds flow through organizational structures called Special Purpose Entities (SPE) that allow multinational

firms to minimize taxes and regulatory requirements. Damgaard, Elkjaer, and Johannsesn (2019) have referred to such investments as "phantom" investments, as oppose to "real" investments by multinationals in subsidiaries that actually engage in business activities. Recent studies have shown that these flows result in the "double counting" of FDI and an overstatement of its size, which also affects the measurement of investment income.[2]

Moreover, FDI-generated income can be divided into equity income, the income earned by the multinational firm's business activities, and interest income, which is generated by intra-firm lending. This lending may reflect a multinational firm's desire to obtain the cheapest sources of finance, which could be outside its home country. But the debt could be due to the firm using financial engineering to lower its total tax liabilities by borrowing from units in jurisdiction with lower tax rates.

Past research often treated FDI income as part of the total return on foreign investments, which also includes valuation gains or losses due to market and exchange rate fluctuations. However, investment income, and in particular the income generated by FDI, deserves separate treatment for several reasons. First, as noted above, FDI income has become a substantial component of the current accounts of many nations. Second, the multinational firms that generate these streams of income are based in advanced economies. Therefore, FDI income contributes to income inequality among countries. Third, due to the concentration of financial wealth within the advanced economies, multinational profits accrue to the those in the upper distribution of income of these countries. FDI income flows, therefore, could contribute to income inequality within the advanced economies.

This paper is the first to specifically focus on FDI income and its distribution. We measure the growth of FDI income payments over time and identify which countries have been the major

recipients of this income. We show how differentiating between total and non-SPE generated income affects this distribution. We also distinguish between FDI income due to equity activities and the interest income arising from intra-firm debt. We analyze the impact of these flows on the shares of income received by the top 1% of households in advanced economies and financial centers.

To preview our results, we find that a few advanced economies are the recipients of FDI generated income. If we distinguish between SPE and non-SPE income, this concentration becomes higher. When we investigate the impact of FDI income on the income share of the top 1% of households in advanced economies, we find that FDI equity income—but not interest income—does contribute to the income share of these households. We find similar results in the advanced economies when we exclude SPE-generate income. However, we do not always find the same linkages in the financial centers.

The next section reviews the relevant literature. Section 3 examines trends in investment income. Section 4 describes the data, and Section 5 presents our results. Section 6 summarizes our conclusions.

2. Literature Review

The total returns on foreign capital, which consist of income and valuation changes, and their role in international financial adjustment have been widely studied. Much of this work has focused on the positive return that the U.S. receives despite its negative international investment position (NIIP). Hung and Chang (2018) provide tests of the hypotheses that have been advanced to explain the U.S. positive income flows. Gourinchas and Rey (2007a, 2007b, 2014) attributed this return to a composition effect, i.e., the difference between the returns on its equity assets and

debt liabilities, and a return effect, i.e. the higher return that the U.S. receives on each class of investment. Curcuru, Thomas and Warnock (2013) reported that the earnings of U.S. multinationals are largely responsible for the positive return that the U.S. receives from its foreign investments. Habib (2010), Darvas and Hüttl (2017), Adler and Garcia-Macia (2018) and Hünnekes, Schularick and Trebesch (2019) undertook similar empirical analyses of the relative returns on foreign assets and liabilities, using data from a range of countries.

Investment income by itself has been the subject of several recent analyses. Forbes, Hjortsoe and Nenova (2017) demonstrated how investment income flows affect a country's current account, and developed a model of the impact of domestic and global risk on investment income. Alberola, Estrada and Viani (2020) studied the impact of net foreign assets on a country's current account, including its net income.

The international income surpluses recorded by many advanced economies are matched by deficits in emerging market countries. Joyce (2021) found that payments on FDI liabilities are largely responsible for the net investment income deficits recorded by these countries. Zélity (2020) has examined the welfare impact of FDI profits in the four Visegrád countries.

The rise of SPEs and their effect on the measurement of direct investment has received increasing attention. Lane and Milesi-Ferretti (2018) pointed out that the expansion of FDI positions since the global financial crisis has primarily taken place in the financial centers. Lund et al. (2017) drew attention to the "double counting" of financial assets and liabilities that the intermediary role of financial centers creates. Similarly, Damgaard, Elkjaer and Johannesen (2019), who distinguish between "phantom" and "real" investment, showed that the former may account for up to 40% of global FDI. In response to the increase in FDI positions in the financial centers, the IMF (2018) organized a task force that presented an overview of the uses of SPEs and

proposed a definition of SPEs that would be used in identifying SPE-related transactions in future data collection. Similarly, the OECD (2008) has developed guidelines for treating SPE data in its *Benchmark Definition of Foreign Direct Investment 4th Edition* (BDM4).

The use of foreign tax havens by U.S.-based multinationals has also contributed to the growth of direct investment income. Hines and Rice (1994), Clausing (2009, 2016), Bosworth, Collins and Chodrow-Reich (2007), Keightley and Stupak (2015) and Bruner, Rassier and Ruhl (2018) have shown that U.S.-based firms shift profits across national frontiers to take advantage of lower tax rates in other jurisdictions. Huizinga and Laeven (2008) demonstrated that multinationals based in Europe engage in similar activities. Tørsløv, Wier and Zucman (TWZ) (2020) investigated the profit-shifting of multinationals in a range of countries, and found that profit-shifting by U.S.-based multinationals accounts for the largest amount of this activity.

The returns of foreign investments in previous periods have also been studied. Hauner, Milanovic and Naidu (2017) drew upon Hobson's (1902, 1965) analysis of imperialism to examine the foreign holdings of the advanced economies of the pre-World War I era. They used the data of Picketty and Zucman (2014) to demonstrate that the United Kingdom and France increased their holdings of foreign assets during this era. Piketty (2014) points out the income earned from foreign holdings were sufficient to offset both trade deficits and capital outflows in the United Kingdom and France in the nineteenth century.

Studies of the impact of financial globalization on income inequality have been limited. Many of these have concentrated on the experience of developing economies, and used FDI inflows (Kaulihowa and Adjasi 2018) or capital account liberalization (Bumann and Lensink 2016, Furceri and Loungani 2018, Furceri, Loungani and Ostry 2019) as their measure of financial globalization. There is no consensus has to whether either form of financial openness reduces or

reinforces inequality in the host countries.[3] Moreover, the effects of the resulting flows of income on inequality in either the home or host countries have not been studied.

3. Trends

In this section, we examine the trends in FDI income and its recipients. Our sample includes advanced countries, which are the home countries of the multinational firms that have foreign operations, and financial centers, which are often used as intermediaries between the ultimate sources of the investments and their final destinations. The advanced countries are Australia, Austria, Canada, Denmark, Finland, France, Germany, Greece, Italy, Japan, New Zealand, Norway, Portugal, Spain, Sweden, the United Kingdom and the U.S. The financial centers are Belgium, Hong Kong, Ireland, Luxembourg, Netherlands and Switzerland.[4]

We begin with the data on international investment income that are reported in the IMF's *Balance of Payments Statistics*. The total income flows include the income from FDI, portfolio equity and debt, other investments (which includes bank loans) and reserve assets. Our reporting period begins in 1990 and extends to 2018. In each year, we included all those countries that reported positive FDI income.

Figure 1 shows total FDI income surpluses and international investment income, both scaled by world GDP.[5] FDI income relative to world GDP rose rapidly in the latter half of the 1990s and during most of the 2000s. Figure 1 shows a peak in direct investment income in 2001 followed by a decline during a slowdown in economic activity in many countries. This was followed by a recovery and another peak before the global financial crisis, and then another peak shortly after followed by a decline during the most recent period. At its highest point total FDI income equaled 0.94% of world GDP before it dropped more recently to 0.79%.

The figure also shows that net FDI income often exceeded total international investment income for the recipient nations. This difference reflects the NIIPs of several of the major recipients of direct investment income, such as the U.S. and France. These countries have surpluses in direct investment income but record deficits on their portfolio investment income, reflecting the "long equity, short debt" leveraged composition of their external balance sheets. The returns on direct investment allow these countries to have positive overall net investment income despite their negative NIIPs.[6] Japan and Germany, on the other hand, have positive NIIPs and record surpluses in both direct investment and portfolio investment income.[7]

Figure 2 shows the major recipients of this income and their shares over time. The U.S. received three quarters of the FDI income at the beginning of this period, and accounted for half of the income for many years until 2019. This predominance reflects several factors. First, FDI has historically been an important form of U.S. international investments, and the U.S. owns a significant share of the stock of the world's outward investment (Lipsey 2003). Second, as mentioned above, the return on U.S. FDI assets has been higher than that paid on U.S. FDI liabilities. Third, as also mentioned in the previous section, U.S. based multinationals have taken advantage of lower tax rates in foreign tax havens by shifting the source of their profits to these countries.

The decrease in the U.S. share of direct investment income over time is due to the increasing amounts of such income received by Japan and several European nations that are also home countries for multinationals. The United Kingdom had been the second largest recipient of direct investment income for many years, but its share began to diminish in 2006, and turned negative in 2014. Lane (2015) attributes the fall in earnings to declines in the stock of the United

Kingdom's direct investment assets and also a drop in the average yield on these assets relative to the liabilities.

Japan has become the second largest recipient of direct investment income. Fukuma, Morishita and Nakamuta (2016) attribute this to the growing share of direct investments in Asia, Europe and the U.S. in Japan's external assets. Germany is also a major recipient of direct investment income. Knetsch and Nagengast (2017) present evidence of the difference in the yields between German outward and inward direct investments. Finally, as mentioned above, France shows a surplus in FDI income despite a negative NIIP position. Vicard (2019) has attributed the substantial gap between the returns on outward and inward investment to profit shifting by multinational firms based in France.

To measure the degree of concentration of the receipt of net FDI income, we calculated the Herfindahl-Hirschman index with the country shares of net FDI income.[8] Figure 3 shows the results. There is a marked decline in the index from 1990, when the index was 6082, to 2006, when it registered 1843. The decrease reflects the relative decline in the U.S. share and the corresponding rise of the other advanced economies' shares. There was a rise in 2008 during the global crisis and a subsequent decline, and little variation until the last year.

The IMF data used for Figures 2 and 3 include the net income received by the Netherlands and Luxembourg, which have also grown over time.[9] However, as pointed out above, the data on FDI flows and income can overstate the actual amounts when the investments are routed through SPEs in international financial centers such as these countries. Beginning in 2005, the OECD has asked its members when reporting foreign direct investment-related data to distinguish between SPE and non-SPE activities, including income. Not all the members have complied, but Luxembourg and the Netherlands have. When these data are examined, Luxembourg's income

surplus disappears and the Netherlands' is smaller. Figure 4 shows the Herfindahl-Hirschman index for the years 2005 onwards, comparing the IMF data utilized in Figure 3 with the OECD data for non-SPE income. The OECD (dashed) line is higher in most years, indicating that the concentration of FDI income increases when only the ultimate recipient nations are included. However, the difference is relatively small, as the major recipient nations are the ultimate recipients.

FDI income can be disaggregated into its two components, equity income and debt income. The former measured the profits from a multinational's activities in a country, and the latter interest on intrafirm lending. Figure 5 shows the average of the two types of income for the advanced countries in our sample. Equity income as a proportion of national GDP shows a steady increase during the 1990s and 2000s, with a drop in 2008 followed by further rises until 2013, and subsequent decreases. Interest income for these countries, on the other hand, registers a consistent deficit over the entire sample period.

Figure 6 shows the corresponding data for the financial centers. Since 2001 these countries reported surpluses on interest income, while equity income payments registered deficits for most of this period.[10] Why would multinational firms in the advanced countries report deficits on debt-related income while the opposite phenomenon occurs in financial centers? There are several reasons why intra-firm lending may take place, such as a lower cost of financing a firm's investments. But multinationals also seek to lower their total tax liabilities by lending from units in low-tax countries to units in high-tax jurisdictions, which are usually the countries where the firms' headquarters are located. The firms are able to reduce their taxes in their home countries by deducting interest payments, while their affiliates that receive the income pay little if any tax. Our data are consistent with this interpretation.[11]

The data reveal, therefore, that amount of income that is generated by FDI has risen since the 1980s, from about 0.2% of world GDP to more recently 0.8%. This money has flowed to a few large advanced economies, principally the U.S., Japan, Germany and France. The share of the United Kingdom, on the other hand, has fallen. With the exception of the United Kingdom, these shares have been relatively stable until the most recent years. The degree of concentration rises when we adjust for income associated with SPEs in financial centers. However, these flows include debt-related payments to financial centers.

These results are consistent with those reported by Gethin (2018) on foreign income flows. He cited data from the World Inequality Lab to show that "...only a small number of rich countries benefitted from positive foreign income flows in recent years." He specifically named France, Germany and Scandinavian and Gulf countries as major recipients of foreign income when it is measured on a per capita basis.[12] He also pointed out that Ireland and Luxembourg's GDPs can overstate their standards of living when foreign income flows are taken into account.

4. Data

The sources of our data appear in Appendix Table A1, and summary statistics are reported in Appendix Tables A2 and A3. We use both IMF and OECD data, and treat the advanced economies and financial centers separately. The period of the annual data is from 1990 to 2017.

The primary dependent variable utilized in the empirical analysis is the share of national income held by the top 1% of households, which are available in the *World Inequality Database*. We also report results in the Appendix for the top 10% of households. These variables are available on an annual basis for many countries, unlike Gini coefficients.[13] They are based on annual tax returns and therefore are consistent within countries.

Our measures of FDI income include FDI equity income and interest income, each divided by national GDP, as well as all FDI income. For comparison we also include portfolio income and other investments' income, as well as net investment income, primary income and the current account. We first use the IMF data and then the OECD non-SPE data where available.[14]

The macroeconomic control variables are taken from the literature on inequality. They include the logarithms of income and incomes squared to allow a quadratic relationship based on the Kuznets curve. Trade openness is measured by exports and imports scaled by GDP, but we also use exports and imports separately. The Chinn-Ito (2006) measure is utilized for capital account openness, scaled from 1 to 100. We also include government consumption scaled by GDP.

We also used measures of a country's capital stock, which is reported by the *Penn World Tables Version 9.0* (*PWT9*) (Feenstra, Inklaar and Timmer 2015). This measure includes expenditures on research and development that would include technological innovations. The capital stock is scaled by national GDP, both in constant dollars. We also utilize the *PWT9* measure of human capital that is based on years of schooling, and we utilize its logarithmic value.

To assess the impact of financial development in the home country on the income of the richest households, we used the IMF's *Financial Development Index*. This measure evaluates financial development in terms of its depth, access and efficiency, with higher values denoting higher levels of development on a scale of 0 to 100. We utilize the separate indexes for the development of institutions and markets as they may have different effects.

We used lagged values of the determinant variables to avoid endogeneity. We included country and time fixed effects, and report robust standard errors.

5. Results

5.1 FDI Income (IMF Data)

In Table 1 we show the impact of FDI equity income, FDI interest income and all FDI income on the income share of the top 1% in the advanced economies. We use the data on these forms of income that are reported in the IMF's *Balance of Payments Statistics*.

The results in equations (1.1) and (1.2) show that FDI equity income has a positive and significant impact on the share of income. An increase in FDI equity income of 1% of GDP increases the share of income by 0.23 of a percentage point at the 5% level of significance. Multinational firms are generally publicly held, so the impact of their earnings on the income share of the richest percentile is consistent with the concentration of stock ownership among the upper-income. In the U.S., for example, the richest 1% own over half of corporate equities and mutual fund shares.[15]

Other results worth noting include those based on trade. Trade openness, the amount of exports and imports scaled by GDP, does not have a significant impact on income share in equation (1.1). But when exports and imports are entered separately in equation (1.2), exports appears with a positive coefficient significant at the 10% level, while the coefficient on the imports variable is negative and significant at the 1% level. Similar results appear in equations (1.4) and (1.6). The benefits of a trade surplus accrue to the upper-income class.

In equations (1.1) and (1.2) we included the measures of the development of financial markets and institutions. The former is not significant in levels or squared. The coefficient of financial institutions, however, has a negative coefficient that is highly significant in all the equations in this table. A one percent rise in the developments of financial institutions lowers the share of income of the upper 1% from 0.08 to 0.59 of a percent of GDP. The squared value of the

variable, on the other hand, has a negative coefficient that is also significant but very small. Further development of the financial sector contributes to more inequality. This is consistent with financial developments in countries such as the U.S. and the U.K., countries with a broad range of financial institutions and increased income inequality Similar results appear in the following estimation results.[16]

In equations (1.3) and (1.4) we replace net FDI equity income with net interest income. These coefficients are not significant; the income share of the upper 1% households is not affected by this form of income. This result is consistent with the data presented in Section 3, that showed that net interest income is relatively small and negative for the advanced economies.

Trade openness has a negative coefficient, significant at the 10% level. The different impacts of exports and imports indicate that the larger negative coefficient of the import variable is responsible for that result. In addition, the logarithm of GDP per capita and its squared values have a U-shaped relationship with income inequality. An increase in this variable initially lowers inequality but further growth has the opposite effect. However, the coefficients are not always significant in the following specifications or those in the following tables.

In equations (1.5) and (1.6) we use total net FDI income as the measure of FDI income. The coefficients are positive and highly significant. An increase in FDI income does increase the share of income of the top 1%, and the previous results show that the impact is due to equity income.

In Table 2, we further explore the relationship of investment income and inequality. In equation (2.1) we replace the measurements of FDI income with net portfolio income, and with income from other investments in equations (2.2). The former variable has a positive impact that is only significant at the 10% level, while the coefficient on the latter is negative and insignificant. In equation (2.3) we replace them with net investment income, which includes the income from

the three forms of private capital.[17] This appears with a positive and significant coefficient, which we can attribute to net FDI income. Similarly, in equation (2.4) we utilize net primary income, which adds the compensation of employees and rent to investment income. The coefficient is again positive and significant at the 5% level. Since investment income is the major component of this balance for most countries, it again largely reflects the impact of net FDI equity income. Finally, we report the impact of the current account on the income share of the upper 1%, and find that it has a positive and significant coefficient. This is due to the direct impact of net exports and also secondary income as well as net investment income.

The results for the control variables largely replicate those reported for Table 1. Exports are positively associated with the income share of the top 1%, and imports negatively related. Financial markets are not significant, while financial institutions have a U-shaped relationship. The U-shaped relationship of GDP per capita with the income share is significant only in the first two equations.

In Tables 3 and 4, we repeat the analysis of the first two tables but with data from the financial centers. Equations (3.1) and (3.2) show that FDI equity income contributes to the income share of the top 1% of households in these countries as well. An increase in this form of income by 1% as a percentage of GDP raises the share of income by 0.05 of a percentage point, which is lower than the estimates of 0.23 reported in Table 1. When we replace equity income with interest income, however, there are negative coefficients in equations (3.3) and (3.4) that are significant at the 1% levels. The gains from the interest income flows do not accrue to the richest members of the financial centers. This is consistent with the use of these countries as conduits by the multinationals that have owners elsewhere. When total FDI income is used in equations (3.5) and (3.6), the impact is positive, but only significant in equation (3.5).

The other variables have different impacts in these countries. Exports and imports have no significant impact on the share of income. The only control variables that are consistently significant are those of both capital and human capital, and these have negative coefficients. Increases in capital and human capital benefit broader sections of these economies than those in the highest income tier. Financial institutions, on the other hand, are not significant here.

In Table 4 we repeat the analysis of Table 2. Neither net portfolio income, other income, net investment income, net primary income or the current accounts have impacts on income share in equations (4.1), (4.2), (4.3), (4.4) or (4.5). The results for capital and human capital are not always significant, and in some cases where they are the significance level is 10%.

These results demonstrate that FDI income plays a different role in these countries than it does in the advanced economies. While FDI equity income does benefit those in the highest income shares, this impact is offset by the negative effect of interest income. The two largely offset each other, so there is little if any net impact from FDI or other forms of investment income.

5.2 FDI Income (IMF and OECD Data)

The preceding analysis is based on the use of IMF data. However, our results on the effect of FDI income on the income share of the top 1% may be affected by income data from SPEs that function only as conduits. Therefore we replaced the IMF data with the OECD's non-SPE FDI income data when these were reported.[18] We report the results with the transformed data in Tables 5 and 6, using the specifications of Table 1.

Table 5 demonstrates that using non-SPE income does not change our overall results for the advanced economies. This is not surprising, since most of the advanced economies claimed that there was no SPE income. The coefficients for FDI equity and FDI interest income have very

similar coefficients and significance levels to those reported in Table 1, as does net FDI income. Most of the other variables retain their signs and significance, including exports and imports and financial institutions.

Some of the results in Table 6 for the financial centers, on the other hand, differ from those in Table 43. Only two financial centers reported separate non-SPE income from total income, but those countries are the Netherland and Luxembourg, and they account for a significant amount of SPE activity and FDI income. Net FDI equity income has a positive coefficient only in equation (6.2). Interest income has negative and significant impacts in equations (6.3) and (6.4), as in Table 3. In equations (6.5) and (6.6), however, overall net FDI income does not have a significant impact on the income share of the top 1% of households. Removing the SPE data, therefore, leads to results that show less evidence of an impact of FDI income flows on the income share in the financial centers. These results confirms that the effects of FDI income on inequality in financial centers differs from those in advanced economies.

5.3 Robustness

We examined the robustness of our results in several ways. First, we reestimated the equations of Table 5 with the share of income of the top 10% of households. These results are reported in Table A4. In these results, the coefficients for FDI equity income are significant only at the 11% and 12% levels. The results for FDI total income in equations (A4.5) and (A4.6), however, are similar in value to reported in Table 5 and are significant at the 5% level. The coefficients for interest income, as in Table 5, are not statistically significant.

Some of the results for the control variables are different. All the coefficients for the income and income squared variables are negative and positive, respectively, and significant at the 1%

levels. Any initial decline in inequality due to growth will be reversed. The trade variables, however, are not significant. The financial institutions variable has a negative and significant coefficient, but the significance disappears when the squared variable is added, and the latter is also insignificant. It may be that the gains to income from further development of financial institutions accrue only to the richest 1% of households.

We also estimated the equations with Prais-Winsten regressions to address autocorrelation, with panel corrected standard errors that correct for errors that are heteroskedastic and contemporaneously correlated across panels. The results are reported in Table A5. These show again the positive impacts of net FDI equity income as well as total net FDI income on the income shares of the top 1% of households, but at lower levels of significance.

We also estimated the equations with other variables. We included the world GDP growth rate, as well as several political variables drawn from the *International Country Risk Guide* such as investor protection. In all of these results our findings for the impact of FDI income on the share of income of the top 1% remained robust. These results are available from the author.

6. Conclusions

Our analysis demonstrates that the distribution of income from FDI has been concentrated among a few advanced countries. Multinational firms in nations with large economies and an abundance of capital are able to build upon these characteristics to expand and make profits in their foreign operations. We also showed that the income earned from FDI in these economies consists of equity income, while financial centers benefit from interest income.

The quotation from Hobson in 1905 cited at the beginning of this paper demonstrates that investments by firms in advanced economies in foreign markets is not a new situation. Lenin

(1917) identified Great Britain, France, the U.S. and Germany as the "four 'pillars' of international finance capital." Will this concentration, which now includes Japan, change over time? Multinational firms based in emerging markets have expanded into markets in other economies, and their activities will yield investment income receipts that can partially offset their payments. China,, for example, has made impressive gains in developing its technology sector, and this will benefit Chinese multinational firms in the future (Sauvant and Chen 2013). But the size of China's current FDI liabilities contribute to an investment income deficit.

Moreover, the global crisis due to the coronavirus pandemic slowed FDI capital flows and income in 2020 (OECD 2020a). FDI income flows amongst the OECD countries had already fallen in 2019, after rising steadily since 2013 (OECD 2019), and the crisis is causing a further deterioration in multinational profits. The return of economic growth, when it takes place, may not lead to a resumption of FDI activities on the scale seen before. The future development of global supply chains is unclear (De Backer and Flaig 2017, Antrás 2020), while political tensions and barriers over trade pose a challenge to the resumption of FDI flows. OECD initiatives to formulate a new system of taxation of multinationals will also affect their scope and profitability.

We also show that the income flows to these countries reinforce existing income inequality. Those in the top tiers of the income distribution of a home country benefit from the income derived from the foreign operations of multinationals based there. Studies of the impact of globalization on income equality have provided evidence that financial globalization increases income inequality (Heimberger 2020), but the channel of transmission is not clear. Our work provides evidence of a mechanism linking international income flows to inequality that is valid for advanced economies. Future research can investigate the impact of FDI income outflows on income inequality in the emerging countries where the multinational firms operate.

NOTES

[1] However, FDI flows in 2018 and 2019 were lower than those of previous years. Part of this decline reflected a reversal in FDI flows in 2018 due to changes in the U.S. corporate tax code (OECD 2019, 2020a). The OECD projects a further decline in FDI flows of over 30% in 2020 due to the pandemic.

[2] See studies cited in next section.

[3] Herzer and Nunnenkamp (2013) examine the evidence of the impact of both outward and inward FDI on inequality in Europe.

[4] These countries appear on the lists of financial centers that appear in the studies cited in Section 2. Singapore is not included in our sample because it does not report data to the OECD.

[5] We scale the income data by world GDP since we are interested in the increase in all income over time.

[6] The U.S. has had a negative NIIP since the 1980s. France's current period of negative NIIPs began in 2003.

[7] There are also countries with positive net international investment income where portfolio investment accounts for most of this income. These include energy exporters, such as Saudi Arabia, Norway and Kuwait.

[8] The index squares the percentage share of income received by a country; the maximum value is 10,000.

[9] The gross inflows of investment income of the Netherlands exceed those of the advanced economies except the U.S., while Luxembourg's are similar in size. However, in these countries they are matched by gross outflows that cause the net flows of income to be smaller.

[10] The financial center with the largest FDI equity income deficit is Ireland, which is the host country for a number of multinationals with business activities in the country.

[11] Beer, de Mooij and Liu (2018) describe mechanisms utilized by multinational firms to avoid taxes.

[12] Norway and the Gulf countries are major recipients of income from portfolio capital.

[13] Some of the limitations of Gini coefficients are discussed in Alvaredo, Piketty, Saez, Chancel and Zucman's *World Inequality Report 2018*.

[14] The OECD reports these data using both the asset/liability and the directional principle. We use the data based on the former classification, since it is also utilized by the IMF in its data reporting. See OECD (2014) for an explanation and comparison of the two standards.

[15] Data on shares of ownership of U.S. equities and mutual funds are available at the Federal Reserve Economic Database of the Federal Reserve Bank of St. Louis.

[16] Brei, Ferri and Gambacorta (2018) provide a summary of the literature on financial structure and inequality.

[17] Net investment income also includes income from the reserve holdings of central banks, which would be negligible in the case of the advanced economies.

[18] Not all OECD countries differentiate between SPE and non-SPE income. On the other hand, some such as Austria, Denmark, Luxembourg, the Netherlands and Portugal do report different amounts of SPE and non-SPE income.

Figure 1

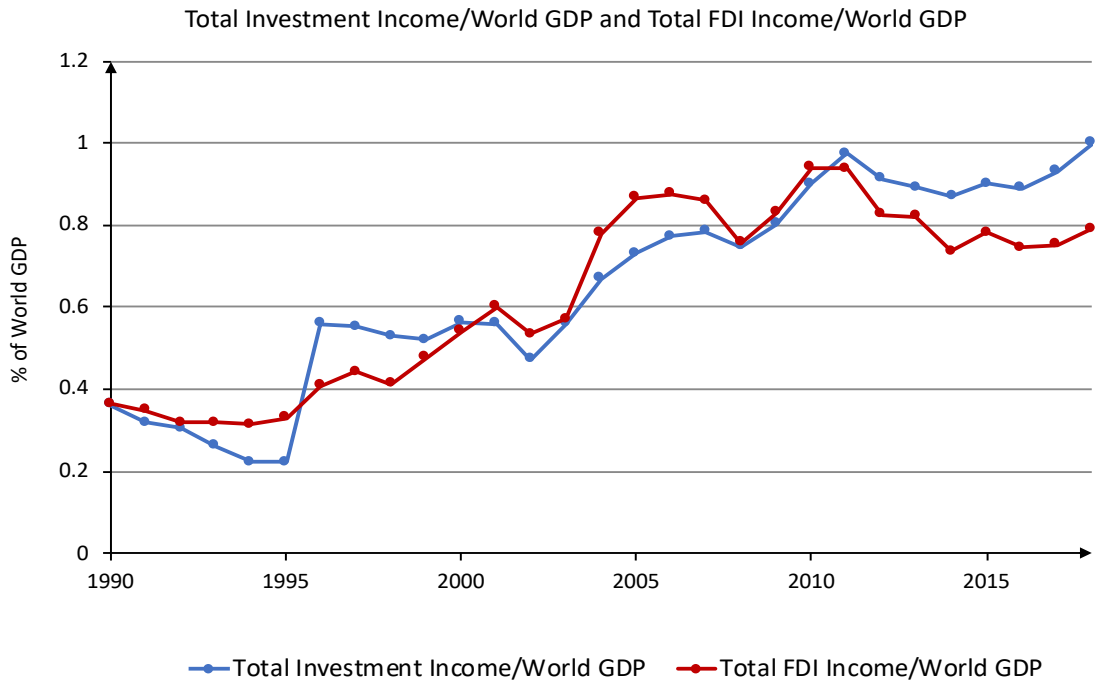

Figure 2

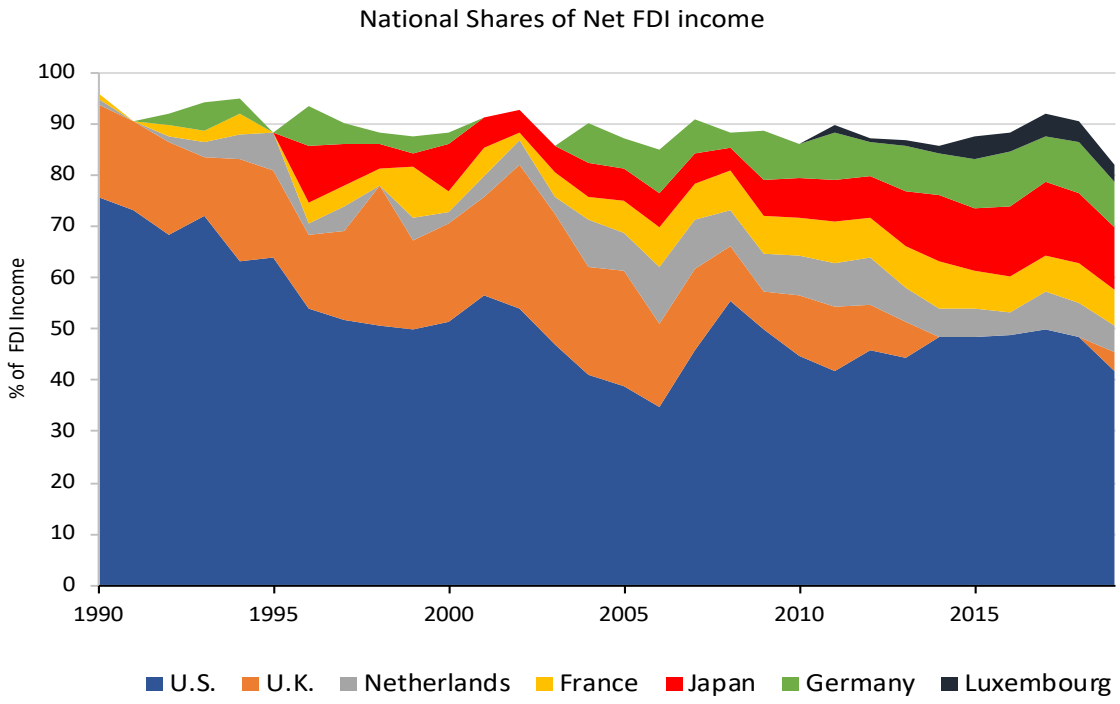

Figure 3

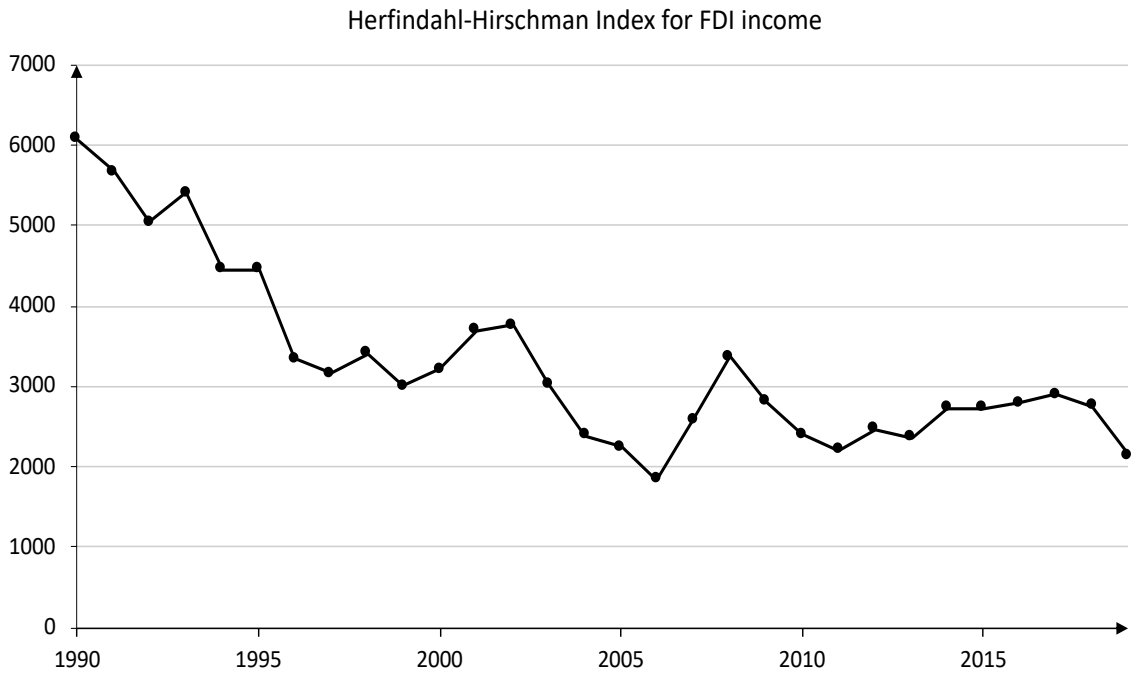

Figure 4

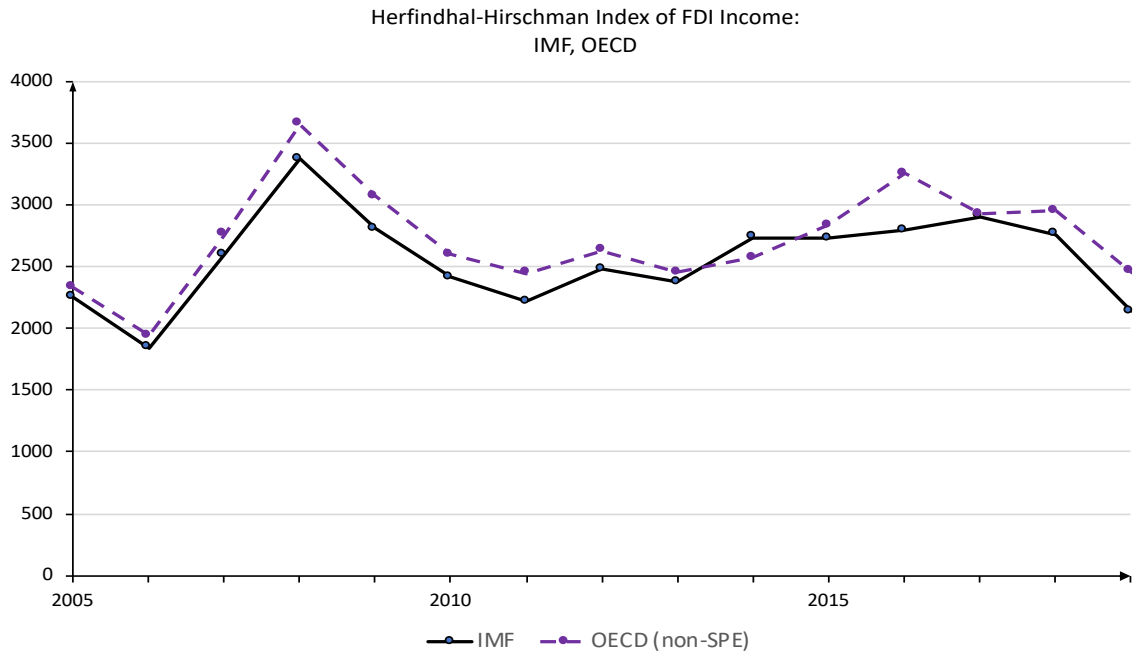

Figure 5

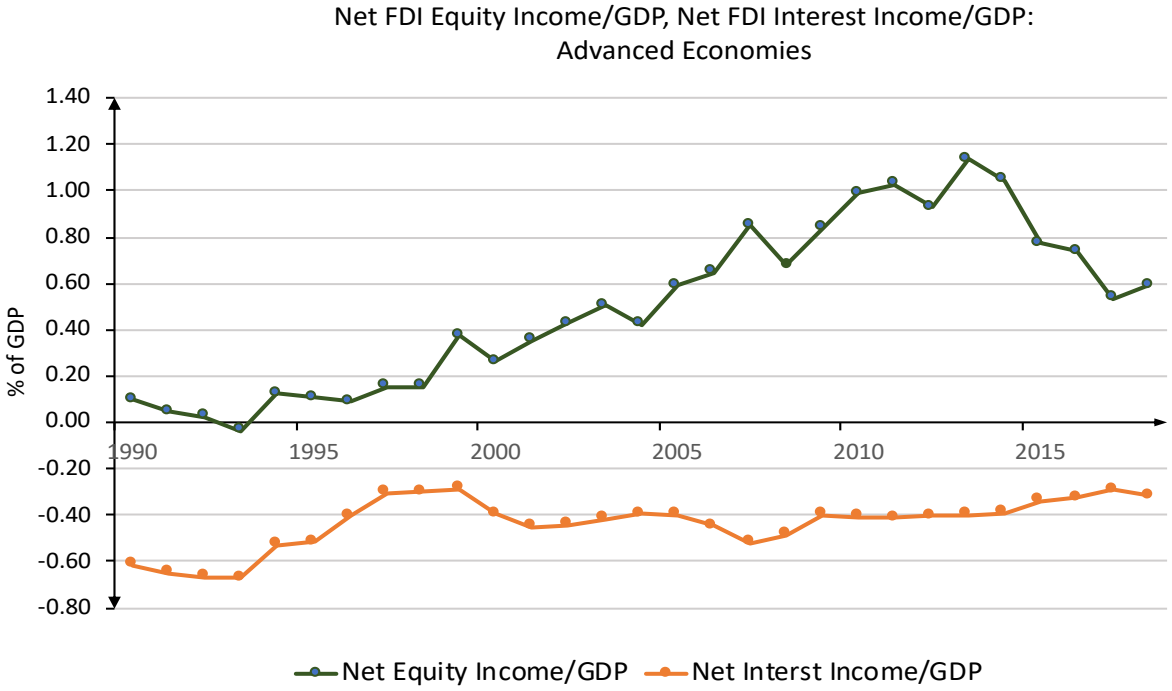

Figure 6

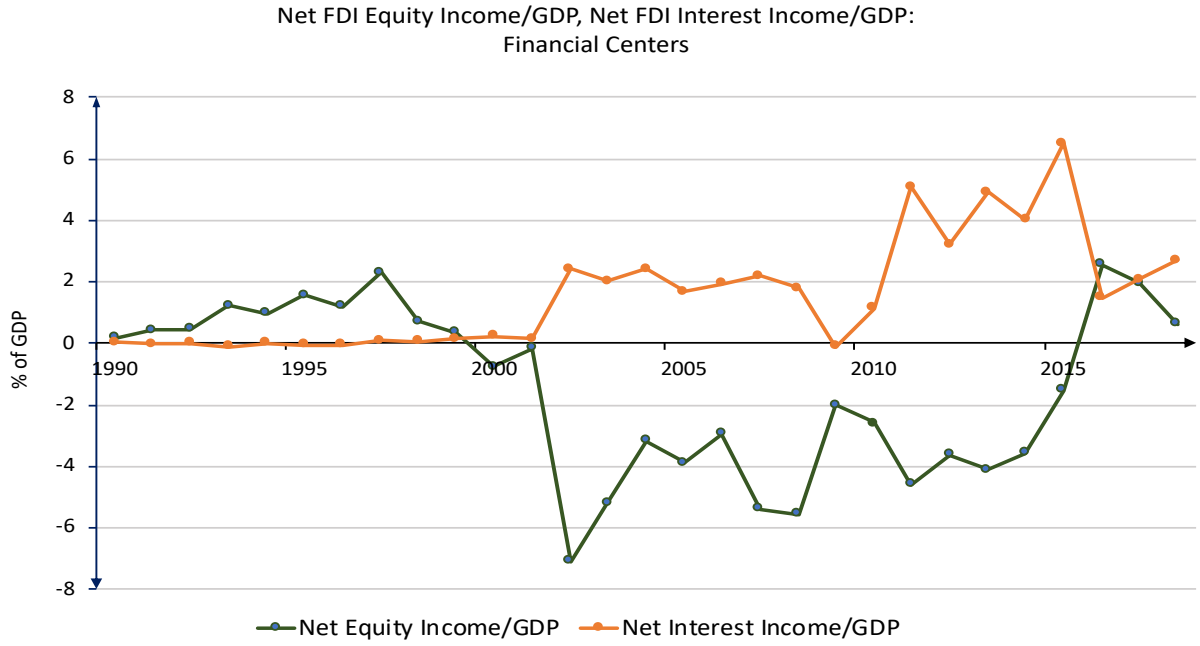

Table 1

Income Share of Top 1 % and FDI Income: Advanced Economies (IMF Data)

	(1.1)	(1.2)	(1.3)	(1.4)	(1.5)	(1.6)
Net FDI Eq Inc/Y	0.23**	0.23*				
	(0.08)	(0.11)				
Net FDI Int Inc/Y			0.07	0.22		
			(0.26)	(0.24)		
Net FDI Inc/Y					0.31***	0.31**
					(0.10)	(0.13)
Ln(Y per capita)	-34.42	-59.27*	-137.75**	-196.95***	-34.54	-58.03**
	(25.77)	(28.91)	(57.79)	(52.20)	(23.94)	(26.71)
Ln(Y per capita)2	1.51	2.78*	6.12**	9.14***	1.51	2.71**
	(1.23)	(1.38)	(2.78)	(2.48)	(1.16)	(1.28)
Trade Openness	-0.02		-0.03*		-0.02	
	(0.01)		(0.02)		(0.01)	
Exports/Y		0.10*		0.10***		0.10**
		(0.05)		(0.03)		(0.04)
Imports/Y		-0.16**		-0.16***		-0.16***
		(0.05)		(0.04)		(0.05)
Capital Acc Open	-0.00	-0.00	0.01	0.02	-0.00	-0.00
	(0.01)	(0.01)	(0.02)	(0.02)	(0.01)	(0.01)
Government/Y	-0.12	0.05	-0.10	0.08	-0.13	0.03
	(0.13)	(0.09)	(0.12)	(0.08)	(0.13)	(0.10)
Capital/Y	-0.00	-0.01	-0.01*	-0.01**	-0.00	-0.01
	(0.00)	(0.00)	(0.01)	(0.00)	(0.00)	(0.00)
Human Capital	-2.45	0.67	-1.42	2.54	-2.15	0.81
	(2.12)	(1.96)	(2.39)	(1.66)	(2.15)	(1.86)
Fin Markets	0.02	0.04	0.03*	0.02	0.02	0.05
	(0.02)	(0.05)	(0.01)	(0.04)	(0.02)	(0.05)
Fin Markets2		-0.00		0.00		-0.00
		(0.00)		(0.00)		(0.00)
Fin Institutions	-0.09***	-0.44***	-0.08***	-0.59***	-0.09***	-0.44***
	(0.02)	(0.11)	(0.02)	(0.14)	(0.02)	(0.11)
Fin Institutions2		0.00***		0.00***		0.00***
		(0.00)		(0.00)		(0.00)
Constant	220.24	343.75**	794.73**	1,087.48***	220.50*	337.60**
	(134.33)	(151.07)	(299.12)	(274.88)	(122.38)	(139.99)
R^2	0.65	0.69	0.63	0.69	0.65	0.69
N	413	413	359	359	432	432

Note: All independent variables are lagged. Country and time fixed effects are also included. The symbols *, **, *** denote statistical significance of 10%, 5% and 1%.

Table 2

Income Share of Top 1% and Portfolio, Other,
Investment and Primary Income: Advanced Economies (IMF Data)

	(2.1)	(2.2)	(2.3)	(2.4)	(2.5)
Net Por Income/Y	0.26*				
	(0.13)				
Net Other Income/Y		-0.02			
		(0.24)			
Net Inv Inc/Y			0.20**		
			(0.09)		
Net Prim Income/Y				0.19**	
				(0.08)	
Current Acc/Y					0.14**
					(0.06)
Ln(Y per capita)	-71.69**	-70.07**	-20.76	-30.50	-43.63
	(25.81)	(31.08)	(30.64)	(27.94)	(30.72)
Ln(Y per capita)2	3.24**	3.28**	0.95	1.42	2.15
	(1.25)	(1.45)	(1.46)	(1.34)	(1.43)
Exports/Y	0.10**	0.10**	0.11**	0.11**	
	(0.04)	(0.04)	(0.05)	(0.05)	
Imports/Y	-0.15***	-0.15***	-0.18***	-0.17***	
	(0.05)	(0.05)	(0.05)	(0.05)	
Capital Acc Open	0.00	-0.00	-0.00	-0.00	0.00
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Government/Y	0.07	0.05	0.03	0.06	0.12
	(0.09)	(0.10)	(0.10)	(0.10)	(0.10)
Capital/Y	-0.01**	-0.01	-0.01	-0.01	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Human Capital	1.76	1.17	0.82	0.83	1.00
	(1.93)	(1.57)	(1.79)	(1.92)	(1.92)
Fin Markets	-0.01	0.04	0.02	0.02	0.01
	(0.04)	(0.05)	(0.05)	(0.05)	(0.05)
Fin Markets2	0.00	-0.00	0.00	0.00	0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Fin Institutions	-0.60***	-0.42***	-0.44***	-0.44***	-0.44***
	(0.11)	(0.11)	(0.11)	(0.12)	(0.12)
Fin Institutions2	0.00***	0.00***	0.00***	0.00***	0.00***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Constant	427.23***	398.98**	141.10	191.19	243.11
	(133.95)	(166.87)	(162.40)	(147.31)	(167.56)
R^2	0.69	0.67	0.68	0.68	0.68
N	411	444	444	444	444

Note: All independent variables are lagged. Country fixed effects are also included. The symbols *, **, *** denote statistical significance of 10%, 5% and 1%.

Table 3

Income Share of Top 1% and FDI Income: Financial Centers (IMF Data)

	(3.1)	(3.2)	(3.3)	(3.4)	(3.5)	(3.6)
Net FDI Eq Inc/Y	0.05***	0.05***				
	(0.01)	(0.01)				
Net FDI Int Inc/Y			-0.04***	-0.03***		
			(0.01)	(0.00)		
Net FDI Inc/Y					0.04**	0.03
					(0.01)	(0.02)
Ln(Y per capita)	163.73	126.87	130.16	-11.44	122.61	78.93
	(147.12)	(180.66)	(181.27)	(174.94)	(178.12)	(203.82)
Ln(Y per capita)2	-7.53	-5.80	-6.05	0.48	-5.64	-3.60
	(6.68)	(8.27)	(8.23)	(7.99)	(8.10)	(9.33)
Trade Openness	0.01		0.01		0.00	
	(0.01)		(0.01)		(0.01)	
Exports/Y		-0.01		-0.06		-0.02
		(0.04)		(0.03)		(0.03)
Imports/Y		0.02		0.07		0.03
		(0.04)		(0.03)		(0.04)
Capital Acc Open	-0.01	-0.02	-0.00	-0.02	-0.01	-0.02
	(0.02)	(0.02)	(0.02)	(0.03)	(0.01)	(0.02)
Government/Y	-0.02	0.04	-0.02	0.01	-0.02	0.03
	(0.09)	(0.14)	(0.09)	(0.15)	(0.12)	(0.13)
Capital/Y	-0.03**	-0.03**	-0.03**	-0.03**	-0.02**	-0.03*
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Human Capital	-13.78***	-13.69***	-9.76**	-9.62**	-13.34***	-12.87***
	(2.15)	(2.48)	(3.14)	(3.22)	(1.78)	(2.19)
Fin Markets	-0.02	-0.07	-0.03*	-0.05	-0.02	-0.06
	(0.01)	(0.05)	(0.01)	(0.04)	(0.01)	(0.05)
Fin Markets2		0.00		0.00		0.00
		(0.00)		(0.00)		(0.00)
Fin Institutions	-0.09	0.35	-0.07	0.56	-0.09	0.31
	(0.05)	(0.32)	(0.06)	(0.44)	(0.05)	(0.28)
Fin Institutions2		-0.00		-0.00		-0.00
		(0.00)		(0.00)		(0.00)
Constant	-813.65	-632.51	-639.51	105.84	-593.27	-374.75
	(812.30)	(974.11)	(1,000.53)	(942.69)	(980.96)	(1,101.75)
R^2	0.73	0.74	0.73	0.75	0.71	0.72
N	95	95	91	91	95	95

Note: All independent variables are lagged. Country and time fixed effects are also included. The symbols *, **, *** denote statistical significance of 10%, 5% and 1%.

Table 4

Income Share of Top 1% and Portfolio Income, Other Income,
Investment Income, Primary Income and Current Account: Financial Centers (IMF Data)

	(4.1)	(4.2)	(4.3)	(4.4)	(4.5)
Net Por Income/Y	-0.01				
	(0.03)				
Net Other Income/Y		-0.01			
		(0.04)			
Net Inv Income/Y			-0.02		
			(0.05)		
Net Prim Income/Y				0.08	
				(0.04)	
Current Acc/Y					-0.04
					(0.04)
Ln(Y per capita)	32.57	72.99	68.84	-39.42	16.76
	(248.00)	(270.58)	(171.05)	(35.19)	(36.56)
Ln(Y per capita)2	-1.45	-3.32	-3.13	2.25	-0.26
	(11.36)	(12.42)	(7.81)	(1.69)	(1.76)
Exports/Y	-0.03	-0.04	-0.04	-0.05**	
	(0.03)	(0.03)	(0.03)	(0.02)	
Imports/Y	0.05	0.04	0.05	0.03	
	(0.03)	(0.05)	(0.03)	(0.02)	
Capital Acc Open	-0.02	-0.02	-0.03	0.01	-0.03
	(0.02)	(0.02)	(0.04)	(0.03)	(0.03)
Government/Y	0.09	0.02	0.03	0.09	0.23
	(0.19)	(0.22)	(0.10)	(0.07)	(0.16)
Capital Stock/Y	-0.03*	-0.03*	-0.02*	0.00	0.00
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Human Capital	-13.27	-8.90	-10.37**	-4.14**	-4.51
	(8.50)	(6.67)	(3.03)	(1.15)	(2.27)
Fin Markets	-0.04	-0.05	-0.04	-0.12*	-0.01
	(0.06)	(0.05)	(0.05)	(0.06)	(0.05)
Fin Markets2	0.00	0.00	0.00	0.00	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Fin Institutions	0.34	0.26	0.24	0.90	0.77
	(0.34)	(0.37)	(0.29)	(0.50)	(0.59)
Fin Institutions2	-0.00	-0.00	-0.00	-0.01	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Constant	-127.17	-354.91	-327.85	150.48	-159.22
	(1,358.17)	(1,467.63)	(933.41)	(174.58)	(182.11)
R^2	0.72	0.71	0.73	0.68	0.62
N	95	95	98	126	126

Note: All independent variables are lagged. Country and time fixed effects are also included. The symbols *, **, *** denote statistical significance of 10%, 5% and 1%.

Table 5

Income Share of Top 1% and FDI Income: Advanced Economies (IMF, OECD Data)

	(5.1)	(5.2)	(5.3)	(5.4)	(5.5)	(5.6)
Net FDI Eq Inc/Y	0.26**	0.23**				
	(0.09)	(0.11)				
Net FDI Int Inc/Y			-0.19	0.03		
			(0.32)	(0.27)		
Net FDI Inc/Y					0.35***	0.32**
					(0.11)	(0.12)
Ln(Y per capita)	-31.34	-58.53*	-135.76**	-197.93***	-31.63	-56.96**
	(26.43)	(29.29)	(57.50)	(51.80)	(24.07)	(26.75)
Ln(Y per capita)2	1.35	2.74*	6.02**	9.19***	1.36	2.66*
	(1.27)	(1.40)	(2.77)	(2.46)	(1.18)	(1.28)
Trade Openness	-0.02		-0.04**		-0.02*	
	(0.02)		(0.02)		(0.01)	
Exports/Y		0.10*		0.10**		0.09**
		(0.05)		(0.03)		(0.04)
Imports/Y		-0.15***		-0.16***		-0.16***
		(0.05)		(0.05)		(0.05)
Capital Acc Open	-0.00	-0.00	0.01	0.02	-0.00	-0.00
	(0.01)	(0.01)	(0.02)	(0.02)	(0.01)	(0.01)
Government/Y	-0.13	0.04	-0.14	0.06	-0.14	0.02
	(0.13)	(0.09)	(0.13)	(0.08)	(0.13)	(0.10)
Capital/Y	-0.00	-0.01	-0.01*	-0.01**	-0.00	-0.01
	(0.00)	(0.00)	(0.01)	(0.00)	(0.00)	(0.00)
Human Capital	-2.59	0.69	-1.59	2.56	-2.42	0.68
	(2.12)	(1.97)	(2.44)	(1.70)	(2.14)	(1.88)
Fin Markets	0.02	0.04	0.03*	0.02	0.02	0.04
	(0.01)	(0.05)	(0.01)	(0.04)	(0.02)	(0.05)
Fin Markets2		-0.00		0.00		-0.00
		(0.00)		(0.00)		(0.00)
Fin Institutions	-0.09***	-0.44***	-0.09***	-0.59***	-0.09***	-0.43***
	(0.02)	(0.11)	(0.02)	(0.13)	(0.02)	(0.11)
Fin Institutions2		0.00***		0.00***		0.00***
		(0.00)		(0.00)		(0.00)
Constant	206.48	340.08**	786.60**	1,092.54***	208.31	332.93**
	(136.80)	(152.83)	(296.57)	(272.68)	(122.36)	(140.05)
R^2	0.65	0.69	0.63	0.69	0.65	0.69
N	418	418	361	361	434	434

Note: All independent variables are lagged. Country and time fixed effects are also included. The symbols *, **, *** denote statistical significance of 10%, 5% and 1%.

Table 6

Income Share of Top 1 % and FDI Income: Financial Centers (IMF, OECD Data)

	(6.1)	(6.2)	(6.3)	(6.4)	(6.1)	(6.5)
Net FDI Eq Inc/Y	0.02	0.04**				
	(0.01)	(0.01)				
Net FDI Int Inc/Y			-0.04***	-0.05***		
			(0.01)	(0.01)		
Net FDI Inc/Y					-0.02	-0.01
					(0.02)	(0.02)
Ln(Y per capita)	137.65	57.43	74.72	-88.33	130.32	54.13
	(183.00)	(202.22)	(210.76)	(213.33)	(191.79)	(207.40)
Ln(Y per capita)2	-6.37	-2.66	-3.50	4.01	-5.97	-2.44
	(8.30)	(9.20)	(9.58)	(9.74)	(8.75)	(9.50)
Trade Openness	0.01		0.00		0.01	
	(0.01)		(0.01)		(0.01)	
Exports/Y		-0.05		-0.07*		-0.04
		(0.04)		(0.03)		(0.03)
Imports/Y		0.06		0.07*		0.05
		(0.04)		(0.03)		(0.03)
Capital Acc Open	-0.00	-0.02	-0.01	-0.03	-0.01	-0.02
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Government/Y	0.04	0.07	-0.03	0.00	0.04	0.06
	(0.13)	(0.15)	(0.09)	(0.14)	(0.13)	(0.15)
Capital/Y	-0.03**	-0.03**	-0.02*	-0.03*	-0.02**	-0.03**
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Human Capital	-10.59**	-11.20**	-10.56**	-10.50**	-9.64**	-9.87**
	(2.85)	(2.75)	(3.08)	(3.04)	(2.98)	(3.07)
Fin Markets	-0.02	-0.07	-0.03	-0.03	-0.02	-0.04
	(0.01)	(0.05)	(0.01)	(0.05)	(0.01)	(0.04)
Fin Markets2		0.00		-0.00		0.00
		(0.00)		(0.00)		(0.00)
Fin Institutions	-0.08	0.41	-0.08	0.58	-0.07	0.29
	(0.05)	(0.32)	(0.05)	(0.38)	(0.05)	(0.32)
Fin Institutions2		-0.00		-0.00		-0.00
		(0.00)		(0.00)		(0.00)
Constant	-679.00	-259.07	-336.99	525.20	-652.42	-253.75
	(1,011.74)	(1,099.75)	(1,160.84)	(1,154.72)	(1,051.25)	(1,119.00)
R^2	0.71	0.72	0.72	0.74	0.70	0.71
N	95	95	91	91	95	95

Note: All independent variables are lagged. Country and time fixed effects are also included. The symbols *, **, *** denote statistical significance of 10%, 5% and 1%.

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Appendix Table 1

Data Sources

Variable	*Source*
Capital Account Openness (1 – 100)	Chinn-Ito (2006)
Capital Stock (constant 2011 million $)/Constant GDP (%)	*PWT9*
Current Account/GDP (%)	*WDI*
Exports/GDP (%)	*WDI*
Financial Institutions, Financial Markets (1-100)	*FDI*
GDP per capita (constant 2010 million $)	*WDI*
Government Expenditures/GDP (%)	*IFS*
Human Capital	*PWT9*
Imports/GDP (%)	*WDI*
Net FDI Equity Income (Credits – Debits)/GDP (%), Net FDI Income (Credits – Debits)/GDP (%), Net FDI Interest Income (Credits – Debits)/GDP X (%), Net Investment Income (Credits – Debits)/GDP (%), Net Other Income (Credits – Debits)/GDP (%), Net Portfolio Income (Credits – Debits)/GDP (%), Net Primary Income /GDP (%)	*BOPS, WDI, OECD Data*
Trade Openness (Exports + Imports/GDP) (%)	*WDI*
World GDP Annual Growth (%)	*WDI*

Note: *BOPS: Balance of Payments Statistics*, IMF*; FDI = Financial Development Index Database,* IMF*; ICRG = International Country Risk Guide,* PRS Group; *IFS = International Financial Statistics*, IMF*; PWT9 = Penn World Tables 9.1; WDI = World Development Indicators*, World Ban

Appendix Table A2

Summary Statistics for Advanced Economies

Variable	*Mean*	*Standard Deviations*	*Minimum*	*Maximum*
Capital Account Openness	94.47	14.04	16.60	100.00
Capital Stock/GDP	559.51	148.26	333.18	993.42
Current Account/GDP	-0.03	4.81	-14.47	16.18
Exports/GDP	29.84	11.24	8.97	55.76
Financial Institutions	75.69	12.16	47.85	95.61
Financial Markets	58.94	20.65	7.43	94.47
Ln(GDP per capita)	10.57	0.33	9.72	11.43
Government Expenditure/GDP	19.94	2.93	13.55	27.94
Human Capital	3.20	0.39	1.94	3.76
Imports/GDP	29.04	9.16	6.94	51.18
Net FDI Eq Income/GDP (IMF)	0.51	1.18	-2.90	4.72
Net FDI Income/GDP (IMF)	0.30	1.25	-3.47	3.94
Net FDI Interest Income/GDP (IMF)	-0.41	0.73	-3.56	0.56
Net FDI Non-SPE Eq Income/GDP (OECD)	0.46	1.53	-3.46	2.26
Net FDI Non-SPE Income/GDP (OECD)	0.35	1.60	-3.74	2.48
Net FDI Non-SPE Interest Income/GDP (OECD)	-0.17	0.21	-0.84	0.22
Net Investment Income/GDP	-0.40	2.08	-5.57	5.37
Net Other Income/GDP	-0.29	0.94	-4.37	1.74
Net Portfolio Income/GDP	-0.52	1.16	-3.30	3.75
Net Primary Income /GDP	-0.61	2.11	-7.59	4.26
Trade Openness	58.84	19.95	16.01	107.79

Note: See Table A1 for units of measurement.

Appendix Table A3

Summary Statistics for Financial Centers

Variable	*Mean*	*Standard Deviations*	*Minimum*	*Maximum*
Capital Account Openness	97.14	9.14	41.6	100.0
Capital Stock/GDP	563.03	128.04	358.88	925.79
Current Account/GDP	7.90	6.22	-5.56	27.14
Exports/GDP	111.68	55.73	40.50	228.99
Financial Institutions	78.50	10.87	55.77	100.00
Financial Markets	62.46	17.52	19.01	100.00
Ln(GDP per capita)	10.76	0.43	9.81	11.63
Government Expenditure/GDP	15.51	5.45	6.84	26.24
Human Capital	3.07	0.33	2.05	3.97
Imports/GDP	99.94	50.83	36.25	221.01
Net FDI Eq Income/GDP (IMF)	-2.11	8.45	-31.39	31.87
Net FDI Income/GDP (IMF)	-0.00	9.89	-20.04	43.87
Net FDI Interest Income/GDP (IMF)	2.29	5.51	-6.09	34.61
Net FDI Non-SPE Eq Income/GDP (OECD)	-7.80	4.61	-13.83	-0.76
Net FDI Non-SPE Income/GDP (OECD)	-10.15	5.20	-16.95	-1.53
Net FDI Non-SPE Interest Income/GDP (OECD)	0.57	1.02	-0.77	2.04
Net Investment Income/GDP	-0.79	7.29	-21.86	10.62
Net Other Income/GDP	0.86	5.16	-14.12	27.67
Net Portfolio Income/GDP	-2.27	13.23	-63.67	13.07
Net Primary Income /GDP	-3.34	9.27	-33.63	8.47
Trade Openness	211.41	105.93	76.95	442.62

Note: See Table A1 for units of measurement

Table A4

Income Share of Top 10% and FDI Income: Advanced Economies (IMF, OECD Data)

	(A4.1)	(A4.2)	(A4.3)	(A4.4)	(A4.5)	(A4.6)
Net FDI Eq Inc/Y	0.29	0.31				
	(0.17)	(0.18)				
Net FDI Int Inc/Y			-0.47	-0.47		
			(0.46)	(0.46)		
Net FDI Inc/Y					0.38**	0.40**
					(0.16)	(0.17)
Ln(Y per capita)	-91.78***	-110.24**	-192.10***	-216.11***	-93.10***	-110.55**
	(31.06)	(43.25)	(59.94)	(66.10)	(28.98)	(39.73)
Ln(Y per capita)2	4.08**	4.97**	8.51***	9.70***	4.14**	4.98**
	(1.51)	(2.09)	(2.80)	(3.12)	(1.42)	(1.93)
Trade Openness	-0.01		-0.01		-0.01	
	(0.03)		(0.03)		(0.03)	
Exports/Y		0.03		0.00		0.03
		(0.07)		(0.06)		(0.06)
Imports/Y		-0.09		-0.03		-0.08
		(0.06)		(0.06)		(0.05)
Capital Acc Open	-0.00	-0.01	0.00	0.01	-0.00	-0.01
	(0.01)	(0.02)	(0.02)	(0.02)	(0.01)	(0.02)
Government/Y	0.05	0.12	0.08	0.13	0.02	0.08
	(0.16)	(0.19)	(0.16)	(0.17)	(0.15)	(0.18)
Human Capital	-0.01	-0.01	-0.02**	-0.02**	-0.01	-0.01
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Capital/Y	-4.27	-3.37	-5.21***	-3.98**	-3.92	-3.16
	(2.66)	(2.54)	(1.65)	(1.68)	(2.59)	(2.44)
Fin Markets	0.03	0.10	0.03	0.06	0.03	0.10*
	(0.02)	(0.06)	(0.02)	(0.05)	(0.02)	(0.06)
Fin Markets2		-0.00		-0.00		-0.00
		(0.00)		(0.00)		(0.00)
Fin Institutions	-0.11***	-0.25	-0.12***	-0.37	-0.11***	-0.24
	(0.04)	(0.25)	(0.04)	(0.29)	(0.04)	(0.24)
Fin Institutions2		0.00		0.00		0.00
		(0.00)		(0.00)		(0.00)
Constant	566.70***	664.41**	1,139.89***	1,263.80***	574.08***	666.78***
	(166.89)	(230.40)	(325.16)	(355.74)	(156.15)	(212.97)
R^2	0.65	0.66	0.60	0.61	0.65	0.66
N	418	418	361	361	434	434

Note: All independent variables are lagged. Country and time fixed effects are also included. The symbols *, **, *** denote statistical significance of 10%, 5% and 1%.

Table A5

Income Share of Top 1% and FDI Income: Advanced Economies (IMF, OECD Data)

	(A5.1)	(A5.2)	(A5.3)	(A5.4)	(A5.5)	(A5.6)
Net FDI Eq Inc/Y	0.12	0.15*				
	(0.08)	(0.08)				
Net FDI Int Inc/Y			-0.23	-0.35		
			(0.23)	(0.22)		
Net FDI Inc/Y					0.14*	0.16*
					(0.08)	(0.08)
Ln(Y per capita)	-64.43***	-71.37***	-83.99*	-98.97**	-63.08***	-68.36***
	(20.86)	(20.40)	(46.71)	(48.12)	(20.87)	(20.90)
Ln(Y per capita)2	2.95***	3.25***	3.88*	4.57**	2.89***	3.12***
	(0.96)	(0.95)	(2.22)	(2.29)	(0.96)	(0.97)
Trade Openness	-0.01*		-0.02**		-0.01**	
	(0.01)		(0.01)		(0.01)	
Exports/Y		0.01		0.01		0.01
		(0.03)		(0.03)		(0.03)
Imports/Y		-0.03		-0.03		-0.04
		(0.03)		(0.03)		(0.03)
Capital Acc Open	-0.00	-0.00	0.01	0.01	-0.00	-0.00
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Government/Y	0.00	-0.00	-0.07	-0.04	-0.01	-0.00
	(0.06)	(0.06)	(0.05)	(0.05)	(0.06)	(0.05)
Human Capital	0.00*	0.00	0.00	0.00	0.00	0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Capital/Y	2.42***	2.65***	2.95***	2.87***	2.08**	2.30***
	(0.86)	(0.80)	(0.86)	(0.79)	(0.85)	(0.79)
Fin Markets	0.02***	0.04**	0.02***	0.04	0.02***	0.05**
	(0.01)	(0.02)	(0.01)	(0.03)	(0.01)	(0.02)
Fin Markets2		-0.00		-0.00		-0.00
		(0.00)		(0.00)		(0.00)
Fin Institutions	0.00	-0.08	0.01	-0.40***	0.00	-0.07
	(0.01)	(0.11)	(0.02)	(0.14)	(0.01)	(0.10)
Fin Institutions2		0.00		0.00***		0.00
		(0.00)		(0.00)		(0.00)
Constant	349.04***	390.49***	453.28*	548.08**	343.88***	375.52***
	(110.82)	(107.38)	(244.19)	(251.76)	(111.37)	(110.55)
R^2	0.89	0.89	0.85	0.88	0.89	0.88
N	418	418	361	361	434	434

Note: All independent variables are lagged. Time fixed effects are also included. The symbols *, **, *** denote statistical significance of 10%, 5% and 1%. Estimation done with Prais-Winsten regressions and panel-corrected standard errors.