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Joyce, Joseph

Wellesley College

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by

Joseph P. Joyce[1]
Department of Economics
Wellesley College
Wellesley, MA 02481 U.S.
jjoyce@wellesley.edu

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 evaluate the impact of this income on the income share of the top 1% of households in the multinationals' home countries. We distinguish between FDI equity income and FDI interest income arising from intra-firm lending. We also consider separately the effects in advanced economies and countries that serve as financial centers. FDI equity income contributes to the income share of the top 1% of households in advanced economies, while FDI interest income has no impact in these economies. Similar results are recorded when we use the OECD non-SPE data. As a result, total FDI income reinforces the income share of the top 1% of households in these countries. While there is some evidence of a similar impact by FDI equity income on the top 1% income households in the financial centers, this result is not apparent when non-SPE income data are used.

Key words: FDI income, multinational firms, inequality

JEL: F21, F23

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 impact of globalization, and financial globalization in particular, on income inequality is a growing area of research.[1] Many studies have examined the impact of capital flows on the distribution of income in the host country, and often find that these flows often increase inequality.[2] The causes of these linkages depends on the type of capital flow under consideration (FDI, portfolio equity and debt, other).

FDI has the potential to affect income due to its long-term nature and its growth over time. While bank lending contracted after the global financial crisis, FDI, which had been increasing 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). More recently, FDI flows have fallen because of changes in the tax treatment of multinationals in the U.S., low economic growth, and the pandemic in 2020 (OECD 2022).

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 for some countries.

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However, some of these flows of investment are channeled through countries that serve as financial conduits 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 Johannesen (2019) have referred to such investments as "phantom" investments, as oppose to "real" investments by multinationals in subsidiaries that actually engage in business activities. These flows result in the "double counting" of FDI and an overstatement of its size, which also affects the measurement of investment income.

While past research has investigated the impact of FDI flows on income inequality, FDI income has not been treated similarly. But the earnings on FDI provide income, and its impact on income distribution should be studied for several reasons. FDI income surpluses are concentrated in the advanced economies that are the home countries for multinational firms. Due to the concentration of financial wealth within these countries, corporate profits accrue to those in the upper distribution of income of these countries. Moreover, the compensation of corporate executives has been shown to respond to their firms' foreign activities (Ma and Ruzic 2020, Keller and Olney 2021). FDI income, therefore, can contribute to income inequality within the advanced economies.

This paper makes several contributions to our understanding of this aspect of financial globalization. First, we analyze the impact of these income flows on the shares of income received by the top 1% of households in advanced economies and financial centers. Second, we distinguish between FDI income that reflects equity activities and the interest income arising from intra-firm debt. Third, we demonstrate how differentiating between total and non-SPE generated income affects these linkages.

To preview our results, we find that FDI equity income—but not interest income—contributes to the income share of the top 1% households. We obtain similar results in the advanced economies when we exclude SPE-generated income, but not the financial centers. We do not find any evidence of an impact of portfolio or other flows on income shares, indicating that FDI income plays a special role in international investment.

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 return on foreign capital, which consists of income and valuation changes, and its role in international financial adjustment has 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 (2007, 2014) attributed this return to a composition effect, i.e., the difference between the returns on 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) and Darvas and Hüttl (2017) 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. Joyce (2021) found that payments on FDI liabilities are largely responsible for the net investment income deficits recorded by these countries. Zélity (2022) 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.

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), Bosworth, Collins and Chodrow-Reich (2007), Clausing (2009, 2016), 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.

Studies of the impact of financial globalization on income inequality have examined the experience of countries with capital inflows (Kaulihowa and Adjasi 2018), inflows and outflows (Herzer and Nunnekamp 2013, Huang, Teng and Tsai 2016) and capital account liberalization (Bumann and Lensink 2016, Furceri and Loungani 2018, Furceri, Loungani and Ostry 2019).

Eichengreen et al. (2021) review the distributional effects of FDI, and report evidence of a positive relationship between inward FDI and inequality in emerging markets and developing economies. They also find that outward FDI is positively associated with inequality in advanced economies, in part due to reduced demand for unskilled labor.

Cabral, Garcío-Díaz and Varella Mollic (2016) investigated the impact of trade and financial globalization on income shares in a sample of advanced and developing economies, and reported that holdings of portfolio equity and FDI had a large impact on the income of the richest households. Similarly, Baek and Chia (2020) examined the effects of FDI, portfolio, and other forms of capital assets and liabilities on inequality in a group of advanced and emerging markets economies. They reported that the share of FDI assets in a country's total outward position had a positive impact on a country's Gini coefficient.

These studies do not explain the mechanisms through which FDI stocks could affect income inequality in the home country. In addition to the effect of FDI flows mentioned above, the resulting investment income can have additional impacts on income inequality. First, Piketty and Zucman (2014) show that foreign assets have played a significant role in the rise in wealth in the advanced economies., and ownership of wealth is heavily skewed towards the upper-income classes. In the U.S., for example, the top 10% of stock ownership owning 85% of all stock (Wolff 2021), and similar trends have been recorded for Europe (Zucman 2019). The concentration of the ownership of stock among the upper-income segment of a population indicates that the income generated by these firms would flow to those groups.

Second, the dispersion in labor income inequality has contributed to overall income inequality in the U.S. and Europe (Hoffman, Lee and Lemieux 2020). Ma and Ruzic (2020) develop a model that shows that executives benefit more from increased profits in foreign markets

than do workers, and provide evidence that this channel is quantitatively important for the increase in top U.S. income shares. Similarly, Keller and Olney (2021) found that foreign business activities increase the compensation of U.S. top corporate executives, and this would constitute a channel whereby foreign income contributes to the income of those in the upper tiers of the distribution. Similarly, Kuwahata (2022) reports that outward FDI influences the compensation of Japanese executives.

3.   Trends

In this section, we examine the trends in FDI income and its recipients. We begin with the data on international investment income reported in the IMF's *Balance of Payments Statistics*. [3] 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.[4] 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.[5] This difference reflects the composition of 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" structure 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.

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, the return on U.S. FDI assets has been higher than that paid on U.S. FDI liabilities. Third, as 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 rise to the growing share of that country's direct investments in Japan's external assets. Germany is also a major recipient of direct investment

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income. Knetsch and Nagengast (2017) present evidence that the increase in German investment income reflects the accumulation of more foreign assets as well as changes in yields.[7] 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 stated 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 FDI-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.

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.

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.[10] In the next section we examine how the income flows affected inequality within these countries.

4. Data and Methodology

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 original sources of the investments and their final destinations. The advanced countries are Australia, Austria, Canada, Denmark, Estonia, 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.[11]

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 annual data, and treat the advanced economies and financial centers separately. The period of the annual data is from 1990 to 2019.

The primary dependent variable utilized in the empirical analysis is the share of national income held by the top 1% of households, which are reported 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.[12] They are based on 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. We first use the IMF data and then the OECD non-SPE data where available.[13] For comparison we also include portfolio income and other investments' income, as well as net investment income, primary income and the current account.

The macroeconomic control variables are taken from the literature on inequality. They include the logarithms of income and income 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, measured from 1 to 100. We also include government consumption scaled by GDP.

We utilize a measure of a country's capital stock, which is reported by the *Penn World Tables Version 10.0* (*PWT10*) (Feenstra, Inklaar and Timmer 2015). The capital stock is scaled by national GDP, both in constant dollars. We also utilize the *PW10* 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 tested for the presence of unit roots in our data. Most tests assume balanced panels, which we do not have. Therefore, we used the Fisher tests, which allow unbalanced panels. The results rejected the hypotheses that the panels contain a unit root. The results are reported in Table A4 in the Appendix.

The estimation equations take the form:

$$Y_t = \alpha_{i,t} + \beta X_{i,t-1} + \gamma Z_{i,t-1} + \delta_i + \epsilon_t + \mu_{i,t} \qquad (1)$$

where Y_t is share of income, $X_{i, t-1}$ are measures of FDI income, $Z_{i,t-1}$ are control variables, δ_i are country fixed effects, and ξ_t are time fixed effects.

For our panel analysis we used a fixed-effects estimator which included time fixed effects.[14] The country and time fixed effects allow us to control for heterogeneity among the countries in our sample. In the results we report standard errors that are robust to cross-sectional heteroskedasticity and within-panel serial estimation. We used lagged values of the determinant variables to avoid endogeneity.[15]

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*.

Equation (1.1) has the initial specification, while in equation (1.2) we disaggregate trade and financial development into their components while adding the squared value of income per capita. FDI equity income has positive and highly significant coefficients in both equations. An increase in FDI equity income of 1% of GDP increases the share of income by 0.27-0.28 of a percentage point of GDP at the 1% level of significance.

Other results are worth noting include those based on trade. When exports and imports are entered separately in equation (1.2), the imports variable is negative and significant at the 5% level. Similar results for imports appear in equations (1.4), (1.5) and (1.6), while the exports variable has positive coefficients significant at the 10% and 5% levels in equations (1.4) and (1.5).

When we include financial development in equation (1.1), the coefficient has a negative coefficient significant at the 10% level. When we use the components of financial development as separate variables in equation (1.2), the development of financial markets is not significant. The coefficient of financial institutions, however, has a negative coefficient that is significant at the 5% level. The same variable has negative and significant coefficients 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% by 0.07 - 0.52 of a percent of GDP. More financial institutions may enable more people to better manage risk and make long-term plans, thus lowering ineqaulity.[16]

In addition, the logarithm of GDP per capita has a negative but insignificant coefficient in equation (1.1). But when we add its squared value in the next equation, the coefficient is significant at the 1% level, while the squared value has a much smaller but positive coefficient that is also significant. An increase in this variable initially lowers inequality but further growth has the opposite effect.

In equations (1.3) and (1.4) we replace net FDI equity income with net FDI interest income. These coefficients are not significant; the income share of the upper 1% households is not affected by this form of income. Net interest income is relatively small and negative for the advanced economies, so its lack of significance is not surprising.

In addition, the logarithm of GDP per capita and its squared values have a significant U-shaped relationship with income inequality in equation (1.4). Exports and imports again have significant positive and negative coefficients, while financial institutions and financial institutions have negative and positive coefficients. We report similar results for the control variables as those in the previous two equaitosn.

In equation (1.5), we used both net equity and interest income as explanatory variables. The net equity income variable has a significant positive coefficient similar to that reported in equation (1.2). Net interest income, on the other hand, has a positive and significant coefficient here. However, because of the unbalanced nature of the data the number of available observations falls to 353, much lower than the 430 observations available in equations (1.1) and (1.2) or the 444 available in the next equation, (1.6). Since there is a limited number of observations and because the variable was not significant in the previous two equations, we treat this result with caution.

In equation (1.6) we use total net FDI income as the measure of FDI income. The coefficient is positive and highly significant. An increase in FDI income increases the share of income of the

top 1%, and the previous results show that the impact is due to equity income. The results for the control variables are similar to those previously reported.

In Table 2, we repeat the analysis of the first table but with data from the financial centers. The FDI equity income variable has positive coefficients and is significant at the 5% and 1% levels, although the coefficient is smaller than those in Table 1. When we replace equity income with interest income, however, there are negative coefficients in equations (2.3) and (2.4) that are significant at the 1% level. The gains from the interest income flows that these countries receive do not accrue to their richest members. When both forms of income are included in equation (2.5), only interest income has a significant variable, and then only at the 10% level. Total FDI income is used in equation (2.6), and the impact is positive but insignificant, reflecting the difference in results between equity and interest income.

There are differences in the results for the control variables. The GDP per capita variables are significant when both are specified. On the other hand, neither exports nor imports have significant coefficients. None of the financial development variables have significant coefficients. But there are positive and significant coefficients for capital account openness in several estimating equations, and these results are consistent with the status of these countries as financial centers. Human capital, on the other hand, has negative and significant coefficients in most of equations. More schooling does not increase the income share of the top 1% of households, and may act to lower inequality.

We performed Chow tests to ascertain whether the coefficients reported in the equations of Table 2 for the financial centers were equal to the corresponding equations reported in Table 1 for the advanced economies, i.e., the coefficients reported in equations (1.1) versus (2.1), etc. In all

cases the F statistics indicated that the coefficients are not equal, and that the data drawn from the two groups of countries are different. These results are reported in Table A5 in the Appendix.

5.2   FDI Income (IMF, OECD Data)

The preceding results are 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.[17] We report the results with the transformed data in Tables 3 and 4, using the specifications of Tables 1 and 2.

Table 3 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 positive coefficients for FDI equity income are similar in magnitude and significance to those in the first table, but now are significant in equation (3.1) and (3.5). FDI interest income does not have significant coefficients in equations (3.3) and (3.4), but does in equation (3.5) with a slightly smaller number of observations. Total FDI income has a very similar coefficient and significance level to those reported in Table 1. The control variables retain their signs and significance, including income per capita and income per capita squared, imports and financial institutions.

The results in Table 4 for the financial centers, on the other hand, differ from those in Table 3 in some aspects. Only two financial centers report 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. FDI equity income does not have a significant impact on the income share of the top 1% of households, while the negative coefficients on interest income are

not significant. 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. The results for the control variables show less significant results for the income variables, import and financial institutions. These results confirm that the determinants of inequality in financial centers differs from those in advanced economies.

5.3   Extensions

The previous tables investigated the linkages of FDI income and the share of income of the top 1% of households. However, it may be that FDI income is no different from other forms of international investment income in its impact. In Tables 5 and 6, therefore, we explore the relationship of other measures of investment income and inequality, as well as broader measures in the current account that include this income..

Table 5 presents our results for the advanced economies. In equations (5.1) and (5.2), we replace the measurements of FDI income with net portfolio income, and with income from other investments. Both variables have positive coefficients but neither is significant. Only FDI income, therefore, has an impact on the top share of income.

In equation (5.3) we replace those variables with net investment income, which includes the income from the three forms of private capital.[18] This variable appears with a positive coefficient significant at the 10% level, which we can attribute to net FDI income. Similarly, in equation (5.4) 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 10% level. Since investment income is the major component of this balance for most countries, it again largely reflects the impact of 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 impacts of net exports and secondary income as well as net investment income.

The results for the control variables largely replicate those reported for Table 1. Imports are negatively related to the top income share, as are financial institutions. But the U-shaped relationship of GDP per capita with the income share is significant only in the second equation.

In Table 6 we repeat the analysis of Table 5 for the financial centers. Neither net portfolio income or other income have significant impacts on income shares in equations (6.1) or (6.2). On the other hand, net investment income and net primary income have positive and significant coefficients in equations (6.3) and (6.4) that may reflect the positive coefficients of FDI equity income in equations (2.1) and (2.2). The capital account variable has positive and significant coefficients in several cases, while the human capital variable has the expected negative and significant coefficients.

5.3   Robustness

We examined the robustness of our results in several ways. First, we reestimated the equations of Tables 1 and 2 with the share of income of the top 10% of households as the dependent variable. These results are reported in Tables A6 and A7. The results for the FDI income variables are quite similar to those in Tables 1 and 2. One exception in Table A6 is the capital/GDP measure, which has negative and significant coefficients. In Table A7 the net FDI equity income variable has positive coefficients that are significant at the 10% level.

We tested for the impact of outliers by winsorizing the three income variables—FDI equity income, FDI interest income, and total FDI income—at the 1% and 99% levels, and reestimated

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Tables 1 and 2. The results for the income variables are quite similar to those reported in our Tables. These results are available from the author.

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 law and order and 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 also available from the author.

6. Conclusions

Studies of the impact of globalization on income equality have provided evidence that financial globalization increases income inequality (Heimberger 2020). But many previous studies have focused on inequality in the host countries where FDI takes place. Our work provides evidence of a link between FDI income flows and inequality in the economies where the multinational firms are based, and is consistent with other work related to FDI.

The quotation from Hobson in 1905 cited at the beginning of this paper demonstrates that investments by firms in advanced economies in foreign markets are not a new situation.[19] Will this situation 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 U.S. and Chinese governments have imposed restrictions on each other's bilateral FDI, and trade-related frictions can slow Chinese firms' expansion.

The global crisis due to the coronavirus pandemic slowed FDI capital flows and income in 2020 (OECD 2021). FDI income flows among the OECD countries had already fallen in 2019, and the crisis led to a further deterioration in multinational profits. There was an increase in FDI income in 2021 (OECD 2022), as firms began to invest again and economic activity picked up.

But a return of economic growth 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 to trade pose a challenge to the resumption of FDI flows. Future research can examine these changes in FDI flows and income, and how these affect income distribution in both the home and host economies.

NOTES

[1] Eichengreeen et al. (2021) provide an extensive summary of this work.

[2] See studies cited in next section.

[3] Details on the data utilized in the empirical analysis are provided in the next section.

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

[5] 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.

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

[7] Hünnekes, Schularick and Trebesch (2019), however, find that the returns on Germany's foreign assets, including FDI, are less than those recorded in other countries.

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

[11] These countries appear on lists of financial centers, such as that included in Lane and Milesi-Ferretti (2018). Singapore is not included in our sample because it does not report data to the OECD.

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

[13] 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.

[14] Baltagi (2013) discusses the benefits and limitations of panel data analysis. Among the benefits are more variability in the data and more efficiency.

[15] Other studies that have used this method include those of Calderón and Kubota (2019), Li, de Haan and Scholtens (2019) and Obstfeld, Ostry and Qureschi (2019).

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

[17] The OECD data begin in 2005, so we use the IMF data for FDI income from the period of 1990-2004. Not all OECD countries differentiate between SPE and non-SPE income, and we use total FDI income when non-SPE data are not available. But Austria, Denmark, Luxembourg, the Netherlands and Portugal report non-SPE income.

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

[19] Piketty (2014) points out that the residents of the United Kingdom and France held considerable foreign assets, which yielded a significant amount of income.

Figure 1

Total Investment Income/World GDP and Total FDI Income/World GDP

Figure 2

National Shares of Net FDI income

Figure 3

Herfindahl-Hirschman Index for FDI income

Figure 4

Herfindhal-Hirschman Index of FDI Income:
IMF, OECD
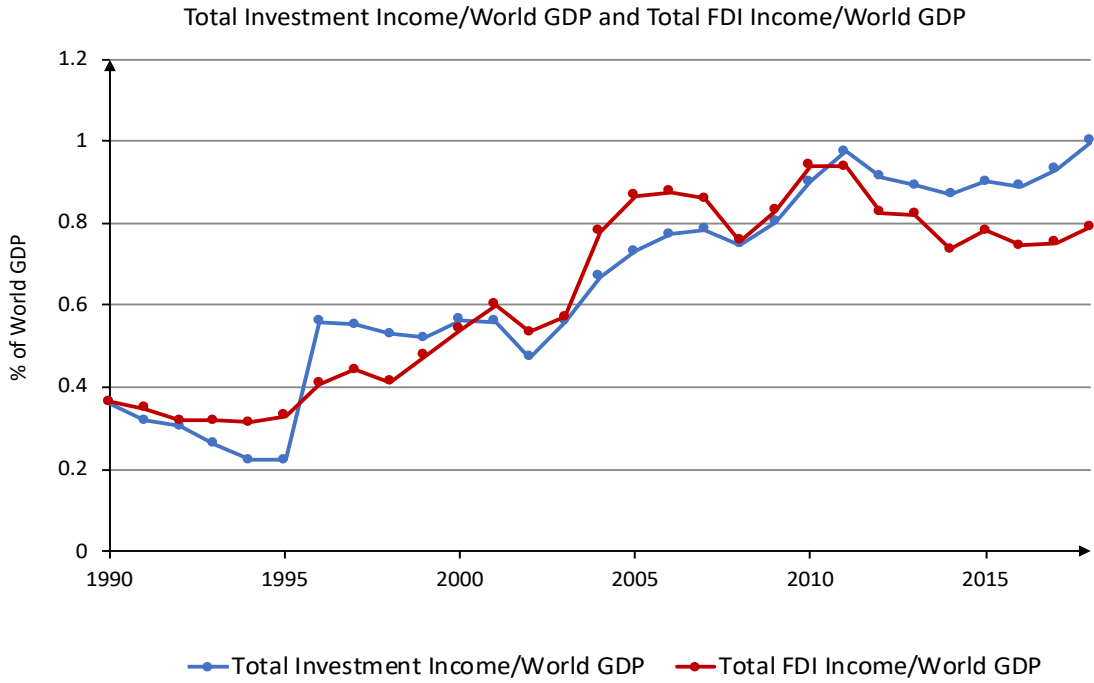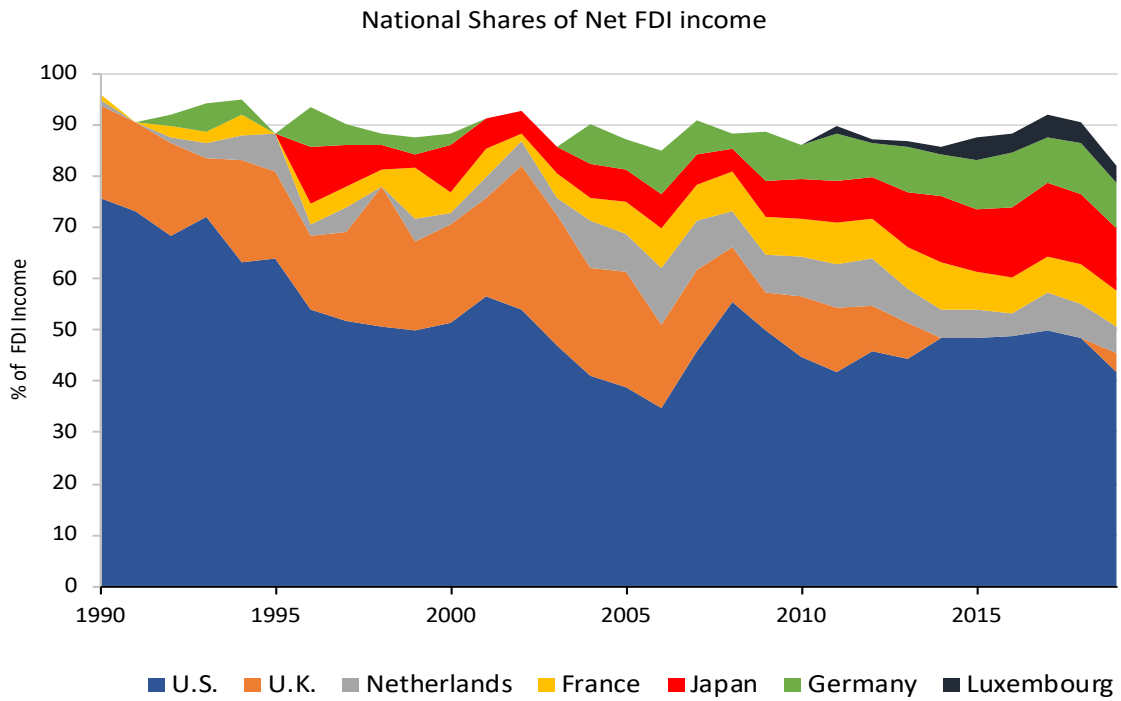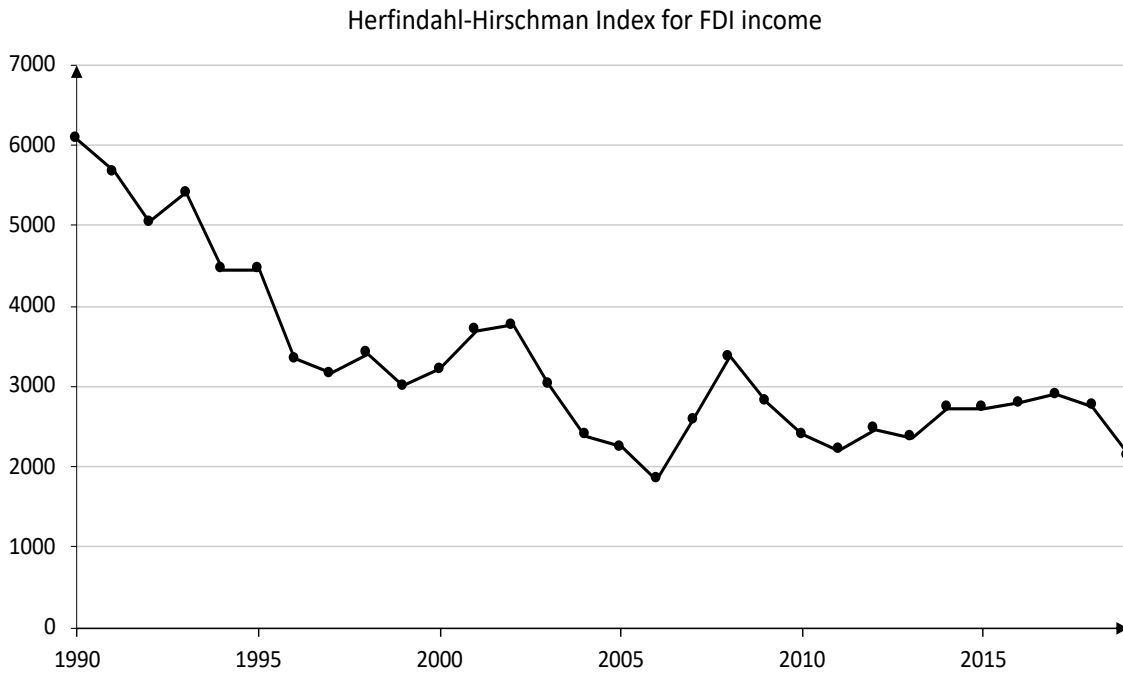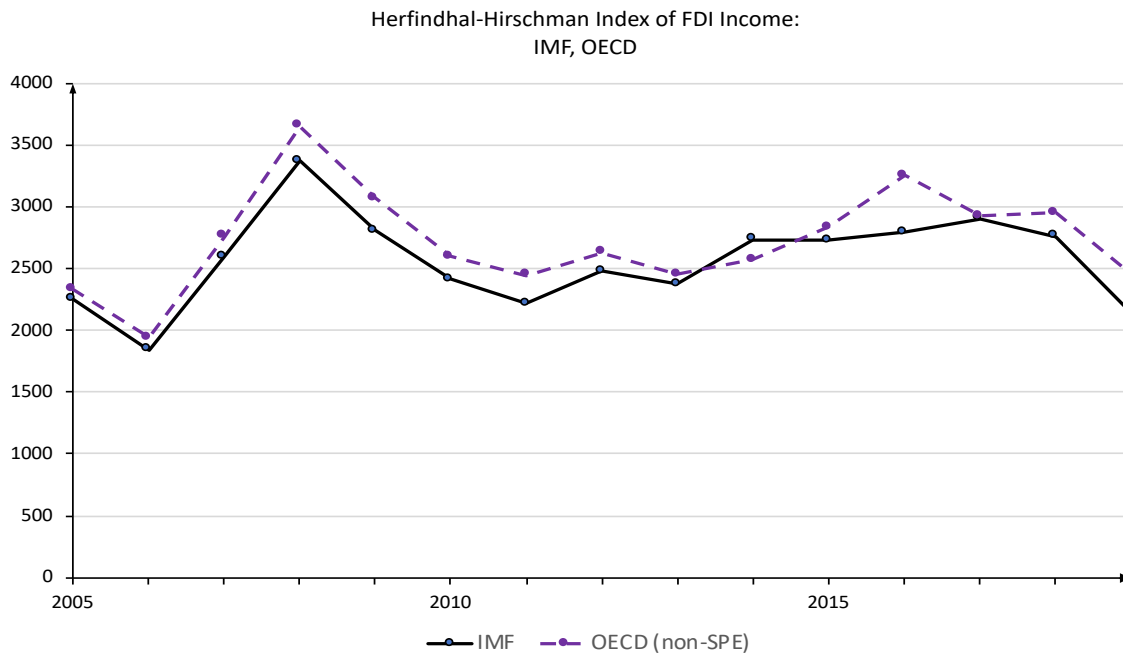
Table 1

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	0.27***	0.28***			0.37***	
	(0.09)	(0.08)			(0.11)	
Net FDI Int Inc/Y			0.79	0.79	1.04**	
			(0.72)	(0.60)	(0.39)	
Net FDI Inc/Y						0.37***
						(0.07)
Ln(Y per capita)	-0.41	-59.61***	-6.16	-77.95*	-56.78**	-35.33**
	(3.51)	(20.19)	(5.12)	(36.98)	(24.72)	(15.68)
Ln(Y per capita)^2		2.77**		3.48*	2.46*	1.61*
		(1.00)		(1.83)	(1.21)	(0.80)
Trade Openness	-0.01		-0.01			
	(0.01)		(0.02)			
Exports/Y		0.09		0.11*	0.10**	0.08
		(0.05)		(0.06)	(0.05)	(0.06)
Imports/Y		-0.16**		-0.20**	-0.20***	-0.17**
		(0.06)		(0.07)	(0.06)	(0.06)
Capital Acc Open	-0.01	-0.00	-0.02	-0.00	0.01	-0.02
	(0.01)	(0.01)	(0.02)	(0.01)	(0.01)	(0.01)
Government/Y	-0.36**	-0.14	-0.29*	-0.12	-0.18*	-0.13
	(0.15)	(0.09)	(0.15)	(0.13)	(0.10)	(0.11)
Capital/Y	0.00	-0.01	-0.00	-0.01*	-0.01***	-0.00
	(0.01)	(0.00)	(0.01)	(0.01)	(0.00)	(0.01)
Human Capital	-2.29	-0.09	-3.38	-1.74	-1.23	-1.61
	(2.18)	(1.61)	(2.81)	(2.45)	(2.05)	(1.95)
Fin Development	-0.03*		-0.03			
	(0.02)		(0.03)			
Fin Markets		0.02		0.01	0.01	0.01
		(0.01)		(0.01)	(0.01)	(0.01)
Fin Institutions		-0.37**		-0.07**	-0.52***	-0.08***
		(0.14)		(0.03)	(0.16)	(0.02)
Constant	28.28	350.85***	93.64	461.80**	368.88**	218.73**
	(40.25)	(105.09)	(59.74)	(187.20)	(127.60)	(79.77)
R^2	0.59	0.68	0.53	0.62	0.68	0.66
N	430	430	371	371	353	444

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

Table 2

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

	(2.1)	(2.2)	(2.3)	(2.4)	(2.5)	(2.6)
Net FDI Eq Inc/Y	0.03**	0.04***			0.02	
	(0.01)	(0.01)			(0.02)	
Net FDI Int Inc/Y			-0.07***	-0.08***	-0.06*	
			(0.01)	(0.01)	(0.02)	
Net FDI Inc/Y						0.02
						(0.02)
Ln(Y per capita)	6.91**	162.94***	1.84	153.81**	154.85**	174.46***
	(2.49)	(34.20)	(2.05)	(42.18)	(36.66)	(28.84)
Ln(Y per capita)^2		-7.63***		-7.24**	-7.28***	-8.17***
		(1.43)		(1.80)	(1.53)	(1.21)
Trade Openness	0.01	0.02	0.01	-0.02	-0.01	0.03
	(0.01)	(0.03)	(0.01)	(0.03)	(0.04)	(0.03)
Exports/Y		-0.00		0.05	0.04	-0.01
		(0.03)		(0.04)	(0.04)	(0.03)
Imports/Y						
Capital Acc Open	0.05	0.13*	0.06	0.12*	0.12	0.17**
	(0.04)	(0.05)	(0.04)	(0.06)	(0.06)	(0.06)
Government/Y	0.09	-0.16	0.03	-0.11	-0.14	-0.15
	(0.10)	(0.08)	(0.09)	(0.09)	(0.10)	(0.11)
Capital/Y	-0.01	-0.03*	-0.02	-0.03	-0.03	-0.03
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Human Capital	-13.38***	-14.95***	-10.53***	-9.70***	-11.33***	-14.74***
	(0.93)	(1.03)	(0.75)	(0.87)	(1.62)	(1.09)
Fin Development	-0.04		-0.05			
	(0.04)		(0.04)			
Fin Markets		-0.02		-0.02	-0.02	-0.02
		(0.01)		(0.01)	(0.01)	(0.01)
Fin Institutions		-0.08		-0.07	-0.07	-0.08
		(0.04)		(0.05)	(0.05)	(0.04)
Constant	-25.44	-801.47**	24.00	-765.39**	-764.91**	-868.28***
	(34.30)	(205.20)	(30.08)	(250.51)	(221.27)	(177.68)
R^2	0.71	0.77	0.74	0.78	0.78	0.75
N	100	100	96	96	96	100

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

Table 3

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

	(3.1)	(3.2)	(3.3)	(3.4)	(3.5)	(3.6)
Net FDI Eq Inc/Y	0.33**	0.35***			0.46***	
	(0.11)	(0.09)			(0.09)	
Net FDI Int Inc/Y			0.91	0.82	1.10**	
			(0.73)	(0.65)	(0.49)	
Net FDI Inc/Y						0.43***
						(0.09)
Ln(Y per capita)	0.81	-37.79**	-4.11	-99.59***	-83.04**	-34.99*
	(3.66)	(17.14)	(5.35)	(31.92)	(32.57)	(16.63)
Ln(Y per capita)^2		1.77*		4.64***	3.77**	1.63*
		(0.90)		(1.56)	(1.62)	(0.87)
Trade Openness	-0.00		-0.00			
	(0.01)		(0.02)			
Exports/Y		0.08		0.13*	0.11	0.08
		(0.07)		(0.07)	(0.07)	(0.06)
Imports/Y		-0.14*		-0.18**	-0.20**	-0.16**
		(0.07)		(0.08)	(0.07)	(0.07)
Capital Acc Open	-0.02	-0.02	-0.02	-0.00	-0.00	-0.02
	(0.01)	(0.01)	(0.02)	(0.01)	(0.01)	(0.01)
Government/Y	-0.29*	-0.13	-0.32*	-0.12	-0.17	-0.13
	(0.15)	(0.12)	(0.16)	(0.13)	(0.14)	(0.11)
Capital/Y	0.00	-0.00	-0.00	-0.01	-0.01**	-0.00
	(0.01)	(0.01)	(0.01)	(0.01)	(0.00)	(0.01)
Human Capital	-2.16	-1.38	-2.72	-0.72	-1.72	-1.44
	(2.27)	(2.27)	(2.67)	(2.33)	(2.50)	(2.19)
Fin Development	-0.04*		-0.03			
	(0.02)		(0.03)			
Fin Markets		0.02		0.01	0.02	0.02
		(0.01)		(0.01)	(0.01)	(0.01)
Fin Institutions		-0.09***		-0.07**	-0.08***	-0.09***
		(0.02)		(0.03)	(0.03)	(0.02)
Constant	13.83	226.67**	70.44	557.48***	485.85***	213.52**
	(41.98)	(83.46)	(62.07)	(166.00)	(163.13)	(81.10)
R^2	0.59	0.66	0.56	0.64	0.68	0.66
N	392	392	332	332	323	405

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

Table 4

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

	(4.1)	(4.2)	(4.3)	(4.4)	(4.5)	(4.6)
Net FDI Eq Inc/Y	0.01	0.02			0.05	
	(0.02)	(0.02)			(0.04)	
Net FDI Int Inc/Y			0.23	0.18	0.14	
			(0.33)	(0.37)	(0.42)	
Net FDI Inc/Y						0.03
						(0.01)
Ln(Y per capita)	6.71***	167.14*	-2.03	78.37	110.79	145.09**
	(1.32)	(62.64)	(4.19)	(199.82)	(163.33)	(45.74)
Ln(Y per capita) ^{2}		-7.52*		-3.53	-4.91	-6.80**
		(2.89)		(9.03)	(7.28)	(2.10)
Trade Openness	-0.01		-0.04			
	(0.03)		(0.04)			
Exports/Y		-0.11		-0.19**	-0.19*	0.02
		(0.07)		(0.07)	(0.07)	(0.02)
Imports/Y		0.04		0.05*	0.04	-0.00
		(0.02)		(0.02)	(0.02)	(0.02)
Capital Acc Open	0.16	0.12	0.14	0.13	0.14	0.13*
	(0.12)	(0.13)	(0.24)	(0.26)	(0.24)	(0.05)
Government/Y	0.55*	0.15	-0.23	-0.23	-0.18	-0.08
	(0.26)	(0.28)	(0.64)	(0.69)	(0.78)	(0.13)
Capital/Y	-0.02	-0.03*	-0.01	-0.02	-0.03	-0.03
	(0.02)	(0.01)	(0.03)	(0.03)	(0.03)	(0.01)
Human Capital	-9.86*	-2.15	3.07	10.14	7.19	-11.41***
	(4.27)	(3.61)	(9.56)	(5.88)	(6.69)	(0.90)
Fin Development	-0.02		-0.17			
	(0.06)		(0.11)			
Fin Markets		-0.04		-0.10**	-0.12*	-0.03
		(0.03)		(0.02)	(0.05)	(0.02)
Fin Institutions		-0.03		-0.07	-0.06	-0.06
		(0.02)		(0.13)	(0.13)	(0.04)
Constant	-43.46	-897.62*	33.22	-433.24	-611.08	-718.90**
	(24.86)	(343.99)	(53.31)	(1,125.67)	(934.91)	(248.60)
R^2	0.81	0.86	0.88	0.90	0.91	0.73
N	72	72	55	55	55	89

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

Table 5

Income Share of Top 1% and Portfolio, Other,
Investment and Primary Income: Advanced Economies

	(5.1)	(5.2)	(5.3)	(5.4)	(5.5)
Net Port Income/Y	0.09				
	(0.14)				
Net Other Income/Y		0.01			
		(0.23)			
Net Inv Inc/Y			0.15*		
			(0.08)		
Net Prim Income/Y				0.14*	
				(0.08)	
Current Acc/Y					0.14**
					(0.05)
Ln(Y per capita)	-36.59	-52.22*	-21.90	-27.83	-34.18
	(23.74)	(26.45)	(25.22)	(22.85)	(24.23)
Ln(Y per capita)^2	1.48	2.45*	0.99	1.28	1.76
	(1.25)	(1.29)	(1.27)	(1.15)	(1.18)
Exports/Y	0.09*	0.10	0.10	0.10	
	(0.04)	(0.06)	(0.06)	(0.06)	
Imports/Y	-0.16**	-0.16**	-0.18**	-0.18**	
	(0.07)	(0.07)	(0.07)	(0.07)	
Capital Acc Open	-0.01	-0.02	-0.02	-0.02	-0.02
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Government/Y	-0.13	-0.10	-0.10	-0.10	-0.01
	(0.13)	(0.12)	(0.12)	(0.12)	(0.11)
Capital/Y	-0.01*	-0.00	-0.00	-0.00	0.00
	(0.00)	(0.01)	(0.01)	(0.01)	(0.00)
Human Capital	-2.28	-0.92	-1.38	-1.34	-1.03
	(2.71)	(2.00)	(2.28)	(2.25)	(2.14)
Fin Markets	0.01	0.02	0.02	0.02	0.01
	(0.01)	(0.01)	(0.01)	(0.01)	(0.03)
Fin Institutions	-0.07***		-0.07***	-0.08***	-0.05**
	(0.02)		(0.02)	(0.02)	(0.02)
Constant	250.24**	300.44**	144.85	175.63	181.23
	(109.77)	(135.23)	(124.11)	(111.76)	(126.32)
R^2	0.63	0.64	0.65	0.65	0.65
N	421	454	454	454	454

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

Table 6

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

	(6.1)	(6.2)	(6.3)	(6.4)	(6.5)
Net Port Income/Y	-0.01				
	(0.01)				
Net Other Income/Y		-0.01			
		(0.02)			
Net Inv Income/Y			0.04**		
			(0.01)		
Net Prim Income/Y				0.09***	
				(0.01)	
Current Acc/Y					-0.07
					(0.05)
Ln(Y per capita)	172.94***	146.52***	150.42***	-14.63	34.27
	(36.46)	(30.77)	(28.37)	(55.96)	(48.61)
Ln(Y per capita)^2	-8.09***	-6.90***	-7.09***	1.24	-0.92
	(1.54)	(1.41)	(1.30)	(2.73)	(2.38)
Exports/Y	0.02	0.01	0.03	-0.04	
	(0.04)	(0.04)	(0.04)	(0.04)	
Imports/Y	0.01	0.01	-0.00	0.03	
	(0.03)	(0.03)	(0.04)	(0.05)	
Capital Acc Open	0.17**	0.17**	0.09***	0.02	-0.04
	(0.06)	(0.06)	(0.01)	(0.02)	(0.03)
Government/Y	-0.10	-0.13	-0.15	-0.02	0.17
	(0.12)	(0.11)	(0.08)	(0.13)	(0.21)
Capital Stock/Y	-0.03	-0.03	-0.03*	0.02*	0.02**
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Human Capital	-13.62**	-12.00***	-11.56***	-3.04**	-4.07
	(3.29)	(1.81)	(0.97)	(0.84)	(2.07)
Fin Markets	-0.02	-0.02	-0.02	-0.01	-0.02
	(0.01)	(0.01)	(0.01)	(0.02)	(0.01)
Fin Institutions	-0.07	-0.08	-0.07	0.03*	0.02
	(0.04)	(0.04)	(0.04)	(0.01)	(0.01)
Constant	-865.23**	-725.28***	-739.90***	19.59	-247.43
	(220.27)	(168.61)	(157.74)	(280.81)	(244.44)
R^2	0.75	0.74	0.76	0.67	0.61
N	100	105	108	132	132

Note: All independent variables are lagged. Country and time fixed effects are included. Robust standard errors are reported. 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 (%)	*PWT10*
Current Account/GDP (%)	*WDI*
Exports/GDP (%)	*WDI*
Financial Development, Markets, Institutions (1-100)	*FDI*
GDP per capita (constant 2010 million $)	*WDI*
Government Expenditures/GDP (%)	*WDI*
Human Capital	*PWT10*
Imports/GDP (%)	*WDI*
Income Shares: Top 1%, 10% of Households	*WID*
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*

Note: *BOPS: Balance of Payments Statistics*, IMF*; FDI = Financial Development Index Database,* IMF*; IFS = International Financial Statistics*, IMF*; PWT10 = Penn World Tables 10.1; WDI = World Development Indicators*, World Bank; *WID = World Inequality Database*, World Inequality Lab,

Appendix Table A2

Summary Statistics: Advanced Economies

Variable	Obs	Mean	Std. Dev.	Min	Max
Capital Account Openness	493	94.61	13.85	16.43	100.00
Capital Stock/GDP	510	559.24	148.46	333.19	993.26
Current Account/GDP	478	.02	4.78	-14.41	16.18
Exports/GDP	510	30.04	11.33	8.82	59.00
Financial Development	510	67.77	15.10	30.59	95.56
Financial Institutions	510	73.20	13.46	29.66	96.00
Financial Markets	510	60.27	21.33	8.65	95.28
Ln(GDP per capita)	503	10.48	.35	9.59	11.24
Government Expenditure/GDP	510	19.95	2.94	13.55	27.93
Human Capital	510	3.21	.39	1.94	3.77
Imports/GDP	510	29.18	9.27	6.94	52.44
Income Share: Top 1%	510	.11	.02	.04	.19
Income Share: Top 10%	510	.34	.04	.23	.46
Net FDI Eq Income/GDP	454	.41	1.29	-3.47	4.70
Net FDI Income/GDP	468	.28	1.31	-3.74	3.93
Net FDI Interest Income/GDP	395	-.14	.20	-.86	.56
Net Investment Income/GDP	478	-.69	2.14	-7.53	5.23
Net Other Income/GDP	478	-.40	.85	-4.37	1.64
Net Portfolio Income/GDP	445	-.66	1.19	-3.30	4.55
Net Primary Income /GDP	478	-.57	2.13	-7.60	4.26
Trade Openness	510	59.22	20.16	15.81	110.61

Note: See Table A1 for units of measurement.

Appendix Table A3

Summary Statistics: Financial Centers

Variable	Obs	Mean	Std. Dev.	Min	Max
Capital Account Openness	197	97.56	8.70	41.69	100.00
Capital Stock/GDP	210	562.25	128.08	353.77	928.46
Current Account/GDP	148	7.95	6.34	-11.26	27.14
Exports/GDP	180	117.68	55.65	39.81	228.99
Financial Development	180	71.82	12.22	44.27	100.00
Financial Institutions	180	79.39	10.96	50.82	100.00
Financial Markets	180	62.06	18.98	16.69	100.00
Ln(GDP per capita)	180	10.82	.45	9.97	11.63
Government Expenditure/GDP	180	14.22	5.08	6.84	26.24
Human Capital	210	3.09	.35	2.05	4.35
Imports/GDP	180	104.45	51.35	35.88	221.01
Income Share: Top 1%	210	.12	.04	.06	.22
Income Share: Top 10%	210	.36	.06	.26	.5
Net FDI Eq Income/GDP	115	-3.04	9.62	-34.24	29.85
Net FDI Income/GDP	115	-.68	10.76	-22.91	40.31
Net FDI Interest Income/GDP	105	2.59	5.84	-5.75	25.93
Net Investment Income/GDP	123	-2.00	8.98	-26.37	10.31
Net Other Income/GDP	120	.82	4.75	-14.95	25.47
Net Portfolio Income/GDP	115	-3.03	14.26	-62.11	13.05
Net Primary Income /GDP	148	-4.98	11.35	-42.22	8.14
Trade Openness	180	222.14	106.68	75.90	442.62

Note: See Table A1 for units of measurement

Appendix Table A4

Fisher Unit Root Tests

Variable	Test Statistic	Probability
Capital Account Openness	-23.9584	0.0000
Capital Stock/GDP	-8.3171	0.0000
Current Account/GDP	-7.5161	0.0000
Exports/GDP	-5.9600	0.0000
Financial Development	-8.0769	0.0000
Financial Institutions	-6.5017	0.0000
Financial Markets	-8.3962	0.0000
Ln(GDP per capita)	-7.3037	0.0000
Ln(GDP per capita)^2	-7.2026	0.0000
Government Expenditure/GDP	-9.2307	0.0000
Human Capital	-3.1790	0.0007
Imports/GDP	-5.6363	0.0000
Income Share: Top 1%	-8.5229	0.0000
Income Share: Top 10%	-8.6319	0.0000
Net FDI Eq Income/GDP	-6.457	0.0000
Net FDI Income/GDP	-5.7355	0.0000
Net FDI Interest Income/GDP	-5.9775	0.0000
Net Investment Income/GDP	-6.5752	0.0000
Net Other Income/GDP	-9.2279	0.0000
Net Portfolio Income/GDP	-3.7860	0.0001
Net Primary Income /GDP	-5.4769	0.0000
Trade Openness	-5.7186	0.0000

Note: The test statistic for the hypothesis that the panel data contain unit roots is the inverse normal Z statistic. See Choi (2001) and Stata (2021).

Table A5

Tests of Equality of Coefficients in Tables 1 and 2

Equations	F	Prob > F
(1.1) vs (2.1)	F (9, 21) = 12.68	0.0000
(1.2) vs (2.2)	F (11, 21) = 12.96	0.0000
(1.3) vs (2.3)	F (9, 21) = 5.63	0.0005
(1.4) vs (2.4)	F (11, 21) = 7.25	0.0001
(1.5) vs (2.5)	F (9, 21) = 8.85	0.0000
(1.6) vs (2.6)	F (11, 21) = 19.19	0.0000

Table A6

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

	(A6.1)	(A6.2)	(A6.3)	(A6.4)	(A6.5)	(A566)
Net FDI Eq Inc/Y	0.48***	0.46**			0.56**	
	(0.16)	(0.16)			(0.20)	
Net FDI Int Inc/Y			1.36	0.71	2.00**	
			(0.85)	(0.96)	(0.74)	
Net FDI Inc/Y						0.53***
						(0.13)
Ln(Y per capita)	0.21	-80.50***	-5.05	-96.40***	-53.42	-78.98***
	(7.22)	(26.16)	(7.91)	(32.48)	(49.23)	(26.57)
Ln(Y per capita) ^{2}		3.66**		4.21**	2.29	3.57**
		(1.41)		(1.56)	(2.42)	(1.41)
Trade Openness	-0.02		0.01		0.01	
	(0.04)		(0.05)		(0.04)	
Exports/Y		-0.07		-0.03		-0.06
		(0.10)		(0.10)		(0.10)
Imports/Y		-0.00		-0.00		-0.03
		(0.08)		(0.08)		(0.07)
Capital Acc Open	-0.01	0.00	-0.02	0.01	-0.00	0.00
	(0.02)	(0.01)	(0.03)	(0.02)	(0.02)	(0.01)
Government/Y	-0.34	-0.24	-0.12	-0.10	-0.22	-0.22
	(0.22)	(0.24)	(0.18)	(0.21)	(0.18)	(0.22)
Human Capital	0.00	-0.01	-0.01	-0.02*	-0.01	-0.01
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Capital/Y	-4.90*	-5.41*	-8.04**	-7.79**	-8.35**	-5.37*
	(2.76)	(2.93)	(2.86)	(3.17)	(3.27)	(2.85)
Fin Development	-0.06		-0.06		-0.05	
	(0.04)		(0.05)		(0.05)	
Fin Markets		0.03		0.02		0.03
		(0.02)		(0.03)		(0.02)
Fin Institutions		-0.16***		-0.16***		-0.16***
		(0.04)		(0.04)		(0.04)
Constant	54.13	506.34***	119.08	622.23***	375.89	500.73***
	(81.33)	(118.79)	(88.13)	(174.23)	(249.88)	(123.08)
R^2	0.53	0.62	0.46	0.54	0.52	0.62
N	430	430	371	371	353	444

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

Table A7

Income Share of Top 10% and FDI Income: Financial Centers (IMF Data)

	(A7.1)	(A7.2)	(A7.3)	(A7.4)	(A7.5)	(A7.6)
Net FDI Eq Inc/Y	0.04**	0.05***			0.03	
	(0.01)	(0.01)			(0.03)	
Net FDI Int Inc/Y			-0.07***	-0.09***	-0.05	
			(0.01)	(0.01)	(0.03)	
Net FDI Inc/Y						0.04
						(0.02)
Ln(Y per capita)	9.72*	205.36**	3.96	215.28**	217.13**	218.91***
	(3.56)	(62.05)	(3.31)	(56.43)	(58.00)	(44.95)
Ln(Y per capita)^2		-9.55**		-10.05**	-10.14**	-10.18***
		(2.82)		(2.43)	(2.55)	(2.06)
Trade Openness	0.01		0.02			
	(0.01)		(0.01)			
Exports/Y		0.01		-0.02	-0.01	0.02
		(0.05)		(0.05)	(0.05)	(0.04)
Imports/Y		0.02		0.07	0.05	0.01
		(0.05)		(0.06)	(0.07)	(0.05)
Capital Acc Open	-0.04	0.06	-0.02	0.07	0.06	0.10
	(0.05)	(0.06)	(0.01)	(0.06)	(0.06)	(0.07)
Government/Y	0.14	-0.19	0.08	-0.13	-0.17	-0.18
	(0.14)	(0.14)	(0.16)	(0.15)	(0.17)	(0.18)
Capital/Y	-0.01	-0.03*	-0.02	-0.04*	-0.04*	-0.04
	(0.01)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Human Capital	-15.62***	-17.33***	-12.43***	-11.28***	-14.17**	-17.84***
	(1.39)	(1.76)	(1.72)	(1.70)	(3.17)	(2.35)
Fin Development	-0.03		-0.04			
	(0.04)		(0.04)			
Fin Markets		-0.02		-0.02	-0.02	-0.02
		(0.01)		(0.01)	(0.01)	(0.01)
Fin Institutions		-0.09		-0.08	-0.09	-0.09
		(0.05)		(0.06)	(0.06)	(0.04)
Constant	-19.15	-995.20**	36.53	-1,062.55**	-1,061.69**	-1,070.96**
	(46.01)	(340.21)	(43.78)	(331.97)	(324.57)	(242.86)
R^2	0.76	0.81	0.78	0.82	0.82	0.80
N	100	100	96	96	96	100

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