Public Disclosure Authorized

Public Disclosure Authorized

WPS-2509

POLICY RESEARCH WORKING PAPER 2509

How Tax Policy and Incentives Affect Foreign Direct Investment

A Review

Jacques Morisset
Neda Pirnia

Tax incentives neither make up for serious deficiencies in a country's investment environment nor generate the desired externalities. But when other factors—such as infrastructure, transport costs, and political and economic stability—are more or less equal, the taxes in one location may have a significant effect on investors' choices. This effect varies, however, depending on the tax instrument used, the characteristics of the multinational company, and the relationship between the tax systems of the home and recipient countries.

The World Bank
and
International Finance Corporation
Foreign Investment Advisory Service
December 2000

Summary findings

With an increasing number of governments competing to attract multinational companies, fiscal incentives have become a global trend that has grown considerably in the 1990s. Poor African countries rely on tax holidays and import duty exemptions, while industrial Western European countries allow investment allowances or accelerated depreciation. Have governments offered unreasonably large incentives to entice firms to invest in their countries?

Morisset and Pirnia review the literature on tax policy and foreign direct investment and explore possibilities for research. They observe that tax incentives neither make up for serious deficiencies in a country's investment environment nor generate the desired externalities. Long-term strategies to improve human and physical infrastructure—and, where necessary, to streamline government policies and procedures—are more likely than incentives to attract genuine long-term investment.

But more recent evidence has shown that when other factors—such as infrastructure, transport costs, and political and economic stability—are more or less equal, the taxes in one location may have a significant effect on investors' choices. This effect is not straightforward, however. It may depend on the tax instrument used by the authorities, the characteristics of the multinational company, and the relationships between the tax systems in the home and recipient countries. For example, tax rebates are more important for mobile firms, for firms that operate in multiple markets, and for firms whose home country exempts any profit earned abroad (Canada, France) rather than using tax credit systems (Japan, the United Kingdom, the United States).

Even if tax incentives were quite effective in increasing investment flows, the costs might well outweigh the benefits. Tax incentives are not only likely to have a negative direct effect on fiscal revenues but also frequently create significant opportunities for illicit behavior by tax administrators and companies. This issue has become crucial in emerging economies, which face more severe budgetary constraints and corruption than industrial countries do.

Morisset and Pirnia suggest research in five areas:

- The eventual nonlinear impact of tax rates on the investment decisions of multinational companies.
- The effect of tax policy on the composition of foreign direct investment (for example, greenfield, reinvested earnings, and mergers and acquisitions).
- The development of new technologies and global companies that are likely to be more sensitive to, and able to exploit, incentives.
- The need for a global approach to the taxation of multinational companies.
- The question of whether tax incentives should be directed only at (foreign) investors that make the "right things" (such as environmentally safe products) or more broadly at those that bring jobs, technology transfers, and marketing skills.

This paper—a product of the Foreign Investment Advisory Service, International Finance Corporation—is part of a larger effort to understand the behavior of multinational companies. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Nessa Busjeet, room I9-107, telephone 202-473-3997, fax 202-522-3262, email address nbusjeet@ifc.org. Policy Research Working Papers are also posted on the Web at www.worldbank.org/research/workingpapers. Jacques Morisset may be contacted at jmorisset@ifc.org. December 2000. (29 pages)

The Policy Research Working Paper Series disseminates the findings of work in progress to encourage the exchange of ideas about development issues. An objective of the series is to get the findings out quickly, even if the presentations are less than fully polished. The papers carry the names of the authors and should be cited accordingly. The findings, interpretations, and conclusions expressed in this paper are entirely those of the authors. They do not necessarily represent the view of the World Bank, its Executive Directors, or the countries they represent.

Produced by the Policy Research Dissemination Center

How Tax Policy and Incentives Affect Foreign Direct Investment

A Review

By

Jacques Morisset[1]

And

Neda Pirnia

[1] Foreign Investment Advisory Service (FIAS), a joint service of the International Finance Corporation and the World Bank. The opinions and arguments expressed are the sole responsibility of the authors and do not necessarily reflect those of the above institutions. We would like to thank Bijit Bora, Gokhan Alkinci and Carl Aaron for their comments. To be published in "New Directions for Research in FDI", B. Bora (ed), Rutledge, forthcoming

I. Introduction

In a world where an increasing number of governments compete hard to attract multinational companies, fiscal incentives have become a global phenomenon. Poor African countries rely on tax holidays and import duty exemptions, while industrial Western European countries allow investment allowances or accelerated depreciation (Table 1). This trend seems to have grown considerably since the early 1990s as evidenced by the number of high profile foreign investments, such as Toyota in Northern France or Mercedes-Benz A.G. in the U.S. State of Alabama. These have generated considerable debate about whether governments have offered unreasonably large incentives to entice those firms to invest in their area. Still, this debate about the effectiveness of tax incentives is hardly new and has accumulated a long history.[2]

The objective of the paper is to review the existing literature on tax policy and Foreign Direct Investment (FDI) as well as to explore possibilities for future research. Taxes affect the net return on capital and should, at least in the mind of numerous policymakers, influence the capital movements between countries. For this reason, the early literature attempted to evaluate if a generous tax policy could compensate for other obstacles in the business environment and, thus, attract multinational companies. In the mid-1980s, the literature went one step further by exploring what kind of tax instruments should have the greatest impact on the location decision of multinational companies. Special attention was also given to the motivations and tax behavior of the multinational company.

In recent years, the globalization process has led to the emergence of new issues. Not only have companies tended to become more mobile, but also governments have to deal with this new dimension in the design of their national tax policy. The gradual

[2] According to Wells (1999), the earliest reference was in 1160, when wool weavers were offered tax incentives to locate in Biella, in the Piedmont region of Northern Italy.

elimination of barriers to capital movements have stimulated governments to compete for FDI in global markets as well as reinforced the role of tax policy in this process. This recent competitive trend has to be offset by the increasing pressure that governments face to harmonize their tax policies within regional (or international) agreements. A second important issue has been the recognition that tax policies of the home and host countries are interconnected and that this link influences the behavior of multinationals. There has been a great deal of evidence, especially after the changes in the U.S. tax laws during the late 1980s, that home country tax policy affects both the multinational firm's behavior and the effectiveness of tax policy in the countries where these firms operate and invest. Last but not least, there has been a growing attention to the costs associated with tax incentives –and not only to their possible benefits. Tax incentives are likely not only to have a direct negative impact on fiscal revenues but also, and frequently, create significant possibilities for suspicious behaviors from tax administrations and companies. This issue has become crucial in emerging countries where budgetary constraints as well as corruption are certainly more severe than in industrial countries.

Table 1

Types of Incentives Used by Region

Region/ Major Incentives (countries)	Africa (23)	Asia (17)	Latin America & Caribbean (12)	Central & Eastern Europe (25)	Western Europe (20)	Other Countries (6)	Total (103)
Tax holidays	16	13	8	19	7	4	67
Accelerated depreciation	12	8	6	6	10	5	47
Investment allowances	4	5	9	3	5		26
Import duty exemption	15	13	11	13	7	4	63
Duty drawback	10	8	10	12	6	3	49

Source: UNCTAD, 1995

This paper proceeds as follows. Section II reviews the early literature that examined the impact of tax policy on FDI from a global perspective using investors' surveys and time-series econometric analysis. Section III explores which tax instruments have the greatest impact on FDI and what kind of foreign investors is likely to be most responsive to changes in tax policy since these two areas have retained the attention of many researchers over the past 15 years. Section IV focuses on three issues that have emerged with globalization: the interconnection between the home and host countries taxation and its subsequent impact on FDI; tax competition versus harmonization across countries and states, and the costs associated with tax incentive schemes. The last section concludes with a few remarks and ideas for future research.

II. Early Literature: The Aggregate Approach

Tax policies are obviously capable of affecting the volume and location of FDI, since all other considerations equal, higher tax rates reduce after-tax returns. Of course, all other considerations are seldom equal. Countries do not only differ in their tax policies, but also in their commercial and regulatory policies, market size, natural endowments, and human capital. All these factors influence the desirability of an investment location.

Based on this perception, the early literature attempted to determine if tax policy was one of the key factors in the decision-making process of multinational companies. Two basic approaches were and continue to be developed: (A) selective surveys of international investors, and (B) time-series econometric analysis. The majority of earlier studies focused on the aggregate FDI data by lumping together firms of all types and paid little attention to differences across sectors and industries as well as between regions and countries. Below is presented a brief summary of the major findings.

A. Survey of Investors

One of the first survey studies was conducted by Barlow and Wender in 1955. They interviewed 247 US companies on their strategies to invest abroad. One of the questions asked was about the conditions that were required before companies proceed with foreign investment. Only 10 percent of the companies listed favorable foreign taxes as a condition for FDI, while another 11 percent mentioned "host government encouragement to companies". Together, these inducements were ranked fourth after currency convertibility, guarantee against expropriation, and host country political stability.

Those findings were confirmed by the survey of 205 companies conducted by Robinson in 1961. Perhaps the most important result of Robinson's survey was the considerable difference of opinion between the business community and the governments, with regards the major factors influencing decisions to invest. Tax concessions headed the list of government responses, while they were omitted from the list of private investor responses.

Next came the result of a field research conducted by Aharoni and published in 1966 on the way foreign investment decisions were made by U.S. manufacturing firms. The conclusions were that host government concessions did not bring about the decisions to invest. Income tax exemption was considered a very weak stimulant. Those investors, who did consider it, did it only marginally. In the word of one of the investors in the survey: "*Tax exemption is like a dessert; it is good to have, but it does not help very much if the meal is not there*". It should be noted that in this case, as in the case of Robinson's interviews, host government officials interviewed in the field research believed income tax exemption to be a very powerful stimulus to FDI.

In a 1984 survey of 52 multinational companies, the Group of Thirty found that among 19 factors that were identified as influencing FDI flows, inducements offered by the host country rank seventh in importance for investment in developing

countries and eight in developed countries. In recent years, several investors' surveys explored the effectiveness of tax policies on FDI using alternative samples or asking more detailed questions (for example, JETRO (1995), Ernst & Young (1994) or Fortune/Deloitte & Touche (1997)). In general, these surveys have confirmed the conclusions summarized above; that if tax policy matters it is not the most influential factor in the site selection of multinationals.[3]

B. Econometric Analysis

The available econometric evidence on the effect of taxation used time-series estimation of the responsiveness of FDI to annual variations in tax rates. Most econometric studies have tended to confirm the results of surveys; that investors are mostly influenced in their decision by market and political factors and that tax policy appear to have little effect on the location of FDI.

A selective sample of studies has concluded in that direction: Root and Ahmed (1978), Agodo (1978), Shah and Toye (1978), and Lim (1983). In 1978, Root and Ahmed performed an econometric study with data for 41 developing countries for the period 1966-1970. They classified countries in three categories of unattractive, moderately attractive, and highly attractive according to their average annual per capita inflow of FDI. Forty-four variables were chosen as potentially significant discriminators of the three country groups. Among the six policy related discriminators were three relating to tax levels. Of these, corporate tax rates proved to be an effective discriminator of the three defined country groups; however tax incentives laws and liberality were not found to be effective discriminators. Agodo analyzed a sample of 33 US firms having 46 manufacturing investment in 20 African countries. Tax concessions were found to be insignificant as a determinant of FDI in simple and multiple regressions.

Much of the literature of the period used highly aggregate data, evaluating the correlation between annual changes in FDI flows, and a series of factors, including

[3] In the Fortune/Deloitte & Touche's survey, taxes ranked at the 13th position out of 26 factors.

movements in after-tax rates of return earned by foreign investments. The primary limitation of aggregate studies is that changes in FDI may be correlated with important omitted variables such as trade and financial liberalization as well as the elimination of barriers against FDI. Most countries embark in a reform process that includes simultaneous actions aimed at enhancing the development of private investment, including FDI promotion. As a result, it becomes very difficult to distinguish the effects of taxation from the effects of other variables that are in turn correlated with tax rates.

There is also the crucial issue of how to define tax policy changes and to measure the after-tax rate of return. Which taxes should be included in the regressions (corporate profit tax, trade taxes, domestic indirect taxes, etc.)? Should these taxes be integrated in one aggregate or several indicators? Several studies have employed nominal tax rates but they can be misleading for a variety of reasons. In particular, they do not capture the eventual tax rebates that are offered to specific investments or activities. Understanding the exact impact of tax policy on investment decisions has led to the development of the popular concept of effective tax rate, which is defined as the percentage reduction in the financial rate of return on an investment that is due to the fiscal system of the host country.[4] In principle, both the effective marginal and average tax rates[5] may be relevant in the strategic decisions made by firms. Locating production in an area with low marginal rate should lead to a high optimal level of output, while the average rate will affect the profit level. [6] In a recent econometric study on the behavior of US firms in the European Union, Devereux and Griffith (1998) have shown that the average effective tax rates seem to have a greater impact on the FDI location that the marginal tax rates.

Still, the general conclusion that emerged from the early econometric studies is that the effect of tax policy on FDI is rather limited, at least compared to other factors such as political stability, the costs and availability of labor and basic infrastructure. The

[4] There exists a considerable literature around this concept, which include recent developments such as uncertainty, relations between labor and capital taxes, and indirect taxes. Several studies can be found in Anwar Shah (1995).

[5] The average rate can be viewed as the marginal rate multiplied by the statutory average tax rate

importance of these other factors suggests that tax policy is a poor instrument to compensate for various negative factors in the investment climate of a country. Many countries from South America to Sub-Saharan Africa have offered investment incentives for businesses to locate in underdeveloped, more costly, and otherwise unattractive regions with little success in generating (sustainable) investment flows to those areas. This experience strongly suggests that the fiscal investment incentives popular in developing countries have not been effective in making up for fundamental weaknesses in the investment climate.

III. New evidence from the mid-80s: A look for Details

The relative little importance of tax policy does not mean that it does not exert any impact on FDI. Looking at foreign direct investment figures, it is certainly not a coincidence that FDI in tax haven countries in the Caribbean and South Pacific grew more than fivefold between 1985 and 1994, to over $200 billion. Ireland's tax policy has been generally recognized as a key factor in its success to attract international investors over the past two decades. In fact, the simple position described in the preceding section was not completely accurate. It is not true that tax policy and incentives fail to attract investors; they do affect the decisions of *some* investors *some* of the time.

Even in the 1970s, there were researchers who started to look into more detailed FDI data and came out with conclusions that made the result of previous studies more vulnerable to criticism. Forsyth in his 1972 study provides support for the view that inducements and incentives may often not play a key role in influencing the decision to undertake a particular foreign investment. However, once other factors have provoked the decisions to set up production facilities in a broad area, then the more precise location decision may be strongly affected by such factors.

[6] It has to be noted that in principle the locational decision of the firm may be affected by the marginal and average rates in two opposite directions. When the average level is high in one country, it is possible that the overall profit level may be less than in another country even though its marginal rate is lower.

By mid-1980s, understanding the exact role of incentives in attracting FDI became a new research agenda. One direction has been to explore the reaction of multinational companies to changes in tax policy when they differ in their activities, motivations, market structure an/or financing. Others have searched to examine which tax instruments may have the greater effect on the behavior of international investors.

A. Tax Behavior of Multinational Companies

While most early studies examine the impact of taxes on the average foreign investors, there were many reasons to believe that this impact differs greatly depending on the characteristics of the multinational company. International investors often have at their disposal numerous alternative methods of structuring and financing their investments, arranging their transactions between related parties located in different countries, and returning profits to investors. These alternatives have important tax implications, and there is considerable anecdotal evidence that tax considerations strongly influence the choices that firms make.

One of the earlier findings of the literature is that the impact of tax rates on investment decisions is generally higher on export-oriented companies than those seeking the domestic market or location-specific advantages. In surveys, these firms are those with managers that have responded more favorably to tax incentives (see Reuber (1973)[7] and Guisinger (1985)). This finding is not really surprising because export-oriented firms such as garment manufacturers are operating in highly competitive markets with very slim

[7] For his study, Reuber separated investors into different groups according to their type investment (market seeking or export oriented). He used 80 investment projects in various industries of thirty developing countries, made by companies from various national origin. The companies surveyed were asked to identify, among various incentives, which one was deemed so important that its absence would have caused the abandonment of the project or major changes in it. Among export oriented projects, 48% named fiscal incentives (including tax holidays, duty remission and accelerated depreciation). Among market oriented projects, 56% of responses named protection of the market as the prevailing factor. By using a different approach to define the problem, Reuber showed that investment incentives might not matter to all investors but they do matter to some investors having a specific investment strategy (e.g. export platform). Another merit of the study is to pose the question "do incentive matter?" in terms of the location of the projects rather than a broader decision to carry out FDI.

margins. Moreover, these firms are often highly mobile, and more likely to compare taxes across alternative locations (Wells 1986). Hence, taxes can be an important part of their cost structure, and the firms can easily move to take advantage of more favorable tax regimes.

The impact and the nature of incentive schemes may also differ if they apply to new or existing companies. For example, Rolfe et al. (1993) shows, using a survey of managers of US firms, that start-up companies will prefer incentives that reduce their initial expenses (equipment and material exemption), while expanding firms will prefer tax incentives that target profit. He also reports that manufacturing industries will prefer incentives related to depreciable assets because they utilize more fixed assets than service industries.

In an interesting study, Coyne (1994) suggests that small investors are generally more responsive to tax incentives than large ones. Taxes may play a more important role in the cost structure of small companies because they do not have the financial and human capacity to developed sophisticated tax avoidance strategies. Large multinational companies are also more likely to receive special tax treatments, whatever the tax laws applied by the host country. Oman (2000) reports some evidence that large firms, especially in the automobile sector, are more likely to negotiate secret advance agreements on how much they will pay in both industrial and emerging countries.

There exist a few studies that estimate separate equations for FDI financed by retained earnings and external funds (equity plus debt) (Hartman (1984) and Boskin and Gale (1987)). They typically found that FDI financed by retained earnings is more strongly influenced by host country tax rates. However, they do not offer any clear explanation for this result, but it is possible that equity and debt financing are also influenced by the tax policy in the home country, thereby reducing the impact of the host country's tax regimes (see next section for more explanations).

Finally, there is growing evidence that low taxes might be a key factor for firms that are not operating in one specific but multiple markets such as Internet related

business, insurance companies and banks. Establishing a subsidiary in a low tax country gives them the opportunity to develop tax avoidance strategies. It is indeed difficult for any one country to claim the right to tax the holding company if its operations have taken place in multiple markets at the same time. A typical example is when filing tax returns in a high tax country, a multinational company claims that it has earned as little profits as possible. Instead, it tries to attribute as much profit as possible to its operations in low-tax countries by arranging "transactions" between its subsidiaries in the two countries, and setting the "transfer price" of those transactions so that it has the desired effect on profits. Multinationals can also adjust the timing of their dividend repatriations from foreign subsidiaries (see Hines and Hubbard (1990)). In practice, such strategies may explain the success of tax havens countries in attracting subsidiaries of "global" companies and the expenses made by multinationals on economists and accountants to justify their transfer prices that suit their tax needs. Still, very little is known about the magnitude of such international tax evasion and how much do they affect tax revenues across countries (see for some preliminary evidence, Grubert, Goodspeed and Swensson (1993) or the Economist (2000)).

B. Tax Instruments Used by Governments

Governments have several tax instruments that they can use to attempt to influence the effective tax rates and the location decision of multinational companies. [8] The literature has traditionally focused on the instruments linked to the corporate income tax such as tax holidays and tax allowance. Of course, these instruments are of no help to an unprofitable company and, therefore, other forms of incentives have also been widely used around the world. Exemptions from custom duties or local indirect taxes (generally to targeted sectors) do exist in many countries, even though their use has been restricted in most international and bilateral trade treaties. Outright grants are used in many industrial countries but rarely in the developing world because of their upfront costs.

[8] For example, an effective tax rate in the United States of about 25% at the end of 1994 was produced by a 38% corporate tax rate combined with no investment tax allowance, depreciation rates on buildings of 4.4% and 18.6% on machinery, and an number of other assumptions about inflation, interest rates (interest

Following the existing literature, our focus is on the corporate income tax and the different options used by governments to relieve companies. Governments with high corporate tax rates have a number of options to reduce them to more competitive levels. One is to give tax incentives to a selected group of firms. An alternative is to change the general fiscal system to lower the effective tax rate for all firms. There are many options between these two extremes, including the "stability premium" that have been offered to investors by countries such as Chile and Colombia. This premium consists in an option where the investor purchases the right to maintain its corporate tax rate at a given level, even if the tax regime will be modified in the future. Below is presented a short review of the major options but, at the outset, it is worth underscoring that there is certainly no clear-cut answer in favor of one or another alternative mechanism (see Mintz and Tsiopoulos (1992), for fuller details).

The first option is to generalize a low corporate tax rate on a broad base. Small countries such as Hong Kong, Lebanon or Mauritius have typically retained this option. A low corporate tax rate is, in itself, an incentive. It allows investors to keep a larger portion of profits. Governments are also able to maintain corporate tax revenues because investors have limited tax-planning opportunities and the simplicity of the system makes for a favorable investment climate. Investors look favorably on a country offering a low statutory tax rate, especially one well below the worldwide norm of 35 percent to 40 percent, since it signals that the government is interested in letting the market determine the most profitable investments without undue governmental influence. Although a broad-based low corporate tax rate is appealing, this approach has limitations. In particular, international linkages can undermine a country's efforts to make its tax system relatively neutral. In fact, a country with a corporate tax system greatly out of line with other countries might be better off having a less neutral system to minimize distortions. It has also to be recognized that the sudden change to a low, generalized tax rate can reduce tax revenues during a transition period, even though the simplicity of the tax

is deductible), etc. Approximately the same effective tax rate was achieved in Spain with a lower corporate tax rate (35%), and lower rates of depreciation of buildings (3%) and equipment (12%).

system may attract further investors and increase the tax base in the longer run and so compensate for the initial reduction.

For these reasons, many governments rely on tax incentive schemes in their effort to lure foreign investors. This selective approach, in contrast to a generalized tax reduction, is attractive to many countries because it may minimize the initial effect on fiscal revenues and, in principle, should help to target specific industries or activities that would bring the greater benefits to the country. It can also be argued that incentives may have a signaling effect on the government's commitments to stimulate FDI, as they are generally easier to implement than a general reform of the tax system (see Bond and Samuelson (1986)).

One popular form of tax incentive consists of reducing the corporate income tax rate by providing tax holidays or temporary rebates. This form of incentive has been popular in emerging countries where authorities have favored a discretionary approach. For example, several African Investment Codes have included tax holidays, with differentiated rebates and periods of abatement, depending on the government's objectives. The main benefit of tax holidays is that they provide large benefits as soon as the company begins earning income, and are thus more valuable than an incentive such as a lower corporate tax rate that accrues more slowly over a longer time. However, they primarily benefit short-term investments, which often are undertaken in so-called footloose industries characterized by companies that can quickly disappear from one jurisdiction to reappear in another. They also tend to reward the founding of a company, rather than investment in existing companies and discriminate against investments that rely on long-lived depreciable capital. Last but not least, they can lead to large erosion of the tax base as taxpayers learn how to escape taxation of income from other sources.[9]

[9] For example, during the holiday years, companies operate at a preferential corporate tax rate. When corporate taxpayers have a choice, they have incentive to shift income into a company enjoying the tax holiday and take more deductible expenses in another company they may own that must pay taxes. They would prefer to have the taxpaying company incur interest costs on borrowed finance and the tax holiday company to be financed with equity. In fact, the tax holiday company could hold debt in the non-holiday company. The non-holiday company can deduct interest while the tax-holiday company earns the interest tax-free.

Many countries, especially in the industrial world, allow fast write-offs for investment expenditures -- either all investments, or those they especially want to induce through tax allowances or credits.[10] Investment tax allowances have distinct advantages. The incentive is correctly targeted at the desired activity since a company receives the benefit of lower corporate taxes only if it makes capital investments (rather than formation of a new company). It encourages companies to take a long-term view when planning investments. By targeting current capital spending, the allowance causes less revenue leakage than would a tax holiday, and it promotes new investment instead of giving a windfall gain to owners of old capital, as does a reduction in corporate tax rates. It can also be made refundable, allowing the government to share the investment costs and risks with the foreign entrepreneur. Still, investment tax allowances have limitations and drawbacks. If the investment tax allowance is not refundable, existing companies reap the full benefits (i.e. supporting expansion) while start-up companies must first earn enough income before they can take the allowance. Also, projects with long gestation periods suffer in comparison with those that begin earning income quickly. When inflation is high, the allowance aggravates the tax system's uneven impact on the investment behavior of companies. Companies in high-inflation countries will benefit more if they borrow to finance capital, because tax deductions for capital expenditures are more valuable. This is the reverse of the tax holiday and of lower corporate tax rates, which reduce the advantages of interest cost deductions for tax purposes during high inflation.

Finally, an extreme approach has been to reduce or simply eliminate taxes to all or specific investors. Some countries have become tax heavens, especially in the Caribbean and Pacific regions. They generally chose to suppress all direct income taxes and rely on indirect consumption and employment taxes. Other countries have limited those benefits to specific areas and export oriented activities –the so-called Export Processing Zones (EPZs).

[10] These allowances take three forms: (1) accelerated depreciation, which allows companies to write off capital more quickly for tax purposes than for accounting; (2) an investment expenditure allowance that lets companies write off a percentage of qualifying investment expenditures from their taxable income; and (3)

These zones usually provide a number of benefits to firms that export a minimum share of total output (usually more than 70 to 80 percent). In virtually all of these zones there is a tax holiday for a substantial period of time (often 10 years) coupled with a reduction or elimination of import taxes on machinery and production inputs. In addition, the zones usually provide less cumbersome procedures for importing and exporting.

Tax heaven countries have been successful in encouraging FDI, but this has to be qualified as they principally attracted mobile companies or activities that are relatively global such as banking and insurance as well as Internet companies. Today, the Cayman Islands claims that it is the fifth largest financial center, as it is home to subsidiaries of 45 of the world's largest banks. It has to be noted that tax heavens have been much less successful in convincing multinational firms to relocate their corporate home than establishing new subsidiaries, partly reflecting the tax and regulatory costs of doing so from the home countries (Collins and Shackelfold (1995)). The experience with EPZ has been mixed as reported by Magati (1999). It remains unclear if the benefits (employment, exports) outweigh the costs (foregone tax revenues, distortions in the allocation of resources). In many countries, such regimes have created a dichotomy between the EPZ companies and those operating under the common regime. The capacity of custom and tax administrations to properly manage and control EPZ companies has also been a crucial element in the performance of EPZ.

IV. Recent Issues in a Global World

In recent years, the globalization process and the gradual elimination of barriers to capital movements, including FDI, across countries have led to the emergence of new issues. The first issue that has received a growing attention from researchers has been the interaction between the home and host countries' taxation regimes and its resulting

---

an investment tax credit that allows companies to reduce taxes paid by a percentage of investment expenditures.

impact on FDI flows. Second, the issue of tax competition between countries and across regions has also become widely debated in view of the growing importance of this phenomenon worldwide. Finally, several widely publicized recent deals have revealed that a few multinational companies have received large, perhaps disproportionate, tax rebates, suggesting that the costs and not only the benefits of tax incentives need to be examined more closely. These three issues are reviewed below.

A. Home country tax policy

In the presence of international capital mobility, home-country corporate income tax rates and rules about how taxes paid in the host country are considered at home should influence FDI. In fact, such influence was recognized a long time ago by the bilateral agreements that were signed to avoid double taxation of income between countries (see UNCTAD, 1995). The current literature has emphasized two additional effects: 1) the influence of the home country's tax system on the efficacy of the tax incentives granted by the host country, and 2) its impact on the way multinational do business abroad.

Home country's taxation rules affect the effectiveness of tax incentives in the host country. Most FDI outflows originate from OECD countries, with different regimes on how they tax the activities of their multinationals abroad. For example, the foreign tax paid by U.S. companies can be claimed as a tax credit on the U.S. tax liabilities (up to a rate of 35 percent). Japan and U.K. use similar tax credit systems, while other countries such as Australia, Canada, France, Germany and the Netherlands exempt more or less any profits earned abroad from home-taxation. In 1996, Hines compared the distribution of FDI within the U.S. of foreign investors whose home governments grant foreign tax credits for federal income and state income taxes with those whose governments do not tax income earned in the United States. His findings reveal that companies with home tax-free rules (France, Canada, etc.) have more invested in low tax states that those that have to pay taxes in their home country (Japan and U.K).[11] In a more recent paper of

[11] Note that Slemrod (1990) did not find any clear pattern at the country (rather than the State) level.

1998, the same author found that Japanese firms have a tendency to favor investment in countries where Japan has agreements to claim foreign tax credits for income taxes that they would have paid to foreign governments in the absence of tax holidays.[12] From a policy perspective, these two findings seem to indicate that tax incentives are more effective when they apply to firms from countries whose governments do not tax their foreign activities.

Some recent evidence has shown that the home country's taxation system is likely to influence the way their multinational companies do business abroad. Hines and Hubbard (1990) and Grubert (1998) found that it is attractive for U.S. firms to use debt to finance foreign investment in high tax countries (compared to the U.S.) and equity in low tax countries. The argument is that the debt generates interest deductions for the subsidiary and so reduces its taxable income in the host country (note that the parent firm has to pay additional taxes, but at a lower rate, in the U.S.). Harris (1993) uses firm-level data to illustrate that the Tax Reform Act of 1986 in the United States pushed U.S. firms with higher equipment/structure ratios to invest abroad more heavily because their tax regime encouraged such an action. A series of other recent studies have found similar results for preferred stock issuances (Collins and Shakelford (1992)) or domestic versus foreign borrowing (Atshuler and Mintz (1995). An interesting finding is that the 1986 Tax Reform has also influenced the form of business organization that the multinational will select in the foreign country. For example, since 1986, American investors have had fewer tax incentives to participate in joint ventures, particularly in low tax foreign countries, and the number for this type of foreign investments fell sharply as reported by Desai and Hines (1999).

Finally, the importance of the home-country tax system can also be illustrated by the efforts of tax authorities to prevent the transfer of multinationals' headquarters or other specific activities (such as R&D) to other countries. Many governments negotiate

[12] Hines shows that Japanese firms are subject to 23 percent lower tax rates than their American counterparts in countries which whom Japan has agreements. In other world, Japanese firms have a greater propensity to invest when they can benefit from tax incentives than when they cannot not because they would have to pay taxes in Japan.

contractual arrangements or, and often simultaneously, impose high penalties if the multinational company decides to do so. For example, the costs of moving a parent company, if it is already incorporated in the United States, are prohibitive because the tax administration generally takes the view that the firm is selling off its assets, and levy a substantial capital gain tax. On the other hand, the US tax system provides incentives to local R&D if imported technology and local technology are substitutes, and thus discourage US firms to move those activities abroad (see Hines 1999).

B. Harmonization vs. Tax Competition

In recent years, there has been new empirical evidence that tax rates and incentives influence the location decision of companies within regional economic groupings, such as the European Union, NAFTA, or ASEAN. The location decision of foreign companies within the U.S. has also retained the attention of several researchers (Ondrich and Wasylenko (1993) and Swensson (1994)). As an illustration of this effect, Devereux and Griffith (1998) found that the average effective tax rate plays a significant role in the choice of US companies to locate within Europe. This factor, however, does not seem to influence the choice of whether to locate in Europe compared with one of the outside options (domestic or other foreign markets).

Such findings confirms the idea that was put forward by Forsyth (1972) about 30 years ago. The potential effectiveness of fiscal incentives is that they are able to make a difference between competing jurisdictions where the basic, more important conditions, in other words the fixed locational characteristics, are more or less equivalent. These jurisdictions may be subnational or in different countries included in a supranational unified market (e.g. the European Union). Here, once a locational decision is narrowed down to a handful of alternative sites, incentives can play a decisive role in the final locational choice.

Since tax policy seems to have a greater impact on the location decision within regional markets, the argument is that it can push governments to "race to the bottom"

with competitive tax reductions. The main concern is that the various countries may end up in a bidding war that results in a "prisoner's dilemma" that benefits the foreign firms at the expense of the winning State and the welfare of its citizens.

The issue of tax competition across countries or regions has led to many studies in the past few years. For example, Haaparanta (1996) shows that countries will engage in tax bidding process to attract FDI, if their key motivation is to create jobs. The same reasoning could apply to R&D. Hauffer and Wooton (1999) suggest that the size of the host country may also matter. In principle, countries with large domestic markets are capable of taxing more FDI because they benefit from positive agglomeration effects but this advantage decreases with lower trade costs, as it may happen in regional grouping and Trade Union. Overall, the outcome of tax competition is generally ambiguous because it depends on many factors. Among a few of them, do governments enter in cooperative or non-cooperative contests? Do firms operate in a competitive or non-competitive market? What kinds of tax instruments do the governments use?

In reality, it is difficult to assess the magnitude of tax competition across countries or within a country because of the inherent difficulty of obtaining any reliable data from governments and even more so from firms (see Oman (2000) for a tentative assessment in several countries and regions). Tax competition seems to be more intensive in some sectors such as automotive and for larger firms. In any case, both the European Union and OECD have declared that tax competition is harmful to countries. However, this view has to be contrasted with the argument that variations in tax regimes are a good thing because they give tax payers more choice, and thus more chance of being satisfied, as well as some pressure on governments to compete by offering different combinations of public services and taxes.

Recent efforts to harmonize tax systems have been launched both in the industrial and developing world. For example, it has been one of the major objectives of the European Union, where member countries are discussing more stable, predictable and transparent tax rules for investors and governments alike. A first step was achieved in

December 1997 with the adoption of the Code of Conduct for business taxation in which member states agree not to introduce "harmful" tax measures and to roll back existing harmful measures. Similarly, several West African countries have been undertaking a joint effort to harmonize their tax incentives for FDI in one unified Investment Code within the Monetary Union of West African States. These processes have been slow and the challenge remains great at both the political and economic levels. The fact of the matter is that the temptation to use tax incentives for attracting FDI will certainly increase as a consequence of the growing mobility of capital and companies across countries and regions as well as the homogenization of basic fundamentals across (larger) economic areas.

C The Costs of Fiscal Incentives

The debate about the effectiveness of incentives in attracting investment –the potential benefit side – has diverted the attention from the cost side. Even if tax incentive were quite effective in increasing investment flows, the costs might well outweigh the benefits. This issue has become critical in view of the increase in tax competition around the world. This competition is not only taken place in relatively wealthy industrial countries but also in emerging markets where governments generally face severe budgetary constrains.[13]

There is no doubt that tax incentives are costly. The first and most direct costs are those associated with the potential loss of revenues for the host government.[14] The argument here is to determine if the new foreign investment would have come to the country if no or lower incentives were offered. In such cases, "free rider" investors benefit, whilst the Treasury loses, and there are no net benefits to the economy. An interesting recent study on the State of South Carolina in the US (Figlio and Blonigen 1999) has shown that foreign direct investment has several important negative impacts on

[13] This is certainly the main argument why tax incentives are frequently eliminated in budgetary crisis; see recent examples of East Asian countries (e.g., Indonesia) as discussed by Wells (1999).

[14] It is estimated that the direct and indirect fiscal "cost-per-job" of incentives received by investors in the automobile industry often exceeds US$100,000 (see Oman (2000)).

the State budget, in fact more than new domestic investment. Not only they generated more revenue losses (an average sized new foreign firm is associated with a 1.2 percent reduction in real per capita revenues while a domestic firm only 0.1 percent) but also additional expenses on infrastructure and education, even though those may have indirect benefits for the economy. These results simply illustrate that attracting foreign companies is not a "zero-sum game" from a public finance perspective.

Tax policy and incentives have many, perhaps less evident, additional costs. Indeed, the argument for their efficacy presuppose that tax authorities are capable of identifying the "positive externalities" of investments, and determine the exact level of tax incentives required to attract the investor. Most incentive programs have relied on vague assessments of potential externalities, and presumptions of policymakers about both the desirability and likelihood of attracting certain types of investments.[15] The distortionary effects of incentives on the allocation of resources can be significant as they bias the investment decisions of private companies. Incentives can be further counterproductive if they contribute to attracting more investors of the "wrong kind", which is certainly the case in countries where basic fundamentals are not yet in place.

Another problem with incentive measures relates less to whether they achieve their objectives than to the difficulty and cost of administering them effectively. Put another way, incentive regimes generally impose a significant administrative burden, and must therefore be more than marginally effective in order to cover the costs of implementing them and produce a net overall benefit. On this point, it is worth mentioning the difference between discretionary regimes, which depend upon case by case evaluations, and non-discretionary regimes, which grant incentives to whatever company meets clearly stated requirements. Difficult-to-administer discretionary regime result in delays and uncertainty for investors, which can even increase the overall cost of making an investment in some countries. They have also been significant sources of corruption, effectively screening out desirable investment, and detrimental to the

[15] Even if incentives are effective in attracting more investment, the fact is that they distort the profit signals to investors. Thus, unless the envisaged externalities can somehow be generated, the resources used by a government to fund incentive measures are being put to less than optimal use.

processes of developing competitive markets and sound policy-making. In contrast, automatic incentive regimes are easier to implement, and generally involve such incentives as investment tax credits, accelerated depreciation, and subsidies linked to indicators that can be easily measured (exports, technology imports, skilled labor). One has to keep in mind, however, that successful examples like Singapore or Ireland are rare. They have been more governments that failed to attract FDI with targeted tax incentives, explaining why the recent trend has been to eliminate and streamline tax incentive programs. In fact, it seems that multinationals give more importance to simplicity and stability in the tax system than generous tax rebates, especially in an environment with great political and institutional risks (see Ernst & Young (1994)).

V. Concluding Remarks and Next Steps

In summary, incentives will generally neither make up for serious deficiencies in the investment environment, nor generate the desired externalities. Thus, advisors often counsel long-run strategies of improving human and physical infrastructure, and where necessary streamlining government policies and procedures, thereby increasing the chances of attracting investment on a genuine long-term basis. Indeed, the importance of fundamental factors like economic conditions and political climate is underlined by the fact the most serious investors are often unaware of the full range of incentives on offer when they invest, and that they often do not consider alternative locations.

Recent evidence has nevertheless shown that, when other factors such as political and economic stability, infrastructure and transport costs are more or less equal between potential locations, taxes may exert a significant impact. This is evidenced by the growing tax competition in regional groupings such as the European Union or at the sub-regional level within one country (e.g., the U.S.). This impact, however, has to be qualified on two important counts. First, the impact of tax policy may significantly depend on the tax instruments used by the authorities. For example, tax holidays and a

general reduction in the statutory tax rate may have an equivalent impact on the effective tax rate but significantly different effects on FDI flows and government's revenues. Second, The effectiveness of tax policy and incentives is also likely to vary depending on the multinational firm's activity and on its motivations for investing abroad. For example, tax incentives seem to be a crucial factor for mobile firms or firms that operate in multiple markets because they can exploit better the different tax regimes across countries.

The debate around the impact of taxes and fiscal incentives on FDI is far from being over. Old questions will lead to new answers, and news questions will also emerge in the future. Among all these possibilities, we would like to focus on *five* directions that, we believe, offer ideas for future research. The first direction consists of the eventual non-linear impact of tax rates on the investment decision of multinational companies. A look at the reality suggests that countries with excessive tax rates can kill foreign direct investment but those with reasonable tax rates may exert little or no influence on it. At the other extreme, the success of tax heaven countries indicates that extremely low tax rates may also attract foreign investors, at least some of them. There is a need for a detailed econometric evidence of those non-linear effects as they may have implications for policy-makers that aim at using tax policy to attract foreign investors.

The second direction for research could be to examine more closely the effect of tax policy on the composition of FDI (e.g., greenfield, reinvested earnings, and mergers and acquisition). There have been only a few studies on this aspect, most of the authors preferring to focus on the level of total FDI in the country. However, depending on the tax policy or the fiscal incentives, foreign investors may choose alternative ways to invest abroad. For example, as mentioned in the previous section, recent changes in the US tax policy seem to have discouraged US joint ventures. By having a better understanding of how tax policies affect the composition of FDI, policy makers in host countries would have a better chance of attracting the right type of investment and maximizing its impact on the economy.

The third direction is linked to the development of new technologies. As a matter of fact the Internet have the potential to increase tax competition, not least by making it much easier for multinationals to shift their activities to low-tax regimes, that are physically a long way from their customers, but virtually are only a mouse-click away. As reported in The Economist (2000), "*many more companies may be able to emulate Rupert Murdoch's News Corporation, which has earned profits of US2.3 billion in Britain since 1987 but paid no corporation tax there*". The emergence of global companies will have a significant impact on government revenues. These companies are likely to be much sensitive to tax incentives as they will be more capable to exploit them by transferring their activities from one country to another. Additional evidence is certainly needed on this rapidly expending sector of the economy.

The fourth direction concerns the need for a global approach to the taxation of multinational companies. Within that vision, the following areas merit further attention: (1) should countries harmonize their tax regimes and, if yes, how? (2) should "transfer pricing" or other techniques used by multinational companies to exploit cross-country differences in tax regimes be restricted as followed recently by U.S. tax legislators who have the possibility to force companies to repatriate their profits if the authorities consider that they attempt to avoid taxation? (3) Should a global agency calculate the profit of global companies worldwide and then allocate it to individual countries on the basis of a formula that reflect the firm's presence in that country? Today, those areas offer more questions than answers, but it has to be recognized that a global approach is increasingly needed because national boundaries are fading away, and national tax administrations are losing their control over taxpayers.

The fifth and last direction lies in the question whether tax incentives should only be directed at (foreign) investors that make the "right things" in the host country, such as environment-safe projects, or those leading to employment or transfers of technology and marketing skills. This new trend caught the attention of a few researchers in the past few years. For example, Markusen et al. (1995) study a model where governments compete through environmental taxes when productive activity causes local pollution (see also

Rauscher (1995)). Hines (1995) found that American owned-foreign affiliates are more R& D intensive if located in countries that impose high withholding taxes on royalty payments, and similarly, that foreign firms investing in the United States are more R&D intensive if they are subject to higher royalty withholding taxes. Recently, Blonigen and Slaughter (1999) suggest that tax policy influence the magnitude of which foreign affiliates use skilled labor and transfer new technologies in the host country. These recent studies indicate that tax policy can be used not only to attract foreign investors but also to regulate some of their activities in the host economy. This issue merit further attention from research, especially at there is need for additional evidence of these possible effect both at the country and enterprise level.

Bibliography

Agodo O., "The Determinants of US Private Manufacturing Investment in Africa", Journal of International Business Studies, 9, 1978.

Aharoni Y., "The Foreign Investment Decision Process", Harvard Business School, Boston, 1966.

Atshuler R. and J. Mintz, "US Interest-Allocation Rules: Effects and Policy", International Tax and Public Finance 2, N.1, May 1995.

Barlow E. and I. Wender, "Foreign Investment and Taxation", Englewood Cliffs: Prentice Hall, 1955.

Blonigen B. and M. Slaughter, "Foreign-Affiliate Activity and US Skill Upgrading", NBER Working Paper, N. 7040, March 1999.

Bond E. and L. Samuelson, "Tax Holidays as Signals", The American Economic Review, 76(4), pp. 820-26, 1986

Boskin M. and W. Gale, "New Results on the Effects of Tax Policy on the International Location of Investment", in Feldstein M. (ed), The Effects of Taxation on Capital Accumulation: University of Chicago Press, 1987.

Coyne E.J., "An Articulated Analysis Model for FDI Attraction into developing Countries", Florida; Nova Southeastern University, 1994.

Collins J. and D. Shackelfold, "Corporate Domicile and Average Effective Tax Rates: The Cases of Canada, Japan, the United Kingdom, and the United States", International Tax and Public Finance 2, N.1, May 1995.

Devereux M. and R. Griffith, "Taxes and the Location of Production: Evidence from a Panel of US Multinationals", Journal of Public Economics, 68, 1998.

Desai M. and J. Hines, "Basket Cases: Tax Incentives and International Joint Venture Participation by American Multinational Firms", Journal of Public Economics, 71, March 1999.

The Economist, "Globalization and Tax", January 29, 2000

Ernst & Young, "Investment in Emerging Markets", 1994.

Figlio D. and Blonigen B., "The Effects of Direct Foreign Investment on Local Communities", NBER Working paper, N. 7274, July 1999.

Forsyth D., "US Investment in Scotland", New York: Praeger, 1972.

Fortune/Deloitte & Touche, "1997 Business Location Study", 1997.

Group of Thirty, "Foreign Direct Investment: 1973-87", New York: Group of 30, 1992.

Gruber H., T. Goodspeed and D. Swensson, "Explaining the Low Taxable Income of Foreign-Controlled Companies in the U.S.", In Studies in International Taxation, edited by A. Giovannini, R. Hubbard, and J. Slemrod, Chicago: University Press, 1993.

Gruber H., "Taxes and the Division of Foreign Operating Income Among Royalties, Interest, Dividends, and retained earnings", Journal of Public economics 68, N.2, May 1998.

Guisinger S. et al., "Investment Incentives and Performance Requirements", New York: Praeger, 1985.

Haaparanta P., "Competition for Foreign Direct Investment", Journal of Public Economics 63, 1996.

Harris D., "The Impact of US Tax Law revision on Multinational corporations' capital Location and Income –Shifting Decisions", Journal of Accounting research 31, Supplement 1993.

Hartman D., "Tax Policy and Foreign Direct Investment", Journal of Public Economics 26, N.1, February 1985.

Hauffer A. and I. Wooton, "Country Size and Tax Competition for Foreign Direct Investment", Journal of Public Economics, 71, 1999.

Hines J. and G. Hubbard, "Coming Home to America: Dividend Repatriations by US Multinationals", in Taxation in the Global Economy, edited by A. Razin and J. Slemrod, Chicago: University Press, 1990

Hines J., "Altered States: taxes and the Location of Foreign Direct Investment in America", American Economic review 86, N.5, December 1996.

Hines J., "Tax Sparing and Direct Investment in developing Countries", NBER Working paper, N. 6728, September 1998

Hines J., "Lessons from Behavioral Responses to International Taxation", National Tax Journal, June 1999.

Japan External Trade Organization (JETRO), The Current state of Japanese Affiliated manufacturers in ASEAN-1994", Tokyo: Overseas Research Department, June 1995.

Lim D., "Fiscal Incentives and Direct Foreign Investment in Less Developed Countries", Journal of Development Studies, 19(2), 1983

D. Magati , "A Review of the Role and Impact of Export Processing Zones", draft, the World Bank, Research Department, 1999.

Markusen J.R., E. Morey, and N. Olewiler, "Competition in Regional Environment Policies when Plant Location are Endogenous", Journal of Public Economics, 56, 1995.

Mintz J. and T. Tsiopoulos, "Corporate Income Taxation and Foreign Direct Investment", Foreign Investment Advisory Service, Occasional Paper 4, 1992.

Oman C., "Policy Competition for Foreign Direct Investment: A Study of Competition Among Governments to Attract FDI", OECD Development Centre Studies, January 2000.

Ondrich J. and M. Wasylenko, "Foreign Direct Investment in the United States: Issues, Magnitudes, and Location Choice of New Manufacturing Plants", Kalamazoo: W.E. Upjohn Institute, 1993.

Phillips A, "The Significance of Nigeria's Income Tax Relief Incentives", The Nigerian Journal of Economic and Social Studies, 11, July 1969.

Rauscher M., "Environment Regulation and the Location of Polluting Industries", International Tax and Public Finance, 2, 1995.

Reuber G et al., "Private Foreign Investment in Development", Clarendon Press for the OECD Development Centre, Oxford, 1973.

Robinson H. J., "The Motivation and Flow of Private Foreign Investment", Menlo park, California: Stanford Research Institute, 1961.

Rolfe R.J. et al., "Determinants of FDI Incentive Preferences of MNEs" , Journal of International Business Studies, 24(2), 1993.

Root F. and Ahmed A., " The Influence of Policy Instruments on Manufacturing Direct Foreign Investment in developing Countries", Journal of International Business Studies, 9(3), 1978.

Shah A., "Fiscal Incentives for Investment and Innovation", Oxford: Oxford Press for the World Bank, 1995.

Shah A. and J.Toye, "Fiscal Incentives for Firms in Some Developing Countries: Survey and Critique", edited by J. Toye, Taxation and Economic Development, London: Fran Cass, 1978

Slemrod J., "Tax Effects on Foreign Direct Investment in the United States: Evidence from a Cross Country Comparison", In Taxation in the Global Economy, edited by A. Razin and J. Slemrod, 79-117, Chicago: University Press, 1990.

Swensson D., "The Impact of US Tax reform on Foreign Direct Investment in the United States", Journal of Public Economics, 54, June 1994. .

UNCTAD, "Incentives and Foreign Direct Investment; Background Report, April 1995.

Wells L., "Investment Incentives: An unnecessary Debate", CTC Reporter, autumn, 1986.

Wells L., "Attracting Foreign Investment: Incentives, Institutions, and Infrastructure", working paper, November 1999.

Policy Research Working Paper Series

	Title	Author	Date	Contact for paper
WPS2493	Annuity Markets in Comparative Perspective: Do Consumers Get Their Money's Worth?	Estelle James Dimitri Vittas	November 2000	A. Yaptenco 31823
WPS2494	The Relevance of Index Funds for Pension Investment in Equities	Ajay Shah Kshama Fernandes	November 2000	A. Yaptenco 31823
WPS2495	The Australian Annuity Market	David M. Knox	November 2000	A. Yaptenco 31823
WPS2496	Perspectives on the Sources of Heterogeneity in Indian Industry	Somik V. Lall G. Chris Rodrigo	November 2000	R. Yazigi 37176
WPS2497	State Policies and Women's Autonomy in China, India, and the Republic of Korea, 1950–2000: Lessons from Contrasting Experiences	Monica Das Gupta Sunhwa Lee Patricia Uberoi Danning Wang Lihong Wang Xiaodan Zhang	November 2000	M. Das Gupta 31983
WPS2498	Sustaining Economic Welfare: Estimating Changes in Per Capita Wealth	Kirk Hamilton	November 2000	L. Rivera 82819
WPS2499	The Treatment of Non-Essential Inputs in a Cobb-Douglas Technology: An Application to Mexican Rural Household-Level Data	Isidro Soloaga	December 2000	L. Tabada 36896
WPS2500	Investigating Corruption	Canice Prendergast	December 2000	H. Sladovich 37698
WPS2501	Anti-Corruption Policies and Programs: A Framework for Evaluation	Jeff Huther Anwar Shah	December 2000	A. Santos 31675
WPS2502	Implications of the Currency Crisis for Exchange Rate Arrangements in Emerging East Asia	Masahiro Kawai Shigeru Akiyama	December 2000	A. Azarcon 36049
WPS2503	Proposed Strategy for a Regional Exchange Rate Arrangement in Post-Crisis East Asia	Masahiro Kawai Shinji Takagi	December 2000	A. Azarcon 36049
WPS2504	Social Capital and the Quality of Government: Evidence from the United States	Stephen Knack	December 2000	P. Sintim-Aboagye 38526

Policy Research Working Paper Series

	Title	Author	Date	Contact for paper
WPS2505	Family Altruism and Incentives	Roberta Gatti	December 2000	R. Bonfield 31248
WPS2506	Ethnicity and Wage Determination in Ghana	Abigail Barr Abena Oduro	December 2000	R. Bonfield 31248
WPS2507	Public Expenditures and Environmental Protection: When Is the Cost of Funds Irrelevant?	Gunnar S. Eskeland	December 2000	H. Sladovich 37698
WPS2508	Sources of Financial Assistance for Households Suffering an Adult Death in Kagera, Tanzania	Mattias Lundberg Mead Over Phare Mujinja	December 2000	V. Soukhanov 35271