The Growing Problem of Antidumping Protection[**]

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I. Introduction

While the public's and press's imagination has tended to focus on hot button issues such as agriculture, labor standards, and the environment, it is the dozens, if not hundreds, of other less publicly visible policies that will largely determine the success of the Doha Round of the World Trade Organization. Chief among these less celebrated policies is antidumping (AD).

AD is a fairly inconspicuous trade policy – I have never seen a picture of a WTO protestor carrying a placard lamenting the spread of AD, or for that matter praising the virtues of AD. Despite its somewhat low public profile many studies have shown that AD imposes heavy costs on both implementing and affected countries. For instance, Gallaway, Blonigen, and Flynn (1999) estimate that only the Multifiber Arrangement imposes larger welfare costs on the US economy than do antidumping and countervailing duty actions.[1] Messerlin (2001) estimates that AD protection and farm policies were about equally as costly for EU countries. In terms of trade volume, Staiger and Wolak (1994) and Prusa (2001) each find that trade from affected countries often falls by more than 50% after the imposition of AD duties.

If AD protection is so costly, why has it remained a "back-burner" topic? There are two inter-related explanations. The first is quite simple: until ten to fifteen years ago the AD users club was fairly small, making it easy for countries seeking reform to believe that AD was essentially a nuisance and hence to give it lower priority in negotiations. The second reason is that the four traditional users of AD – Canada, US, EU, and Australia – have believed and continue to believe that more would be lost than gained if AD were to be reformed (from a mercantilist point of view).

But these explanations are no longer supported by the facts. While AD supporters may not be surprised to hear that AD is posed to become the world's biggest trade impediment, they

may be shocked when they hear its ascendancy is primarily due to the AD activity of new users. Twenty years ago the top four users accounted for 98% of AD actions; nowadays these traditional AD users account for only about 40% of the disputes. Said differently, even though AD activity among the traditional users has fallen by about 25% over the past decade, total worldwide AD activity is up over 15%. Over the past decade the number of countries with an AD statute has doubled and over the past twenty years the number of countries actively using AD has quadrupled. Put another way, within a few years the list of countries not using AD will be shorter than the list of countries of using AD. The once exclusive AD club now includes members from all parts of the globe and from all income levels.

Although the US, Australia and EU still file more cases than other countries do, it now seems inevitable they will be passed by countries such as India, Mexico, Brazil, and perhaps most remarkable of all, the People's Republic of China. Once I control for size, it becomes apparent that new users are filing at prodigious rates, five, ten, and even twenty times the rate as the traditional users. These filing trends imply that the traditional users mercantilist rationale for AD is rapidly eroding.

While some of these issues have been discussed in the literature (Miranda, Torres, and Ruiz, 1998; Prusa, 2001; Zanardi, 2002) there has been no discussion of what these evolving trends mean for Asia-Pacific countries, the traditional target of AD protection. Supporters of AD often make reference to "sanctuary markets," "foreign cartels," and "establishing level playing fields" in their rhetoric; their comments implicitly or explicitly allude to Japan, South Korea, and People's Republic of China.[2]

During the 1980s the Asia-Pacific countries were the targets of 30-40% of traditional users' AD actions. Has the spread of AD protection changed this? Or, do Asia-Pacific countries

continue to bear a disproportionate share of AD protection? I find that the proliferation has done nothing to alter the pattern: over the past decade Asia-Pacific countries are subject to about 40% of both new and traditional user AD actions.

Interestingly, I do see differences in the industry composition of trade complaints between new and traditional users. Traditional and new users both tend to target industries where they are losing comparative advantage. Since this pattern varies across countries, however, AD complaints differ across source countries. In other words, the pattern of AD use says as much about the filing country as it does about the target countries. If country A's steel industry is ailing, then country A targets South Korea's steel companies. If country B's apparel sector is ailing, then country B targets South Korea's apparel companies. If country C's tire industry is ailing, then country C targets South Korea's tire companies.

Interestingly, when one controls for general macroeconomic influences on the quantity of AD disputes among nations, I find broadly similar patterns for new users (in general), Asian countries (specifically), and the traditional users. Exchange rate appreciations, weak GDP growth, and strong import growth all stimulate AD activity. I find some support for the view that the exchange rate matters less for new users which suggests that new users have an even weaker the injury test than traditional users do.

These evolving trends mean that Asia-Pacific nations' position toward AD reform is more complicated than in the past. On the one hand, they have been, and continue to be, subject to huge numbers of AD measures. Reforming AD rules is in their national interest. On the other hand, evidence is emerging that Asia-Pacific nations are learning the joys of discretionary protection. Reforming AD rules will present commercial challenges to many powerful

industries. For many new users the political calculus toward AD reform will soon shift (or in some cases, has already shifted) toward maintaining current rules.

The rest of the paper proceeds as follows. In the next section I give a quick primer on AD rules and protection; the discussion highlights the disconnect between the theoretical justification for and the actual practice of AD protection. I then review the trends in AD measures and document the growing set of countries using AD. In section 4 I focus on AD protection by and against Asia-Pacific countries. In section 5 I examine how macroeconomic variables affect new and traditional user filing activity. Section VI concludes with a discussion of how Asia-Pacific countries might pursue AD reform.

II. Antidumping Overview – The Yawning Gap Between Theory and Practice

Under GATT/WTO rules, antidumping law protects domestic industries from "unfair" import competition. Specifically, AD law allows a country to impose special duties on goods from a particular country or group of countries if two claims can be proven: (i) that the imported goods are being sold in the domestic market at "dumped" prices; and (ii) that the imports in question are causing or threatening to cause "material injury" to domestic producers of the "like product."

AD supporters argue that dumping violates principles of fair trade and as such must be condemned. To the man on the street this broad description makes AD sound fine and, if anything, sounds vaguely reminiscent of antitrust law. If nothing else, the rhetoric of "free but fair" trade is irresistible. After all, who is in favor of unfair trade?

The question of dumping

To most people, AD law sounds like it is rooted in solid economics – namely, the idea that policy-makers should discourage anti-competitive practices. There has been more than a century of legal analysis of what constitutes anti-competitive behavior through application of antitrust laws. Unfortunately, the definition of "unfair" trade practices and application of AD remedies has been allowed to develop a life of its own and bears no resemblance to established standards of anti-competitive behavior. The anti-competitive practice most relevant to our AD discussion here is predatory pricing. This is where a firm prices low with the intent of driving rivals out of business. The standard for judging whether a firm is pricing in such a manner is to examine whether a firm's price falls below its marginal cost. Since marginal cost is essentially unobservable, Areeda and Turner (1975) have alternatively suggested looking at whether price is below average variable cost; i.e., excluding fixed costs.

In simplest terms, dumping is simply defined as the practice of a firm selling at a price in its export market that is below "fair" value. Application of this definition is not so simple as it involves a more precise definition of "fair." In practice, two main ways have evolved to calculate "fair" value: (1) The price charged by the exporting firm in its own market for the same product, or (2) the cost of the product constructed from firm-level accounting data.[3]

Both of these definitions are very weak in terms of identifying economic behavior that could be considered anti-competitive; i.e., the criteria to judge whether predatory pricing is occurring. Under the first definition, a firm is dumping simply by price discriminating; i.e., charging different prices in different markets. It is virtually impossible to find a market in which firms are not price discriminating in some way and antitrust laws do not deem this practice as anti-competitive *per se*.[4] If countries do not worry about price discrimination by firms for

different consumers in the domestic economy, why should we worry about it across national borders?

The second definition of "fair" value leads to an even more ridiculous criterion by antitrust standards. As mentioned, antitrust authorities do worry about pricing below marginal cost (or, in practice, average variable cost), as this has become the standard for believing that the firm is not maximizing short-run profits, but instead pricing in a predatory fashion to drive out rivals. In fact, one can see that relaxing standards to prosecute any firm that prices below average total cost (including fixed costs) for antitrust violations is ridiculous. This would mean that one could prosecute any firm that is making a loss. Yet, when many countries' antidumping authorities determine "fair value" through "constructed cost" measures, they not only include fixed costs, but they also add on their own estimate for what should be a normal profit for the firm in the market. As a result, they take the ridiculous to another level and convict a foreign firm for not making enough economic profit from a country's consumers.

Given this discussion, it should come as little surprise that almost all dumping determinations are affirmative and that dumping margins are usually quite large. In the US, for example, over the past twenty-five years about 98% of the dumping determinations have been affirmative, and over the past five years the average calculated margin has exceeded 50%. While I do not have complete data on dumping determinations for other countries (an ongoing project), my preliminary research indicates that similar extreme patterns hold for other countries.

While one could argue that AD cases are only brought against firms who have violated some reasonable business principles the simple truth is that if one were to apply AD regulations to domestic markets, one would discover not only that any firm that loses money has dumped (by definition) but also that any firm that does not report double-digit profits has dumped. In fact,

WTO rules allow a country to claim an import is being dumped even though the foreign firm charges not only higher prices abroad than it does at home, but also higher prices than its domestic competitors. Lindsey and Ikenson (2002) show how a producer that sells widgets in the export market at prices 13.96% higher than in its home market nonetheless winds up with a dumping margin of 7.37%.

Indeed, WTO-sanctioned methodology implies that not only have most domestic firms "dumped" during bad years (when they announce losses), but also that most firms (foreign or domestic) dump even in good years simply because they report single digit profit margins. Bluntly stated, according to how the GATT/WTO has defined the term almost most economic transactions involve "dumping."

The question of causality

Under WTO rules, affirmative AD determinations with resulting AD duties, require a finding of not only dumping, but also material injury (or threat of injury) to the domestic firm due to import competition. Of course, saying that having a foreign competitor in the market place is injurious to a domestic firm is like saying that water is wet. Competition reduces current firms' profitability, which is an indication of efficient markets. The criterion of "material" injury only raises the bar slightly by ruling out trivially small competitors. For all intents and purposes, in AD injury analysis correlation and causality are the same. Remember, the legal standard is "material injury," and material injury can be interpreted as loosely as local authorities choose. As a practical matter, if there has been any increase in imports over the same time period that virtually <u>any</u> measure of economic performance has declined, imports can be blamed. Whether a similar correlations exists between dozens of other potential factors is usually beside the point.

Moreover, such marketplace occurrences have no necessary correlation with anti-competitive practices.

What AD isn't (competition policy) and what AD is (protectionism)

As the above discussion suggests, AD is not antitrust law. The term "unfair" has evolved to mean something completely different in the practice of AD protection than standard notions of "anti-competitive." As such, there is a very large disconnect between AD protection and the competition policy of developed countries. Any changes in the market place that lead to less favorable outcomes for the domestic firm are considered unfair, so that AD laws are truly about protecting domestic firms' interests, not competition. This places us back into the familiar realm of "beggar-thy-neighbor" trade policies, with many of the well-known economic welfare consequences.[5]

If AD is not about making markets competitive, what is it? For all intents and purposes, AD is simply protectionism dressed up in a nice suit. In many ways, AD is an almost ideal instrument of modern protection. First, it is sanctioned by the WTO. As a consequence, targeted countries cannot immediately retaliate to a dumping order by raising their own tariffs. Implementing countries can always claim they are just exercising their negotiated right to "level the playing field." AD law allows politicians to offer protection to politically preferred industries without blatantly violating their GATT/WTO obligations. Second, the legal standards are at best, easily satisfied and murky, and at the worst, nonsensical. As a result, AD duties always have a significant probability of satisfying the legal rules. As a result, AD duties often are nothing more than veiled protectionism. Third, at shown by Staiger and Wolak (1994), even a case that is ultimately rejected can significantly reduce trade. During the course of the investigation (usually about a year) the foreign companies are guilty until proven innocent. As a

result, duties are imposed long before the final determination is made. This means that in many cases the attempt to restrain foreign rival's with higher tariffs is effectively costless: the legal fees associated with the filing are more than paid for by the increased profits stemming from the investigation effect. Fourth, subject countries can appeal the AD determination to the WTO dispute settlement body, but this is rare and the appeal process is lengthy.[6] Moreover, during the entire review process the AD duties remain in force. And then, even if its appeal is ultimately successful, the affected party has to wait for the implementing country to alter its policy. The bottom-line: even if the appeal eventually results in it the removal of the AD order, the AD action can have affected trade for five or more years.

All things considered, most people only understand the rhetoric surrounding AD and know little how AD is actually implemented. Of those in the know, all but AD's staunchest supporters recognize that AD has nothing to do with keeping trade "fair." AD has nothing to do with moral right or wrong, it is simply another tool to improve the competitive position of the complainant against other companies. As Stiglitz (1997) argues, there is essentially no connection between national welfare considerations and AD protection.

III. Emerging trends in antidumping use – The emergence of New Users

In order to get a handle on how widespread AD is, I reviewed the semi-annual reports submitted to the WTO by member countries.[7] By agreement, all WTO members are required to make a semi-annual report on their use of trade remedies, including antidumping activity.[8] Using these reports I compiled a database of all AD actions filed by WTO members between 1980 and June-2002. In this section I will review the long-run trends in AD use and discuss the

rising use of AD by new users. In the next section I will focus specifically on use of AD by East Asia and South Asia countries.

AD – The 900 Pound Gorilla

To say that antidumping is now the most popular form of international trade protection is an understatement. In terms of the quantity of trade litigation, antidumping has lapped the field – several times over. Between 1995 and 2000, WTO members reported 61 safeguard investigations, 115 countervailing duty investigations, and 1441 antidumping investigations. When one recognizes that countervailing duty has long been the *second* most commonly used trade statute the filing statistics are even more astounding. Countervailing duty law takes the silver medal, but it is a distant second.

The preeminence of antidumping is neither an entirely recent phenomenon nor simply a one-year anomaly. In the United States, for instance, over the past twenty-five years there have been more than twice as many antidumping disputes as countervailing duty allegations. In fact, there have been more disputes filed under the US antidumping statute than under all other U.S. trade statutes put together. The same is true for the EU. Antidumping is simply the 900-pound gorilla of trade laws.

A Long Run Perspective on AD

There has been a steady, long-run increase in AD activity. In Figure 1 I depict the number of filings since 1980. In order to give a broader picture and also to smooth year-to-year fluctuations I have aggregated the annual statistics into five-year intervals. I have also extrapolated the data for Jan-2000 through June-2002 to come up with an estimated figure for the 2000-04 period. As shown, starting from a base of about 700 AD disputes in 1980-84, AD

activity grew to over 1200 disputes in 1990-94 to over 1400 disputes in 2000-04 (estimated). Said differently, the number of AD disputes has doubled since the end of the Tokyo Round, which implies AD has averaged annual growth rate of about 3.5%.

Of course, one reason why we have witnessed such a growth in AD disputes is the growth in trade. That is, as trade increases it should not be surprising to see an increase in dumping allegations. It therefore makes sense to control for the value of imports. Filing intensity not only gives an alternative measure of the long-run growth in AD but also facilitates comparing AD activity across countries. That is, the US and EU are the world's largest importers and, as a result, they might be expected to file more cases. A country like New Zealand, for instance, may file fewer cases but relative to what it imports, those few cases might indicate a very active AD policy.

I compute an "intensity" of AD metric by calculating the number of cases per real dollar of imports and normalize the "intensity" measure so that the intensity level (for the entire 1980-2002 period) of the world's heaviest AD user, the United States, is set to one.[9] Countries with intensity measures greater (less) than one file more (fewer) AD cases per dollar of imports than the US.

In Figure 2 depicts the intensity of AD filings since 1980. A couple of interesting lessons emerge. First, one's perspective on the long-run pattern of AD usage changes depending on whether I look at the raw numbers or intensity rate. Specifically, in Figure 1 we saw that there has been a steady, long-run increase in AD activity; however, as shown in Figure 2 the intensity of AD activity has experienced a steady, long-run decrease. Overall, the intensity of AD activity has steadily fallen about 2.4 to 1.5 over the past twenty years. In other words, even though the number of AD disputes has steadily increased, the volume of international trade has grown by an

even faster rate. Figure 2 suggests that an important reason for the growth in AD is the growth in international trade. As it turns out, this is indeed a key lesson, but as I will discuss below the lesson is somewhat subtler.

Second, as depicted in Figure 2, on average most other countries that file AD actions do so at about twice as intensively as the US. In other words, even though the US files more AD cases than any other country, when measured using the intensity index, the US emerges as a fairly restrained user. The same is true for the EU (see Table 1). In particular, the EU files a large number of cases but its AD filing intensity is puts it near the bottom of the list. By contrast, Australia and Canada, the other two traditional AD users, not only file a large number of cases but have filing intensities that easily exceed that of the US and EU. From the mercantilist perspective these trends are a first indication that the EU and US have reason to be concerned by other countries' use of AD.

The Growth of New Users

Figure 2 does not incorporate the changing set of countries using AD protection over the sample period. Depending on the number and import intensity of new AD users, the preceding statistics might give a misleading impression of the trend in AD protection.

In Table 2 I provide some information to help identify this trend. First, note the increase in the number of countries with an AD statutes. Notice that early in the sample, only 34 nations/regions had an AD statute in their regulations governing international trade. Over time, more and more countries have codified their own AD statute. By 1990-94, the number of countries with their own AD statute had grown to 45. As of mid-2002, 87 countries had enacted their own AD statute.

Of course, just because a country has a statute does not necessarily imply that a country uses it. Japan, for instance, was one of the earliest adopters of AD protection, but has rarely used it. But, over the past two decades there has been a steady increase in the number of countries using AD. The number of countries initiating AD investigations has grown from 8 (in 1980-84) to 24 (in 1990-94) to 30 (2000-June 2002).

Thus the four traditional AD users (US, EU, Canada, and Australia) have been joined by an expanding set of new users. And, the new users have not been bashful about using AD (Table 2). The share of AD cases accounted for by new users has soared from 1% (in 1980-84) to 36% (in 1990-94) to 60% (2000-June 2002).

Differentiating between new and traditional users, I depict the number of AD cases filed (Figure 3) and filing intensity (Figure 4). Several very important lessons can be gleaned. First, while overall AD disputes are on the rise (as seen in Figure 1) the use of AD by traditional users has slightly fallen (or at best remained flat) over the sample period. Thus, the overall growth in AD activity is entirely driven by the embrace of AD protection by new users. New users have gone from filing a handful of complaints in 1980-84 to filing hundreds of complaints each year in the last decade. Second, in terms of intensity of usage, new users are much more prolific in their use of AD than traditional users. While traditional users have an overall filing intensity of about 1-1.5, new users have an overall filing intensity of 3-4, more than twice the traditional users' rate. In other words, per dollar value of imports, new users file upwards of four times as many AD petitions as traditional users. Third, the role of new users is even starker when I examine the trend in filing intensity. The filing intensity for traditional users has steadily fallen over time to about 1 (i.e., the US average for the entire sample). By contrast, the filing intensity of new users has grown sharply, and has averaged well over 4 for the decade of the 1990s. The

view that the growth in AD activity is simply a reflection of the growth in trade is not supported from this more detailed perspective. The filing intensity of new users, the source of the growth in number of AD disputes, has easily exceeded their import growth.

Table 1 sheds more light on these trends by looking at the individual country filing intensity. Argentina and South Africa have a filing intensity of almost 17; India's filing intensity is almost 20. In other words, if a given value of imports induces the two biggest traditional obstacles to AD reform (US and EU) to file about one case, the same imports would generate 15-20 cases for some of the leading new users. Such statistics make it clear that new users have embraced AD in a way unfamiliar to traditional users.

In Table 1 I also report the fraction of AD cases that ultimately result in some form of protection.[10] The two biggest traditional AD users – the US and EU – each levy duties in about 2/3 of their cases. Most of the new users also report similar statistics. This is especially the case for those that use AD more heavily such as Argentina (69% of cases result in duties), Mexico (57%), Brazil (52%), and South Africa (71%). The big outliers are India (98% of cases result in duties) and Egypt (91%). Also worth noting is PR-China with 83% of its cases resulting in duties. While my PR-China only had a handful of cases during my sample, there has been a sharp increase in AD activity in PR-China in the last 18 months. In addition, public statements by PR-China officials seem to indicate a very aggressive attitude.

How should one interpret the prolific rate that new users have filed AD complaints? It seems to me there are several possibilities. Such trends could lead one to wonder that there is something unfair about the way AD law is currently written. Perhaps they might even lead to one to conclude (as I argued above) that the AD system itself makes little economic sense and is simply thinly disguised protectionism.

Or alternatively, if one is committed to the belief that AD simply "levels the playing field" and that AD rules as currently written are an acceptable way to promote fair trade, then one might conclude that for some reason exporters price particularly unfairly when selling to new users. This is a bit uncomfortable position, as one must further explain why exporters who have been successful in many other markets must resort to unfair pricing when servicing the new users.

The most likely interpretation, especially by the traditional users such as the US and EU, is that AD rules are correct but that new users are implementing the rules incorrectly. This final reading, however, is somewhat tenuous. To begin with, almost all of the new users have based their AD rules on either the US or EU system. In most cases, the language of the rules is like language of the US and EU; vague language and vast amounts of discretion characterize all countries AD statutes. While there appears to some anecdotal evidence that some new users are even more casual in their dumping calculations, proving this assertion requires a careful case-by-case examination. In addition, the decided majority (about two-thirds) of WTO disputes involving AD actions have been aimed at actions of the traditional users not new users. This suggests that AD use by traditional users has caused more rancor than AD use by new users. Moreover, new users have fared about the same as traditional users in these proceedings, each having about 50% of the claims accepted by the dispute panel (Durling, 2003). At face value, it is not obvious that new users abuse AD rules to any greater degree than traditional users. Current AD rules are inherently flexible. The fact that the same set of facts leads India to find injury but might lead the US to reject the case does not mean that the India has violated the AD agreement. Finally, getting the new users to adopt different rules for their AD proceedings means that the traditional users will have to put AD rules on the agenda. While the US

reluctantly agreed to do so, its willingness to sincerely negotiate restraining AD is highly doubtful. Among many members of the US Congress, for example, the current AD system is sacrosanct and even modest revisions to AD rules could jeopardize the whole agreement.[11]

IV. AD and East- and South-Asian Countries

General trends – How often are they targeted?

I now turn to the question of who has been subject to AD investigations. In Table 3 I tabulate AD activity by region, where I have grouped according to the World Bank definitions with one exception. Given its long-standing use of AD, I pulled Australia from its standard World Bank region designation "East Asia and Pacific". Most of the other groupings are pretty self-explanatory: the "Americas" includes Canada, the US, and countries in Latin and South America; "EU+" includes the EU, EFTA countries, and Turkey, etc.

Let's begin by looking at Table 3. In the top panel I tabulate by initiations by region against all countries. In the bottom panel I tabulate "affected" or "named" countries by region for cases filed by all countries. As one can see, the Americas are the leading users of AD followed by EU+ and Australia (top panel). Not coincidentally, these are the locations of the big four traditional users. Interestingly, the Americas and EU+ are also among the leading subjects of AD investigations (bottom panel).

At the bottom of Table 3 I give the total cases against the Asia-Pacific and South Asia regions. Largely because of their exporting success Asia-Pacific countries such as Japan, Taiwan, and South Korea have long been singled out in the rhetoric justifying AD protection. Mastel (1998) and Cohen, Blecker, and Whitney (2003) justify AD because it is the only policy

available to remedy the anticompetitive effects of the (perceived) closed nature of Asian markets; or in their language, the anticompetitive effects of "sanctuary markets" and "foreign cartels."

As shown, a growing fraction of AD cases have been aimed against Asian markets, starting from 30% in the early 1980s and rising to about 50% in recent years. A big part of the increase is due to the integration of PR-China into the world trading system. In recent years about 20% of all AD cases target PR-China. Since the rules involving PR-China (and all non-market economies) differ from other Asia-Pacific countries, it makes sense if we breakout the PR-China cases. Once I drop the cases against PR-China we see that the fraction of traditional user AD cases against Asia-Pacific countries has been fairly stable, averaging about one-third of the total.

The relatively stable pattern of use against Asia-Pacific countries begs the question of whether the pattern of filings is stable for both traditional and new users, or whether traditional users activity against Asia-Pacific countries is declining and is being replaced by an upsurge in complaints by new users. To get at this issue, I tabulate AD filings breaking out new and traditional users (see Table 4). The fraction of AD cases by traditional users against Asia-Pacific countries (less PRC) is even more stable than the overall trend. By contrast, the fraction of AD cases by new users against Asia-Pacific countries (less PRC) has grown fairly steadily over time, from 13% in 1980-84 to 22% in 1990-94 to 37% in 2000-June 2002. This is another indication that the proliferation of AD has adversely affected Asian countries.

General trends – How often do they file cases?

While the growth in AD activity against Asia-Pacific countries is notable, more impressive is the pattern of use by Asia-Pacific countries. As shown in Table 3, Asia-Pacific

countries accounted for no AD disputes in the early 1980s and by the early 1990s they accounted for only 7% of all AD disputes. In recent years, however, use by Asia-Pacific countries has soared and they now account for more than one-quarter of all disputes. It is important to point out, however, that the India is by far the biggest source of AD activity in the Asia-Pacific region. In fact India is quickly emerging as the leading user of AD is the entire world. If I drop cases initiated by India the upward trend in AD activity by Asia-Pacific countries is still present, but not nearly so stark: Asia-Pacific countries (less PRC) accounted for 0% of all AD activity in 1980-84, 5% in 1990-94 and 8% in 2000-June 2002.

In Table 5 I detail AD activity focusing solely on the Asia-Pacific region. What is striking is the high percentage of cases within the region. Specifically, about two-thirds of the AD cases initiated by Asia-Pacific countries are aimed at other Asia-Pacific countries. This result is consistent with previous findings showing evidence of "club behavior" (Prusa and Skeath, 2000); in effect, it appears that countries often aim AD protection against trading partners who are similar. At first glance, this result seems odd as it seems to suggest countries are more likely to unfairly dump in nearby markets or in markets where they have substantial economic ties. But as I will discuss below, what this result really reveals is that antidumping charges are driven by characteristics of the local economy.

Industry Pattern

The similarity in filing patterns by new and traditional users supports the notion that it is characteristics of the Asia-Pacific economies that drive AD protection. Perhaps new and traditional users alike feel Asia-Pacific home markets are closed which allows their firms to price unfairly low in export markets. While I have no evidence directly contradicting this view, the position would be more credible if the same industries were subject to AD investigations.

To address this issue, I examined the use of AD by industry. In Table 6 I report case initiations for the top industries (in the top panel of the table). I separate the filings by "Asia-Pacific" countries and by "All other" users. In the bottom panel I report affected industries.

The industries are ordered by use by "All other" countries. As seen, there are some similarities between the two lists, but more interesting is the differences. For instance, the steel industry accounts for a lot of AD disputes in most parts of the world. For instance, "Iron and steel basic industries" and "Manufacture of fabricated metal products" account for about 28% of AD filings (top panel of the table), these are predominately due to filings by the EU and US. However, the steel industry accounts for only 13% of Asia-Pacific filings. While this is a sizeable fraction, it is only half the "All others" total.

This suggests that it must be the Asia-Pacific steel mills that are the preeminent dumpers; but as shown in the bottom panel of the table the steel industry accounts for far fewer Asia-Pacific disputes than for the other regions in the world. In other words, the steel industry outside the Asia-Pacific region uses AD to restrict trade from all sources. It does not solely target, or even disproportionately target, Asia-Pacific sources. This is evidence that AD often tells us more about the users than it does about the targets. The US steel industry is often cited as an industry that has fallen behind their international competitors.[12]

The chemical industry is also an active user of AD. It is the leading industry among Asia-Pacific nations. The textiles industry (synthetic and natural) accounts for about 20% of Asia-Pacific AD disputes. By contrast, these industries are far less significant users for other nations.

In the bottom panel of Table 6 I report industries targeted in AD actions. As was seen in top panel, the industry breakdown differs between Asia-Pacific nations and others. To further analyze the cases against Asia-Pacific nations, in Table 7 I report cases by new and traditional

users. In this table I sort the list of top industries filed by new users. The industry most commonly investigated by new users is the chemical industry; it is the second most commonly investigated by traditional users. While the top three industries are the common across new and traditional users, after these three industries the two lists diverge substantially. The fifth most common industry among new users (Manufacture of textiles) is number 15 among traditional users. The seventh most common industry among new users (Manufacture of drugs and medicines) is number 20 among traditional users. The eighth most common industry among new users (Tire and tube industries) is number 27 among traditional users.

V. Macroeconomic determinants of new and traditional user antidumping activity

Knetter and Prusa (2003) provide an econometric analysis of the AD filing patterns of the four traditional users. They analyzed how macroeconomic factors in general, and fluctuations in real exchange rates in particular, can affect the determination of each of these criteria. I now extend that analysis and examine whether there is any difference in filing behavior between traditional and new users.

As explained in Knetter and Prusa (2003), a foreign firm's responses to a real exchange rate changes increases the likelihood that at least one of the AD criteria will be satisfied. At a theoretical level real exchange rate changes can either increase or decrease filings, depending on which AD test is most responsive to pricing changes. They explain is that when the foreign currency weakens, the firm's costs (denominated in domestic currency units) fall. Therefore, normal response of foreign firms is to lower the domestic currency price of foreign goods. This would be expected to reduce the profits of domestic producers in the same industry by lowering

their margins or market share.[13] They then note that in general this price response (in terms of its own home currency) implies that the foreign firm has increased the foreign currency price of shipments to the domestic market relative to other destinations, but by less than the appreciation of the domestic currency. An increase in the foreign currency price of shipments to the domestic market obviously reduces the chance that the foreign firm is guilty of price-based dumping. Thus, with typical pricing-to-market behavior, a strong (weak) domestic currency will increase (decrease) the chance of injury and make it less (more) likely that the foreign firm is guilty of dumping pricing. If I presume that the incentive to file an AD case is positively related to the likelihood of affirmative decisions on the injury and dumping criteria then in theory it is entirely possible that either exchange rate appreciations or depreciations can precipitate AD filings.

Empirically which effect is more important is also an open question. In particular, using a dataset based on U.S. AD filings from 1982-87 Feinberg (1989) finds that filings increase with a weaker dollar. By contrast, using a more comprehensive dataset (more countries, longer time series) Knetter and Prusa find the opposite result: that filings increase with a weaker domestic currency.

Fluctuations in economic activity, both in the importing country and the exporting country, might also affect filing decisions. Clearly, a slump in economic activity in the importing country makes it more likely domestic firms perform poorly which may facilitate a finding of material injury. Also, a weak economy in the importing country might naturally lead foreign firms to reduce prices on shipments to the importing country. This could increase the likelihood of pricing below fair value. Thus I would expect that import country GDP will be negatively related to filings. It is less clear how export country GDP is related to filings. One possibility is that a weak foreign economy increases the likelihood that foreign firms will cut prices to

maintain overall levels of output. While such behavior might cause injury to domestic firms, it is not clear that it would trigger pricing below "fair value" in the price-based sense, since foreign firms would presumably be lowering prices to all markets (especially their own home market).

The World Bank's *World Development Indicators* provided real GDP data and imports for nearly every country involved in an AD dispute. In the empirical analysis I analyze the number of filings against individual countries. I therefore gathered bilateral real exchange rates between each of the filing countries and each country named in at least one AD case since 1980. The Economic Research Service of the U.S. Department of Agriculture was a convenient source for bilateral real exchange rates since they report exchange rates in a consistent fashion for virtually all countries in the world. The exchange rate is defined as foreign currency per unit of domestic currency so that an increase in the exchange rate reflects an appreciation of the filing country's currency.

Following Knetter and Prusa I estimate the panel data where I conjecture that the number of cases against an affected country by a filing country in each year is a function of the bilateral real exchange rate, filing country real GDP growth. In some specifications I also include the real value of imports from the affected country in order to investigate the extent to which AD filings are driven by import trends.

Since the number of filings is a non-negative count variable, I will estimate the relationship between number of filings and macroeconomic factors using Negative Binomial regression which is essentially a Poisson model with a more flexible error structure. Following Knetter and Prusa I normalize the real exchange rate variable by dividing each exchange rate series by its sample mean before taking logs. As discussed in Knetter and Prusa, countries generally analyze pricing behavior over the year prior to the filing of the case in order to assess

dumping. By contrast, countries generally evaluate injury over a longer time horizon, often over the three years preceding the filing. As a result, I report results with a one-year lag on the real exchange rate and three year lags on real GDP growth and imports.

I report "incidence rate ratios" associated with the parameter estimates. The incidence rate ratio (IRR) is the ratio of the counts predicted by the model when the variable of interest is one unit above its mean value and all other variables are at their means to the counts predicted when all variables are at their means. Thus, if the IRR for the real exchange rate is 1.50, then a one unit increase in the real exchange rate (a 100% real appreciation given that I use the log of the real rate) would increase counts by 50% when all other variables are at their means. The t-statistics are reported for a test of the null hypothesis that the IRR=1, which would imply no relationship between the dependent variable and the regressor.

In Table 8 I present results using all observations on new and traditional user AD activity. The estimated impact for new users is just the base IRR but for traditional users one needs to add the base IRR to the "traditional user" IRR. For example, in model the IRR for the real exchange rate for traditional users is 1.65 [exp(ln(1.12)+ln(1.47)=1.65].

I first note that the results (for all model specifications) confirm the Knetter-Prusa findings – namely, that domestic currency appreciation unambiguously lead to an increase in AD filings. Second, I note that the exchange rate has a much smaller impact for new users (an IRR of 1.12 versus 1.65 for traditional users). This implies that the real exchange is particularly important for the injury determination for traditional users. One interpretation of this finding is that the injury standard is sufficiently weak for new users that there is no need for import competing industries can win their claim with little regard for the strength of the currency.

Domestic GDP growth is negatively related to filings, but the impact is not statistically significant. Once again, this finding confirms what Knetter and Prusa found. In contrast with the exchange rate, however, I do not find any significant difference between new and traditional users.

Finally, I also include specifications with the growth in imports over the prior three years. Here I find the import growth has about the same impact on AD filings by new users (an IRR of 1.23) but has almost no impact on filings by traditional users (an IRR of about 1.39). .

In Table 9 I compare the traditional users with just East-Asia and South-Asia countries. Qualitatively, the results are very much similar to those in Table 8; specifically, the results indicate a real exchange rate appreciation stimulates AD activity. Interestingly, the magnitude of the impact for East-Asian (South-Asian) countries is smaller (larger) than for traditional users. For both regions, however, the difference is not statistically significant.

Finally, I again see that import growth stimulates AD disputes, especially for India (South Asia) and the impact is almost three times as large as for traditional users. Such a large estimate could be interpreted in more than one way. On the one hand, it might simply reflect a huge increase in unfair trade activity. On the other hand, given the earlier discussion, it is more plausible to interpret this as a sign that AD protection often emerges as a country liberalizes its tariffs and quotas. In the case of India, for instance, during the 1990s tariffs fell by about one-half. The natural response for import-competing industries is to turn to AD to restore the previous level of protection.

VI. Concluding Comments

Overall, the long run trend in AD use is serious concern for the world trading system. The data presented in this paper make it clear that AD has long been the leading administered trade barrier and its growth over the past two decades now makes AD the standout. On average, AD filings have grown about 36% in each of the past two decades. What is perhaps the most troubling aspect of this growth is that most of the growth in AD activity over the past 15 years has been due to use by countries who previously never even had an AD statute on their books. These new users have embraced AD enthusiastically, with filing rate 15-20 times those of the traditional users.[14]

Asia-Pacific nations have been significantly affected by the proliferation of AD. They have been frequent targets of AD actions by traditional users and the rhetoric justifying AD protection subtly and not so subtly alludes to US and European fears about competing with Asian economies. Even if PR-China is excluded, Asia-Pacific economies have accounted for about one-third of all AD cases.

It is important to recognize, however, that it is the proliferation of AD that is the current driving force behind AD actions. As depicted in Figure 5, the number of cases against Asia-Pacific nations by traditional users has declined over the past decade. So, while the total number of AD disputes against Asia-Pacific has risen, the source of the trade restrictions is different. And hence, the explanations behind the disputes are different than it was a decade ago.

Now, the main reason for the most trade disputes involving Asia is new users. New users now account for about 60% of all cases against Asia-Pacific nations. Furthermore, more than half of these cases are initiated by other Asia-Pacific nations. In other words, many of the trade disputes are intra-regional disputes.

Rather than viewing this as a problem, the intra-regional nature of many of the disputes points to a potential solution to the AD problem. Namely, regional trade agreements might be the light at the end of the tunnel. Even under the most optimistic scenarios, significant AD reform within the WTO is unlikely. The entrenched positions of the US and EU make such a scenario unlikely. On the other hand, we now have several examples of regional agreements that limit, or prohibit, AD use within the free trade area. The earliest example is the European Community/European Union who prohibits AD actions within the union. The Trans-Tasman pact prohibits antidumping disputes between Australia and New Zealand. The recent Chile-Canada free trade agreement also prohibits antidumping disputes.

If Asia-Pacific nations want to curb antidumping it is likely that the only real prospect is via regional agreements. One enough such agreements are signed, the WTO negotiations have much greater likelihood of succeeding.

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Endnotes

[**] Much of the analysis included in this paper was done while I was a visitor at the East-West Center. The Center's hospitality and research support is deeply appreciated. I would also like to thank WTO Rules Division and Jorge Miranda in particular and for making the WTO AD Measures Database available. As always, all mistakes and errors are my responsibility.

[1] Data limitations require Gallaway et al. to combine antidumping and countervailing duty protection in their analysis. Given that there were more than twice as many antidumping cases as countervailing duty cases there is little sense that the primary distortion is due to countervailing duties. Perhaps more important, it should be recognized that their analysis year (1991) was one in which relatively few AD measures were in force in the US. For instance, in 1991 most steel products from most countries were covered by an OMA and were not part of the Gallaway et al. calculation. Given that the steel industry accounts for about 30% of all US actions their estimate is probably a lower bound of the impact of US antidumping protection.

[2] The standard arguments justifying the need for AD protection can be found in Mastel (1998) and Cohen, Blecker, and Whitney (2003).

[3] The cost-based definition of dumping was only codified into GATT AD rules during the Tokyo Round. This amendment was demanded by domestic industries (most notably steel) in order to make AD more protective. As Messerlin (1989), Clarida (1996), and Lindsey (1999) have reported, US and EU AD disputes are now being dominated by cost-based allegations. Such trends have led one noted legal expert to claim that cost-based AD petitions have become "the dominant feature of US antidumping law" (Horlick, 1989, p. 136).

[4] In other words, it's mere existence is not enough to rule the behavior illegal. It must be shown that the practice is intended to harm competition. Viscusi et al. (1995) conclude that the enforcement of the U.S. Robinson-Patman Act against price discrimination for cases where it was a potentially anticompetitive behavior actually led to anticompetitive results and conclude, "Fortunately, enforcement by the Federal Trade Commission has declined in recent years." (p. 298)

[5] The problems with AD are worse than this discussion suggests. As discussed at length in Blonigen and Prusa (2003) one of the ironies is that the economic literature has shown that AD laws likely help facilitate anti-competitive behavior on the part of firms.

[6] Durling (2003) documents that only a tiny fraction of AD measures even request WTO consultations. He also finds that the typical WTO AD appeal takes more than three years to final determination.

[7] Reports are available at http://www.wto.org.

[8] Zanardi (2002) also reports AD activity by non-WTO members such as Taiwan and Russia and PR-China prior to their membership. My statistics do not include these additional disputes. Overall the differences between Zanardi's aggregate statistics and mine are minor.

[9] Finger, Ng, and Wangchuk (2001) perform a similar calculation.

[10] Statistics on the size of dumping margins is would also be a useful indicator of how AD use varies across countries. Unfortunately, such data is not generally available.

[11] On November 7, 2001 the US House of Representatives passed a resolution instructing the President to "preserve the ability of the United States to enforce rigorously its trade laws, including the antidumping and countervailing duty laws, and avoid agreements which lessen the effectiveness of domestic and international disciplines on unfair trade, especially dumping and subsidies." Similarly, in May 2002 the Senate passed the Dayton-Craig amendment which would require that any Doha Round agreements to change the unfair trade provisions of the WTO be subject to a separate vote apart from the rest of the agreement.

[12] The US essentially made this claim in their 2001 petition for safeguard protection, arguing that they needed time to restructure and retool.

[13] Note that the dollar price of imported goods will fall relative to domestic goods with a real appreciation of the dollar provided the foreign firm does not completely offset the relative cost change with a markup change. The special case in which markups are adjusted to fully offset the effects of currency movements is known as "complete pricing-to-market" in the literature. The opposite case, in which exchange rate changes are fully passed-through to foreign buyers is known as "full pass-through."

[14] One piece of information that would be useful to know is how much trade has been affected by the increased number of AD investigations. Because the WTO reports provide almost no information on the products covered that task will have to be delayed until a later date.

Table 1 - AD Filing Patterns & Success Rates

Americas	No.	Intensity	% Aff.
USA	904	1.00	0.60
Canada	490	2.48	0.65
Argentina	235	16.79	0.69
Mexico	230	2.75	0.57
Brazil	165		0.52
Peru	37	12.19	0.65
Colombia	35	5.42	0.60
Venezuela	31	5.52	0.74
Chile	16	3.59	0.69
Trinidad-Tobago	10	18.06	0.90
Costa Rica	6	7.37	0.17
Uruguay	5	20.11	0.80
Jamaica	3		1.00
Panama	2	12.45	1.00
Nicaragua	2		1.00
Guatemala	1	5.72	1.00
Paraguay	1		1.00
Ecuador	1	3.28	1.00
El Salvador	0	---	---
Honduras	0	---	---
Bolivia	0	---	---
Dominican Rp	0	---	---
Cuba	0	---	---

EU+	No.	Intensity	% Aff.
European Community	663	0.84	0.66
Turkey	64	5.29	0.69
Finland	16	1.94	0.69
Sweden	15	0.97	---
Austria	2	0.58	---
Spain	1	0.65	---
Cyprus	0	---	---
Switzerland	0	---	---
Norway	0	---	---

East Europe-Central Asia	No.	Intensity	% Aff.
Poland	35	4.99	0.29
Czechoslovakia	3		0.33
Bulgaria	1	3.97	1.00
Fm Yugoslavia	1		0.00
Fm German Dm Rp (East)	0	---	---
Hungary	0	---	---
Romania	0	---	---
Fm USSR	0	---	---

West Africa	No.	Intensity	% Aff.
Cote D'Ivoire	0	---	---

East Asia and Pacific	No.	Intensity	% Aff.
New Zealand	75	7.42	0.48
South Korea	74	0.89	0.64
Indonesia	43	10.34	0.60
Philippines	22	2.16	0.55
Malaysia	22	0.75	0.73
Thailand	15	0.88	0.87
Taiwan	6	0.46	0.33
Japan	6	0.15	0.67
PR-China	6	0.61	0.83
Singapore	2	0.32	1.00
North Korea	0	---	---
Papua N.Guinea	0	---	---
Macao	0	---	---
Vietnam	0	---	---
Hong Kong	0	---	---

Australia	No.	Intensity	% Aff.
Australia	822	12.32	0.37

South Asia	No.	Intensity	% Aff.
India	285	19.63	0.98
Nepal	0	---	---
Sri Lanka	0	---	---
Bangladesh	0	---	---
Pakistan	**0**	**---**	**---**

North Africa	No.	Intensity	% Aff.
Egypt	33	8.24	0.91
Algeria	0	---	---
Tunisia	0	---	---
Mozambique	0	---	---
Liby Arab Jm	0	---	---

Middle East	No.	Intensity	% Aff.
Israel	30		0.633
Bahrain	0	---	---
Oman	**0**	**---**	**---**
Jordan	0	---	---
Qatar	0	---	---
Untd Arab Em	0	---	---
Iran	0	---	---
Saudi Arabia	0	---	---

East & Southern Africa	No.	Intensity	% Aff.
South Africa	173	16.22	0.71
Malawi	0	---	---
Kenya	0	---	---
Zimbabwe	**0**	**---**	**---**

Table 2: Growth of AD Law

Time Period	No. Countries with AD statute*	No. Countries Filing AD Actions	% Cases Filed by New Users
1980-84	34	8	1%
1985-89	38	10	11%
1990-94	45	24	36%
1995-99	61	32	61%
2000-6.02	87	30	60%

Source: AD implementation dates, Zanardi (2002); filing rates, author's calculations

* count at beginning of period

Table 3: No. AD Actions (all users)

	Against All Countries/Regions				
Initiating Region	**1980-84**	**1985-89**	**1990-94**	**1995-99**	**2000-6.02**
Americas	332	368	645	479	350
East & Southern Africa	0	0	16	129	28
East Asia and Pacific	0	17	66	129	59
East Europe-Central Asia	0	0	24	12	4
Middle East	0	0	3	21	6
North Africa	0	0	0	24	9
EU+	133	132	215	193	88
South Asia	0	0	15	131	139
West Africa	0	0	0	0	0
Australia	238	182	260	101	41
Total	**703**	**699**	**1244**	**1219**	**724**
Percent by Asia-Pacific	0%	2%	7%	21%	27%
Percent by Asia-Pacific (less India)	0%	2%	5%	11%	8%

	Initiated by All Countries/Regions				
Affected Region	**1980-84**	**1985-89**	**1990-94**	**1995-99**	**2000-6.02**
Americas	144	157	259	189	99
East & Southern Africa	4	6	15	24	21
East Asia and Pacific	205	256	461	524	337
East Europe-Central Asia	96	115	166	157	79
Middle East	6	9	11	17	20
North Africa	1	0	5	8	6
EU+	241	151	272	242	122
South Asia	3	3	48	51	34
West Africa	0	0	2	0	0
Australia	3	2	5	7	6
Total	**703**	**699**	**1244**	**1219**	**724**
Percent against Asia-Pacific	30%	37%	41%	47%	51%
Percent against Asia-Pacific (less PRC)	26%	34%	29%	34%	36%

Note: Countries classified into regions using World Bank system

Table 4: No. AD Actions (New and Traditional Users)

	Initiated by New Users				
Affected Region	**1980-84**	**1985-89**	**1990-94**	**1995-99**	**2000-6.02**
Americas	0	23	126	139	67
East & Southern Africa	0	0	4	12	9
East Asia and Pacific	1	14	149	299	212
East Europe-Central Asia	1	22	60	95	35
Middle East	0	0	1	7	16
North Africa	0	0	0	4	0
EU+	6	16	80	165	73
South Asia	0	1	19	22	16
West Africa	0	0	2	0	0
Australia	0	1	2	6	5
Total	**8**	**77**	**443**	**749**	**433**
New Users - % Against Asia-Pacific	13%	19%	38%	43%	53%
New Users - % Against Asia-Pacific (less PRC)	13%	17%	22%	28%	37%

	Initiated by Traditional Users				
Affected Region	**1980-84**	**1985-89**	**1990-94**	**1995-99**	**2000-6.02**
Americas	144	134	133	50	32
East & Southern Africa	4	6	11	12	12
East Asia and Pacific	204	242	312	225	125
East Europe-Central Asia	95	93	106	62	44
Middle East	6	9	10	10	4
North Africa	1	0	5	4	6
EU+	235	135	192	77	49
South Asia	3	2	29	29	18
West Africa	0	0	0	0	0
Australia	3	1	3	1	1
Total	**695**	**622**	**801**	**470**	**291**
Traditional Users - % Against Asia-Pacific	30%	39%	43%	54%	49%
Traditional Users - % Against Asia-Pacific (less PRC)	26%	36%	33%	42%	34%
Total Cases - % by New Users	1%	11%	36%	61%	60%

Note: Traditional Users are US, EU, Australia, Canada

Table 5: No. AD Actions (Asia-Pacific focus)

	Against Asia-Pacific Only				
Initiating Region	**1980-84**	**1985-89**	**1990-94**	**1995-99**	**2000-6.02**
Americas	89	131	221	181	150
East & Southern Africa	0	0	3	55	16
East Asia and Pacific	0	11	47	82	45
East Europe-Central Asia	0	0	0	5	0
Middle East	0	0	0	2	0
North Africa	0	0	0	8	4
EU+	15	49	106	128	43
South Asia	0	0	9	64	85
West Africa	0	0	0	0	0
Australia	104	68	123	50	28
Total	**208**	**259**	**509**	**575**	**371**
Percent Intra-Asia-Pacific	0%	0%	2%	21%	27%

	Initiated by Asia-Pacific Only				
Affected Region	**1980-84**	**1985-89**	**1990-94**	**1995-99**	**2000-6.02**
Americas	0	0	10	18	13
East & Southern Africa	0	0	1	3	3
East Asia and Pacific	0	11	51	140	121
East Europe-Central Asia	0	0	2	40	7
Middle East	0	0	0	2	13
North Africa	0	0	0	0	0
EU+	0	5	12	49	31
South Asia	0	0	5	6	9
West Africa	0	0	0	0	0
Australia	0	1	0	2	1
Total	**0**	**17**	**81**	**260**	**198**
Percent Intra-Asia-Pacific	---	65%	69%	56%	66%

Table 6: Leading Industries (ISIC, Rev 2)
Percent of total cases

Initiating Industries	All Others	Asia-Pacific
Iron and steel basic industries	23.0%	12.2%
Manufacture of basic industrial chemicals except fertilizers	10.9%	23.4%
Manufacture of synthetic resins, plastic materials and man-made fibres except glass	7.8%	11.3%
Manufacture of fabricated metal products except machinery and equipment, nec	5.3%	0.9%
Machinery and equipment except electrical, nec	3.1%	2.2%
Spinning, weaving and finishing textiles	2.8%	8.1%
Manufacture of pulp, paper and paperboard	2.4%	5.4%
Manufacture of glass and glass products	2.1%	1.6%
Manufacture of electrical industrial machinery and apparatus	2.1%	0.0%
Manufacture of textiles not elsewhere classified	1.9%	1.4%

Affected Industries	All Others	Asia-Pacific
Iron and steel basic industries	27.5%	13.6%
Manufacture of basic industrial chemicals except fertilizers	13.5%	11.0%
Manufacture of synthetic resins, plastic materials and man-made fibres except glass	8.1%	8.4%
Manufacture of fabricated metal products except machinery and equipment, nec	4.0%	5.9%
Manufacture of pulp, paper and paperboard	3.7%	1.5%
Machinery and equipment except electrical, nec	3.2%	2.8%
Manufacture of drugs and medicines	2.4%	2.4%
Spinning, weaving and finishing textiles	2.4%	4.8%
Manufacture of electrical industrial machinery and apparatus	2.2%	1.4%
Manufacture of fertilizers and pesticides	2.2%	0.6%

Table 7: AD Filings Against Asia-Pacific Countries; leading industries (ISIC, Rev 2)

	New Users		Traditional Users	
	Percent	Rank	Percent	Rank
Manufacture of basic industrial chemicals except fertilizers	14%	1	9%	2
Iron and steel basic industries	10%	2	16%	1
Manufacture of synthetic resins, plastic materials and man-made fibres except glass	8%	3	8%	3
Spinning, weaving and finishing textiles	7%	4	4%	6
Manufacture of textiles, nec	4%	5	2%	15
Manufacture of electrical apparatus and supplies, nec	4%	6	2%	10
Manufacture of drugs and medicines	4%	7	2%	20
Tire and tube industries	4%	8	1%	27
Manufacture of footwear, except vulcanized or moulded rubber or plastic footwear	3%	9	1%	34
Manufacture of motorcycles and bicycles	3%	10	1%	23
Manufacture of chemical products, nec	3%	11	3%	7
Manufacture of glass and glass products	3%	12	3%	8
Manufacture of fabricated metal products except machinery and equipment, nec	3%	13	8%	4

Table 8
Negative binomial estimation of bilateral filings
Traditional vs. New Users

Model	(1)	(2)	(3)	(4)
rxr (-1)	1.115	1.184	1.233	1.167
	(3.12)**	(3.17)**	(4.08)**	(2.90)**
rxr(-1) - Traditional User	1.471	1.146	1.128	1.138
	(4.22)**	(1.27)	(1.15)	(1.20)
Growth imports			1.241	1.264
			(3.86)**	(4.09)**
Growth imports - Traditional User			0.954	0.879
			(0.65)	(1.74)
Growth GDP		0.823		0.588
		(0.44)		(1.18)
Growth GDP - Traditional User		0.964		1.377
		(0.08)		(0.70)
Observations	6835	4804	4947	4799

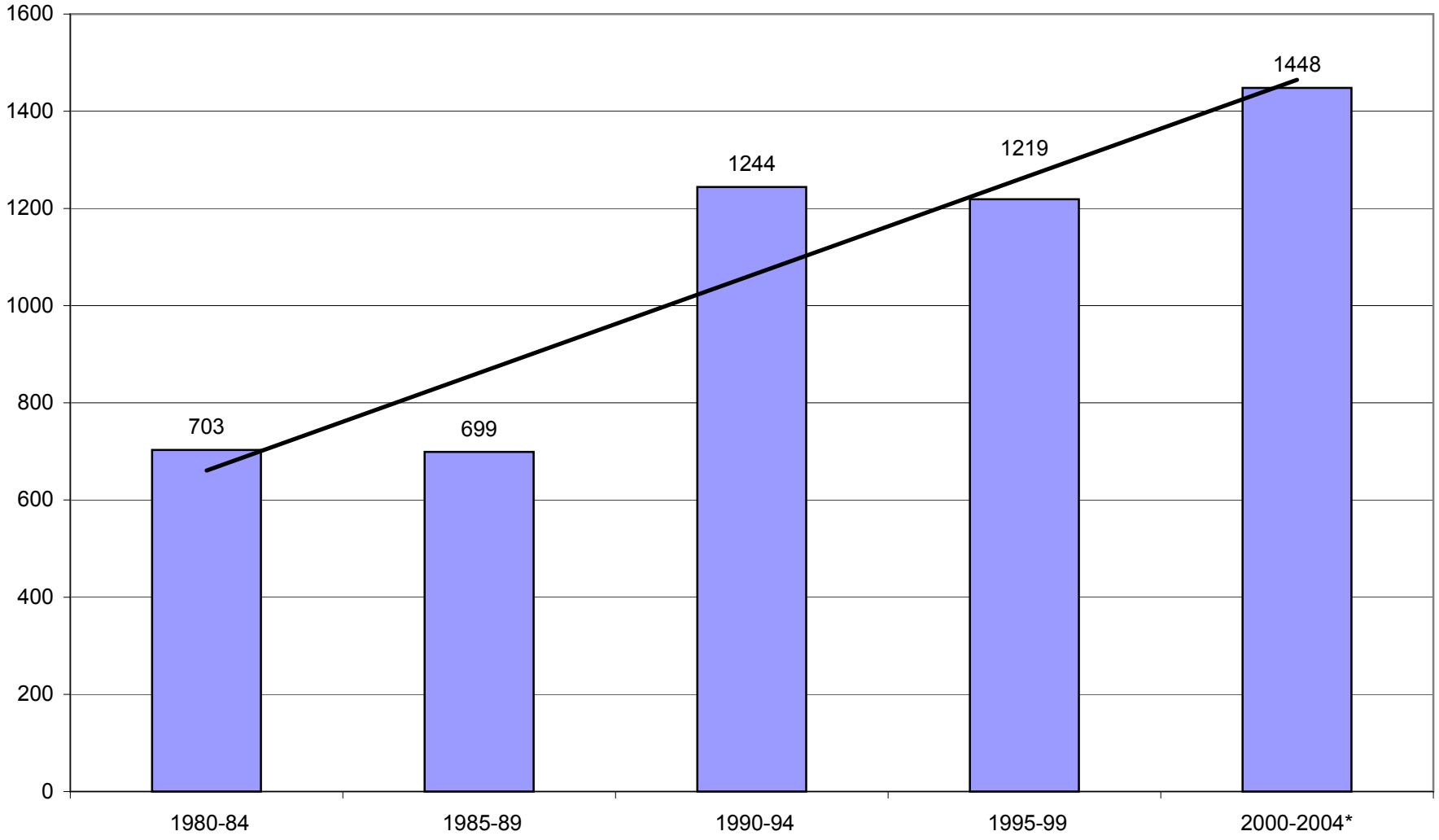
Absolute value of z statistics in parentheses
* significant at 5%; ** significant at 1%

Table 9
Negative binomial estimation of bilateral filings
Traditional vs. Asian Users

Model	(1)	(2)	(3)	(4)
rxr (-1)	1.358	1.356	1.392	1.327
	(3.35)**	(3.93)**	(3.68)**	(3.09)**
rxr (-1) - East Asia	0.857		0.841	0.879
	(0.77)		(0.87)	(0.64)
rxr (-1) - South Asia	1.344		1.112	0.986
	(0.96)		(0.36)	(0.05)
Growth imports			1.189	1.114
			(3.93)**	(2.37)*
Growth imports - East Asia			0.892	0.952
			(1.01)	(0.42)
Growth imports - South Asia			2.221	2.881
			(3.18)**	(3.47)**
Growth GDP	0.767	0.753		0.777
	(2.43)*	(2.52)*		(2.26)*
Growth GDP - East Asia	0.458			0.42
	(1.18)			(1.30)
Growth GDP - South Asia	1.636			0.131
	(0.37)			(1.36)
Observations	3418	3418	3550	3418

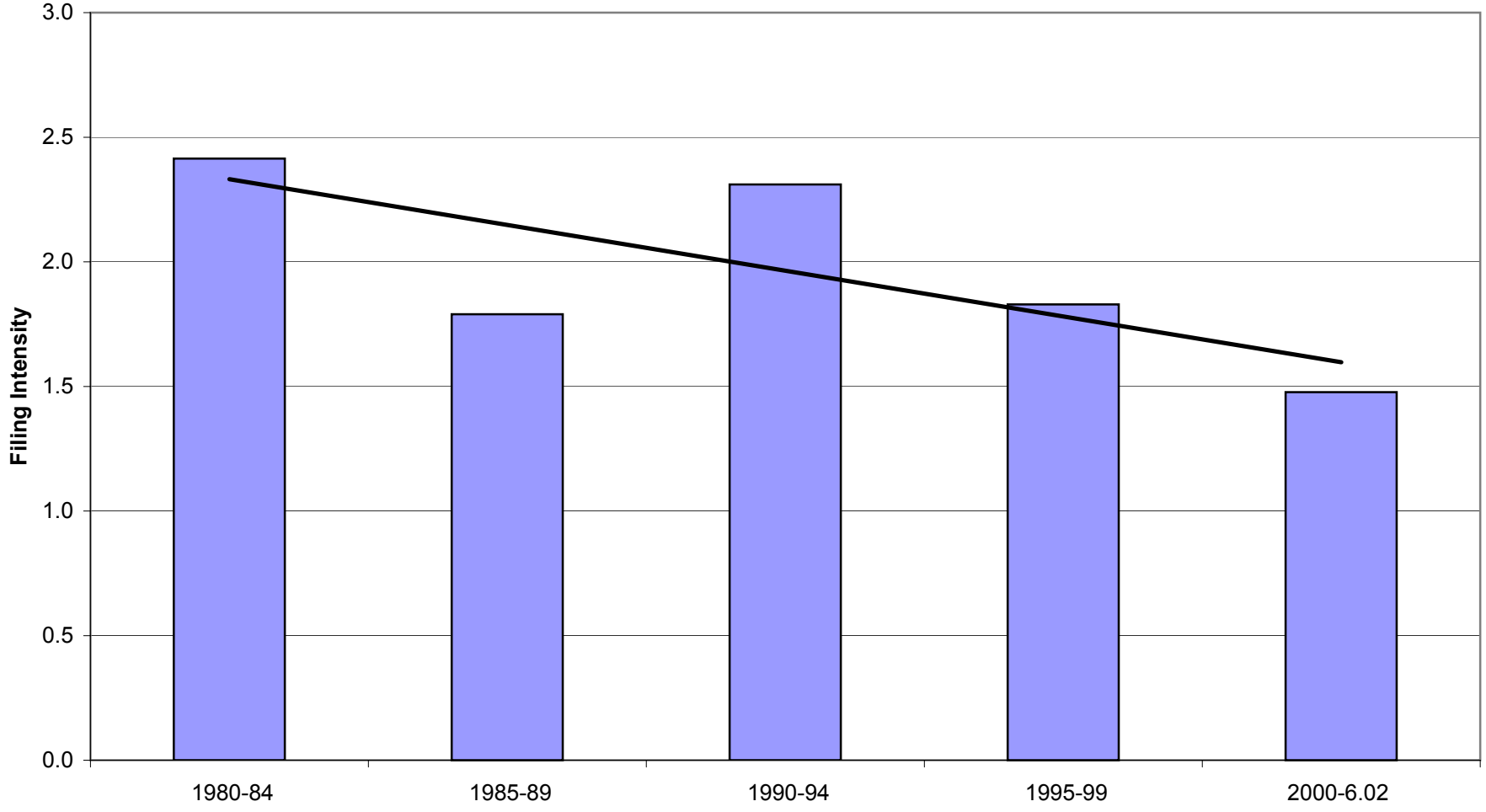
Absolute value of z statistics in parentheses
* significant at 5%; ** significant at 1%

Figure 1:
No. of AD Cases Filed (worldwide)



* 2000-04 total estimated using actual 2000-6.2002 filings

Figure 2:
AD Filing Rates - Intensity Rate



* Filing Intensity normalized so 1=US Avg for 1980-6.2002.

Figure 3:
Emergence of New Users

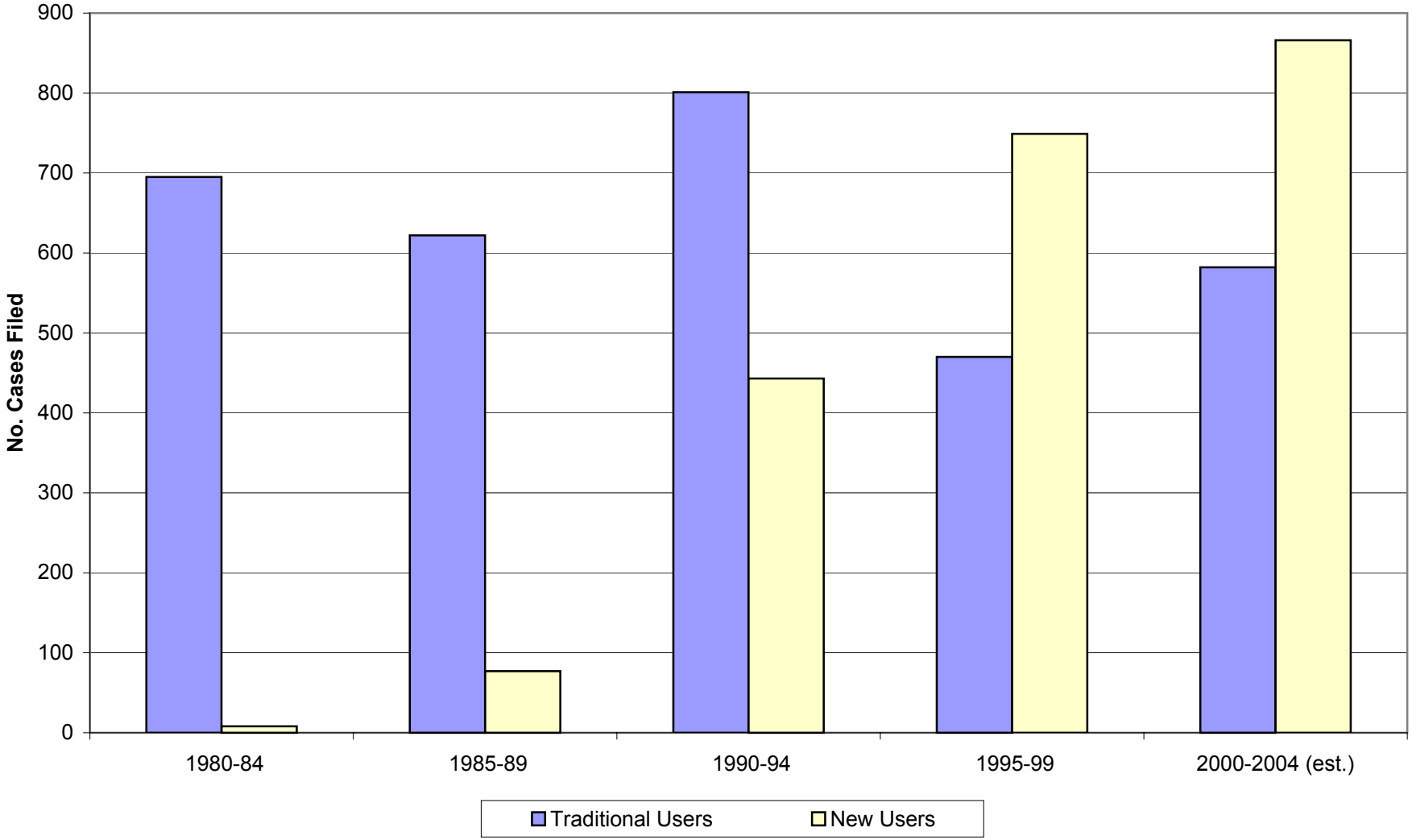
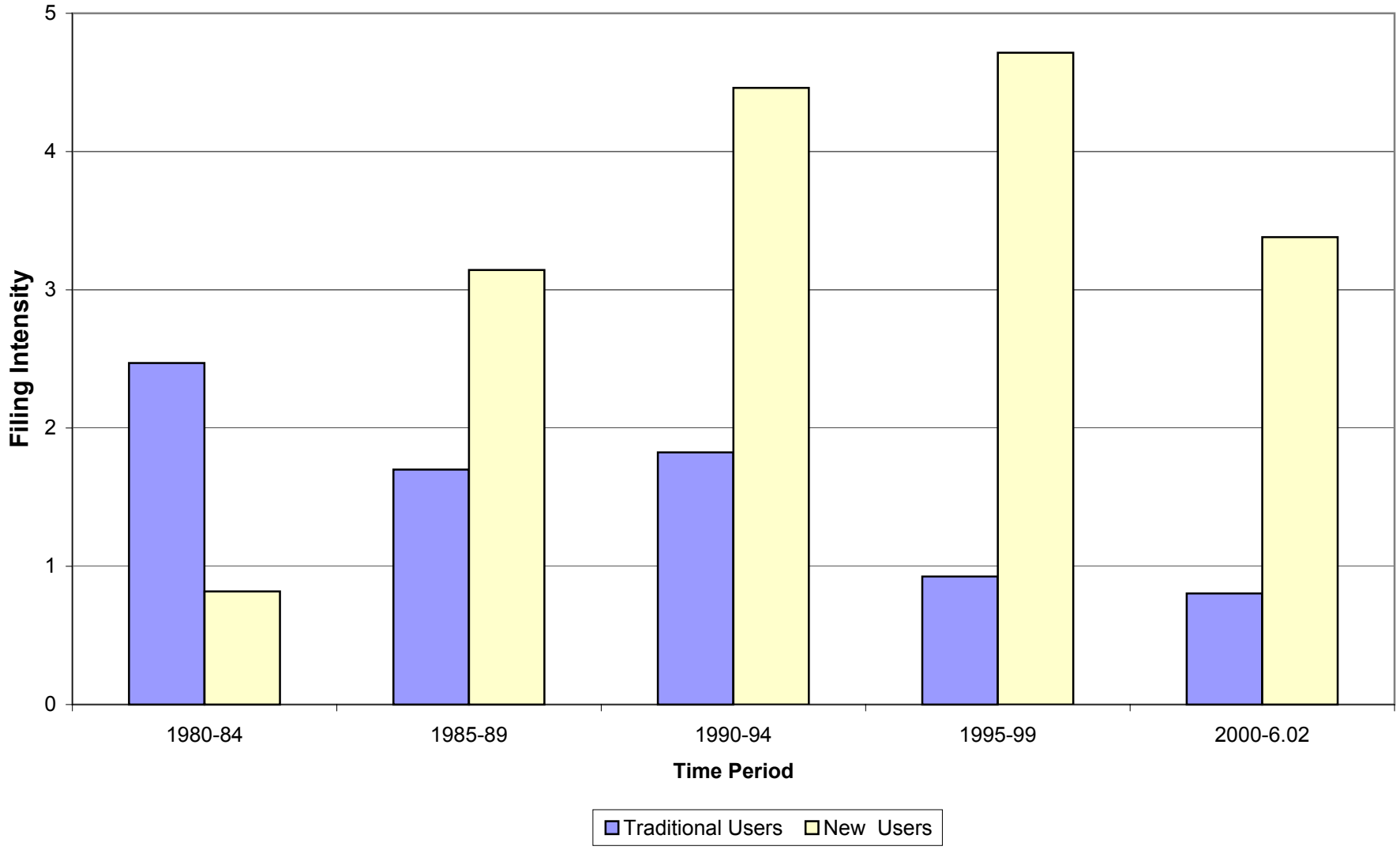


Figure 4:
Intensity Rates, New vs. Traditional Users



* Filing Intensity normalized so 1=US Avg for 1980-6.2002.

Figure 5:
AD Actions Against Asia-Pacific Countries