The impacts of PTA formation on small economies’ tax competition for FDI inflows

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ABSTRACT

This paper examines why small economies are so eager to form or join preferential trade agreements (PTAs), as observed in the East Asia and the Central Europe, taking consideration of the strategic impacts of PTA formation on tax competition for foreign direct investment (FDI) inflows. Based on a simple model where three asymmetric countries compete for FDI inflows, we demonstrate that PTA formation provides a strategic advantage to a small member country of PTA in competing for FDI inflows not only with respect to a non-member country but with a large member country when the integrated market size is large enough. In addition, it is shown that it might be an out-of-equilibrium path strategy for a non-member small economy to exert efforts to induce FDI inflows, because the excessive subsidies to induce FDI inflows might outweigh the gains from the FDI inflows due to strategic disadvantage in tax competition after PTA formation. These findings explain why small economies are mainly driven by the expected economic benefits including FDI inflows from joining PTA.

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1. Introduction

In the initial stage of preferential trade agreement (PTA) formation, large economies played major roles as in the case of the EU and NAFTA. However, a new feature observed in the formation of PTAs especially in the Asia and Europe lately is that small economies are very eager to form new PTAs or to join existing PTAs with large economies. One of the very important driving forces behind the increased efforts to form PTAs is the high expectation for FDI inflows as a result of PTA formation. Recent data support these optimistic expectations.

For an example, a significant increase in the FDI inflows into 15 small economies is observed after the formation of PTA with the United States as shown in Fig. 1 and Table 1. Fig. 1 shows that the FDI inflows into the small economies increased by 50.5% in the first year of the PTA formation with the United States. In addition, the trend of increased FDI inflows is continued for the following 3 years.1

Motivated by these recent features, this paper examines the rationale of a small country to join a PTA for the FDI inflows and focuses on the strategic interactions between host countries’ FDI policies and the location strategies of multinational firms. In many cases, a country’s attempts to establish a preferential trade agreement are driven by concerns that they might be alienated from preferential market access when a competitor or a neighboring country arranges an agreement with another country. For instance, political and economic interest groups in Taiwan were worried that they might be excluded from preferential market access chances and experience a decrease in FDI inflows, i.e., investment diversion, immediately after the agreement on PTA formation was reached between South Korea and the United States in 2007.2 These groups believed that the alienation from the market access chances would eventually lead to the deterioration of the welfare of the country that was excluded from the trade agreement. Motivated by these developments, we analyze the impact that a PTA might have on the FDI flows and possible asymmetric impacts on welfare of member and non-member countries of PTA.

Moreover, we frequently observe tax competition for FDI inflows within the trends of increasing PTA formation. There are a lot of examples supporting the argument for the tax competition taking the form of a “race to the bottom.” Especially, an intense tax competition for FDI inflows can be observed among Central and Eastern European economies before they are admitted to the formal EU membership. For examples, Hungary had reduced corporation tax rates from 40% to 18% in 2000, and Poland had reduced from 40% to 32%, Slovakia reduced from 45% to 29% in 2000. However, an already admitted EU...
FDI in Table 1
eratures examining the link between PTAs and FDIs. According to pact of PTAs and FDIs separately, there are only a limited number of lit-
to induce the FDI are too expensive for the economy.
to give up the efforts to induce the FDI since the required incentives
centive after joining PTA while a non-member small economy comes
try. Therefore, a small economy can host FDI even with a lower tax in-
complicated strategies before and after the entry to PTA, this paper ex-
middle firm's location strategies. More specifically, we consider the strate-
gic interaction between the prospective host countries' FDI policies
and a multinational firm's location strategies. In addition we analyze
the strategic implication of obtaining a PTA membership in terms of
increasing the market size by removing trade barriers between the
PTA member countries. We demonstrate that a small economy can in-
crease her bargaining power by joining PTA with a large economy
since a multinational
firm has a larger incentive to invest in the coun-
try. Therefore, a small economy can host FDI even with a lower tax in-
centive after joining PTA while a non-member small economy comes
to give up the efforts to induce the FDI since the required incentives
to induce the FDI are too expensive for the economy.

While there are many literatures that examined the welfare im-
 pact of PTAs and FDIs separately, there are only a limited number of liter-
atures examining the link between PTAs and FDIs. According to
Markusen and Horstmann (1992), high tariff barriers induce a firm
to choose FDI as a market entry mode. This claim is in agreement
with the fact that there was a sharp increase in FDI inflows into EU
after the adoption of EU as a common market in 1992, which increased
trade barriers against non-member countries in relative terms. There-
fore, the recent sharp decrease in international transaction costs
is likely to encourage exports rather than foreign direct investment.
However, foreign direct investment has dramatically risen over the
last couple of decades, contradicting the claims made by Markusen
and Horstmann (1992). It is widely believed that the formation of
PTAs usually stimulates FDI, although there is not a generalized theory
as to why this is true.

A country may induce FDI from a foreign firm by offering the firm a
favorable policy, such as the reduction in profit tax rate. Haufler and
Wooton (1999) examined how profit tax and tariff policies affect the
location of international firms given the choice between countries
with asymmetric market sizes. Motta and Norman (1996) also studied
how the economic integration of three countries affects the location of
multinational firms’ plants. Economic integration can encourage for-
eign investors to locate in the integrated market without considering
the government policy intervention. Riezman and Kose (2002) ana-
alyzed the impact that preferential trade agreements have on aggre-
gate welfare using a calibration method within a general equilibrium
framework. The results of their study indicate that the welfare of a
non-member country is negatively affected by not participating in a
preferential trade agreement. The welfare of an external country deterio-
rates in this situation due to member countries imposing optimal tariffs
on the external country and the external country facing a “race to the bot-
tom” in profit tax rates by international tax competition for the FDI.

Bjorvatn and Eckel (2006) employed a tax competition model in
the presence of a local firm which affects the choice of location and in-
vestment policy of a foreign investor, focusing on the job creation ef-
fact of FDI. They found that the gap between wages and the shadow
price of labor may influence a foreign firm’s choice of location. In a re-

### Table 1
FDI inflows into small economies that formed FTA with the United States (unit: U.S. million dollars).

<table>
<thead>
<tr>
<th>Country (year FTA is formed with the United States)</th>
<th>t − 3</th>
<th>t − 2</th>
<th>t − 1</th>
<th>t</th>
<th>t + 1</th>
<th>t + 2</th>
<th>t + 3</th>
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<tbody>
<tr>
<td>Bahrain (2008)</td>
<td>930</td>
<td>2502</td>
<td>1464</td>
<td>1464</td>
<td>208</td>
<td>125</td>
<td>N/A</td>
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<tr>
<td>Chile (2004)</td>
<td>4107</td>
<td>2454</td>
<td>4057</td>
<td>6570</td>
<td>6190</td>
<td>6265</td>
<td>10452</td>
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<tr>
<td>Costa Rica (2007)</td>
<td>727</td>
<td>763</td>
<td>1261</td>
<td>1581</td>
<td>1696</td>
<td>1089</td>
<td>1132</td>
</tr>
<tr>
<td>Dominican Republic (2007)</td>
<td>833</td>
<td>995</td>
<td>931</td>
<td>1390</td>
<td>2342</td>
<td>1751</td>
<td>1302</td>
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<tr>
<td>El Salvador (2007)</td>
<td>333</td>
<td>453</td>
<td>207</td>
<td>1293</td>
<td>737</td>
<td>296</td>
<td>62</td>
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<tr>
<td>Guatemala (2007)</td>
<td>271</td>
<td>450</td>
<td>508</td>
<td>621</td>
<td>615</td>
<td>485</td>
<td>550</td>
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<td>Hungary (2000)</td>
<td>501</td>
<td>532</td>
<td>974</td>
<td>774</td>
<td>821</td>
<td>423</td>
<td>639</td>
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<td>62</td>
<td>119</td>
<td>131</td>
<td>162</td>
<td>202</td>
<td>307</td>
<td>353</td>
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<td>Jordan (2001)</td>
<td>321</td>
<td>160</td>
<td>913</td>
<td>268</td>
<td>229</td>
<td>515</td>
<td>858</td>
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<td>Mexico (1994)</td>
<td>5656</td>
<td>5111</td>
<td>4997</td>
<td>12243</td>
<td>10388</td>
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<td>Morocco (2006)</td>
<td>2180</td>
<td>820</td>
<td>1466</td>
<td>2103</td>
<td>2339</td>
<td>2030</td>
<td>1578</td>
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<td>Oman (2009)</td>
<td>1363</td>
<td>2862</td>
<td>2064</td>
<td>1190</td>
<td>1638</td>
<td>N/A</td>
<td>N/A</td>
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<tr>
<td>Peru (2009)</td>
<td>2976</td>
<td>4579</td>
<td>5651</td>
<td>4509</td>
<td>5870</td>
<td>N/A</td>
<td>N/A</td>
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<tr>
<td>Singapore (2004)</td>
<td>14752</td>
<td>6160</td>
<td>11248</td>
<td>19258</td>
<td>13703</td>
<td>25194</td>
<td>30883</td>
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<tr>
<td>Average</td>
<td>2349</td>
<td>1878</td>
<td>2381</td>
<td>3582</td>
<td>3166</td>
<td>3744</td>
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### Table 2

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<th>Country</th>
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<th>Target rates</th>
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<td>25</td>
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<td>Poland</td>
<td>40</td>
<td>32</td>
<td>22</td>
</tr>
<tr>
<td>Slovakia</td>
<td>45</td>
<td>29</td>
<td>25</td>
</tr>
<tr>
<td>Hungary</td>
<td>40</td>
<td>18</td>
<td>18</td>
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<tr>
<td>Austria</td>
<td>30</td>
<td>34</td>
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<tr>
<td>Germany</td>
<td>45</td>
<td>40</td>
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