would increase due only to the greater weight of the Asian countries in the world economy because of their greater than average economic growth.<sup>38</sup> Using a "gravity" model to determine the significance of regional bias in trading relations, separate from other factors such as geographic proximity and economic growth, Frankel finds that at least some of the Asian countries' trade with each other is not explained by these economic factors. However, changes in the coefficient between the years in the sample were not found to be significant and no overall trend of rising regional bias was found.<sup>39</sup>

In summary, the general conclusion of the study is that "beyond the evident facts that countries near each other trade with each other, and that Japan and other Asian countries are growing rapidly, there is no evidence that Japan is concentrating its trade with other Asian countries in any special way nor that they are moving toward a trade bloc as rapidly (or as deliberately) as in Western Europe."<sup>40</sup>

Policy Staff Paper 25

<sup>&</sup>lt;sup>38</sup>For example, consider that there is no intra-regional bias in 1980, i.e., that each East Asian country conducted trade with other East Asian countries in the same proportion as the latter's weight in world trade (e.g.,15 per cent). Total trade by Asian countries increased by 108 per cent in dollar terms over 1980 to 1989, while total world-wide trade increased only 53 per cent. Therefore, even if there continued to be no regional bias in 1989, the observed intra-regional share would have increased by one third (to about 20 percent) due only to the greater weight of the Asian countries in the world economy. Frankel goes further to state that the "clubbishness" that might be indicative of a trading bloc for East Asia does not exist. If it is assumed that a regional bias term explains the difference between the actual share of intra-regional trade in 1980, 33 per cent, and the share that would occur if East Asian countries traded with other countries in the same proportion as their weight in world trade (15 per cent), this term would be 2.18 (.33/.15). If this regional bias term were unchanged in 1989 and multiplied by the East Asians' 1989 weight in world trade, the prediction would be that the intra-regional trade share would be 44 per cent in 1989. Instead, it is only 37 percent. Frankel indicates that the implicit intra-regional bias actually fell during the 1980s; it did not rise as a cursory examination of the numbers would lead one to believe.

<sup>&</sup>lt;sup>39</sup>Frankel found that the coefficient of the dummy for European Community regional integration was also significant, with a higher result for membership in the EEC rather than for just being a country located in Europe. The North American regional integration coefficient was found to be insignificant, and had a very high standard error, which is attributable to the small sample size of three.

<sup>&</sup>lt;sup>40</sup>On the financial side, Frankel found that there was only weak evidence of a special role for Tokyo as a financial centre exerting influence in its part of the world. New York was found to have a dominant effect for Hong Kong and Singapore, for example. These results, however, were influenced by the fact that during the sample period most Asian countries had not yet opened their financial markets to external influence by any foreign centre.