TABLE 4
Estimated impact of CDIA on exports and imports

Exports is the dependent variable						
Constant	GDP	DISTANCE	CDIA	FTA	LANGUAGE	R^2
11.65	0.86	-0.35	0.12	0.74	0.40	86.15
(14.32)	(39.56)	(-3.99)	(5.58)	(5.42)	(5.44)	
Imports is the dependent variable						
Constant	GDP	DISTANCE	CDIA	FTA	LANGUAGE	R^2
7.63	1.04	-0.02	0.03	1.22	0.17	83.57
(7.55)	(38.55)	(-0.19)	(1.30)	(7.15)	(1.80)	

Number of observations: 483

Canadian trade flows. Dummies for the existence of a free trade agreement (FTA) and a common official language with Canada are included into in the model. In algebraic form, the model is as follows:

$$Exports_{c,f} = \beta o + \beta_1 GDP_{c,f} + \beta_2 DISTANCE_{c,f} + \beta_3 CDIA_{c,f} + \beta_4 FTA_{c,f} + \beta_5 LANGUAGE_{c,f} + \varepsilon,$$

where GDP stands for gross domestic product, DISTANCE for distance, CDIA for Canadian direct investment abroad, FTA for free trade agreement, LANGUAGE for common official language and is the error term. The subscripts c and f refer to Canada and foreign country. A similar equation was used for imports.

Before estimating the equation above, the quantitative variables were transformed into natural logs so that the computed coefficients are elasticities, that is they measure the degree to which exports (or imports) reacts to a change in one of the quantitative variables. Table 4 presents the results. The numbers in parentheses are the t-statistics. R^2 is the R-squared representing the proportion of the variation in exports or imports explained by independent variables. For exports, both GDP and distance have the expected signs and are statistically significant at the 5 percent significance level. This means that a 10 percent increase in GDP and in the distance between Canada and trading partners will induce an 8.6 percent increase in exports and a 3.5 percent drop in exports respectively. It is found that exports and CDIA are complementary as a 10 percent increase in CDIA will raise exports by 1.2 percent.

This is smaller than the impact found in a 1998 OECD study of member countries. That study[6] found that each $1.00 of outward direct investment was associated with $2.00 of additional exports and a trade surplus of $1.70. This would reflect the high level of intra-company trade between parent companies and their foreign affiliates, particularly the export from the home country of royalties and licences, consultancy and other "headquarter" services.

Looking at the import equation, both GDP and distance have the correct signs, but the distance variable is not statistically significant. A slightly positive relation was also found between CDIA and imports, although, again, the estimate was not statistically different from zero. That is, the model does not establish a meaningful link between the stock of outward Canadian direct investment and merchandise imports. This is consistent with the view that CDIA is used to serve foreign local markets and not significantly for domestic consumption or production.

6 See OECD (1998). Open Markets Matter: The Benefits of Trade and Investment Liberalisation