A Reputation Model of Quality in North-South Trade

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Countries have different comparative advantages in quality. This paper contrasts a model of exogenous technological differences with one of reputation in a repeated game.Good reputations are a form of private social capital. They can explain why firms could profit from exports or direct investment even if the foreign price is no higher than the domestic one and foreign wages no lower, and why governments like to have large "high- value" sectors.

The Model. Firms use one factor of production, labor, in two countries, the North and the South. The North has 1 unit of labor and the South has $S < 1$. The F firms in each country compete in prices; each chooses its price simultaneously, as in Bertrand competition. A firm can produce two kinds of goods: the simple good, with subscript 0 (our numeraire); and the experience good, subscripted l or h depending on whether its quality is low or high. Prices are p_0 for the simple good, with $p_0 \equiv 1$ as a normalization, and p_l and p_h for the low and high-quality experience goods. Technologies are the same in both countries. Each unit of the simple good or the low-quality good costs one unit of labor to produce in either North or South, but each unit of the high-quality experience good costs $\phi > 1$.

Production is repeated in each of an infinite number of periods, with quality and prices chosen anew each period. The discount rates is $r$in both countries. Consumers buying in period t cannot observe quality before purchase, but they do observe the quality that each firm sold in period $(t-1)$.

If x_0 is consumption of the simple good and x_l and x_h are the consumptions of the experience goods, a consumer's utility in a given period is:

$$U = x_0^\alpha (x_l + \theta x_h)^\alpha \tag{1}$$

where $\alpha < 1$, and where $\theta > \phi$ is the relative value of high quality.

Firms in the North have good reputations; those in South bad reputations. For a firm to choose high quality it must be true that

$$\frac{(1+r)(p^* - \phi)}{r} \geq p^* - 1 \tag{2}$$

Competition among firms turns this weak inequality into an equality,

$$p^* = \phi + (\phi - 1)r \tag{3}$$

Proposition 1. After trade opens between North and South:

(1) The new world prices of the simple good and the high-quality good will be $p_0 = 1$ and $p_h = p^* > 1$. The North will continue to produce both goods and will export the high-quality good to the South. The South will produce only the simple good, ending production of the low-quality good, and will export some of the simple good to the North.

(2) Consumer welfare will rise in both North and South. Profits will rise in the North and will remain zero in the South. Northern consumption per capita of both goods will be higher than Southern consumption.