International agricultural markets, trade and development

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Readings

Some books I will use:

- Markusen et al. International Trade: Theory and Evidence (available on-line)
- Eaton, Jonathan and Samuel Kortum. 2012. "Putting Ricardo to Work." Journal of Economic Perspectives, 26(2): 65-90. DOI: 10.1257/jep.26.2.65
- Dornbusch, R., Fischer, S., & Samuelson, P. (1977). Comparative Advantage, Trade, and Payments in a Ricardian Model with a Continuum of Goods. The American Economic Review, 67(5), 823-839. Retrieved from `http://www.jstor.org/stable/1828066`

Comparative advantage

	Cloth	Wine
England	100	120
Portugal	90	80

That Portugal requires less labor than England to produce both cloth and wine indicates Portugal has an absolute advantage in production. This table gives the labor requirement to produce one unit of out put of cloth and wine.

How many units of cloth can be produced with one unit of labor?

	Cloth	Wine
England	$\frac{1}{100}$	-
Portugal	$\frac{1}{90}$	-

One unit of cloth per 100 units of labor are produced in England and one unit of cloth per 90 units of labor are produced in Portugal

How many units of cloth can be produced with one unit of labor?

	Cloth	Wine
England	$\frac{1}{100}$	$\frac{1}{120}$
Portugal	$\frac{1}{90}$	$\frac{1}{80}$

How many units of cloth can be produced with one unit of labor?

	Cloth	Wine
England	0.01	0.0083
Portugal	0.011	0.0125

These are the marginal productivities of labor. From this we can see that England would be more productive if it shifted labor into Cloth production and Portugal more productive if it shifted labor into wine production. This is the principle of comparative advantage (minimize the opportunity costs of labor).

Comparative advantage comparative labor requirements

	Cloth	Wine
England	A_E	a_E
Portugal	A_P	a_P

If $\frac{A_1}{A_2} < \frac{a_1}{a_2}$ then England has a comparative advantage in cloth production and Portugal a comparative advantage in Wine Production. the inequality reverses if marginal productivities are used.

Changes in output from shifting one worker to the more productive activity

	Cloth	Wine
England	+0.01	-0.0083
Portugal	- 0.011	+ 0.0125
Total Change in output	-0.001	0.0042

Total output of cloth drops slightly an output of wine increases slightly.

Empirical Evidence for the Ricardian Model

- G. D. A. MacDougall British and American Exports: A Study Suggested by the Theory of Comparative Costs. Part I, *The Economic Journal*, Vol. 61, No. 244 (Dec., 1951), pp. 697-724.
- Stern, R. (1962). British and American Productivity and Comparative Costs in International Trade. *Oxford Economic Papers*, 14(3), new series, 275-296. Retrieved from http://www.jstor.org/stable/2661740
- Balassa, B (1963) An empirical determination of classical comparative cost theory. *Review of Economics and Statistics* 37,

Ricardo with a continuum of goods - Dornbusch-Fischer-Samuelson (1977)

- assume constant unit labor requirements
- Rank relative outputs for these as follows:

$$\frac{a_1^*}{a_1} > \ldots > \frac{a_n^*}{a_n}$$

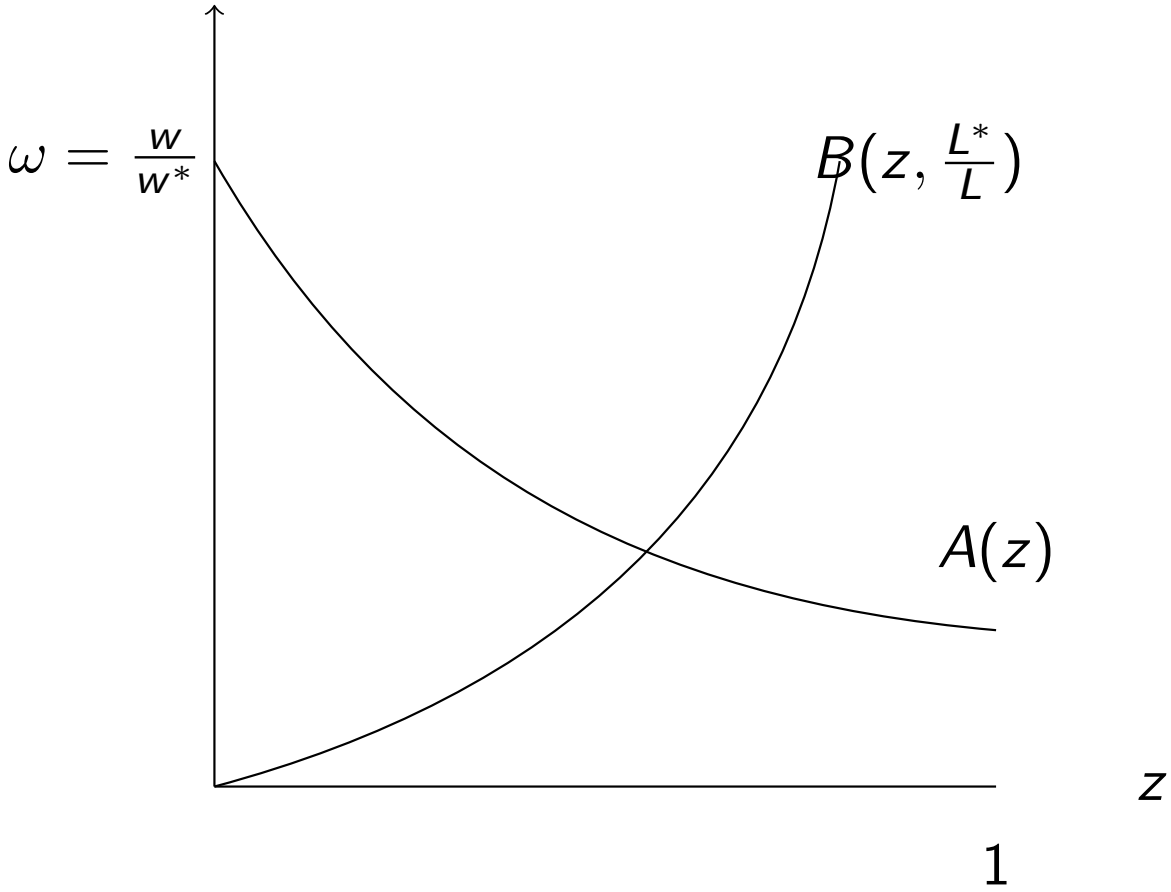
$*$ represents home country.

From this we get $aw \leq a^* w^*$ which can be rearranged to get $\frac{w}{w^*} \leq \frac{a^*}{a}$

The fraction of income spent (anywhere) on those goods in which the home country has a comparative advantage $\theta(\bar{z}) = \int_0^{\bar{z}} b(z)dz$, where $b(z) = \frac{P(z)C(z)}{Y}$ are budget shares for good z.

$$\omega = \frac{\theta}{1-\theta}\frac{L^*}{L} = B(z, \frac{L^*}{L})$$

DFS



where

$$A(z) = \frac{a^*(z)}{a(z)}$$

Thanks for listening!