International Trade Essay, Research Paper

INTERNATIONAL TRADE (EC549)

EDI HOUADRIA ESSAY #1

Subject #2: Does the Leontief paradox invalidate the Heckscher-Ohlin model of trade?

Why and how countries trade has always been a difficult and capital question for economists. The Ricardian model explained trade patterns through differences in labour productivity, however international trade can only partially be explained this way. It has also been wildly believed that resource allocation also plays a vital role in how nations trade, Heckscher-Ohlin (H-O), two Swedish economists, were the first to integrate resource allocation in an economic model of trade now referred to as the Heckscher-Ohlin model of trade. This theory was generally accepted when it was published. However Leontief published empirical data about USAtrading (1953) that was largely inconsistent with the H-O theory of trade. Since then data about what countries trade has been so inconsistent and confusing that there is no real empirical data supporting the H-O model of trade. Thus there are flaws in the original H-O theory; the questions now are : why isn?t there any empirical data, and under what conditions is it possible to make the model consistent with reality?

The H-O theory is also called the factor proportion theory this is because it stresses the importance of the allocation of different factors of production, and what proportion they play in what countries trade. This model is capable of explaining the different input combinations producers may face, which is the optimal one and thus the comparative advantage the nation thus possesses.

The simplest way to explain this model is by explaining how it works in a two-factor economy (two kind of industries with two kinds of inputs), and what happens when this economy opens to trade with a twin nation.

Thus we have a nation who produces two goods i.e. cloth and food, and these goods necessitate two factors of production i.e. land and labour, of course this is set under the conditions of pure and perfect competition thus both factors are mobile. This model explains how the variations of the price or quantity of one factor can have an influence upon the other. For example if the quantity of land suddenly varies this will have little effect upon cloth who is more labour intensive, on the other hand food who is more land intensive will probably have an important price and wage variation ; therefor it is possible to assume that there is an important correlation between the rent of land and the wages of labour, and there is also correlation between the price of food and the price cloth (as illustrated beneath). Depending on these ratios a country can determine in what kind of sector it has a comparative advantage. This is due to the

Input possibilities in food production

fact that changes in the different factors affect the different sectors in a disproportionate manner advantaging one and disadvantaging the other.

If this nation comes to open to trade with another nation, this will lead to factor price convergence, the workforce involved in the countries most abundant factor gain , whereas on the other hand the owners of the countries most scarce resource will probably lose from trade, there are though, important suppositions, both countries produce both goods, technologies are the same, no barriers to trade. Thus trade equalises the relative price of all factors, this is because trade is but a mask, for countries through food and cloth are in fact trading factor endowments and labour.

The US which is the country in the world with the most capital per unit of labour, and thus has a comparative advantage in capital intensive goods. Applying the H-O model to the US should reveal that it exports capital intensive goods. However Leontief studied US exports for the 25 years following World War2, and revealed that US imports were consistently more capital intensive than it?s exports which goes against all the conclusions of the H-O model. The study also outlined the fact that US exports were more skill intensive. This study shatters all the assumptions of the H-O theory because the US is one of the most liberal nations, and one whose sheer economic size means that if it is not possible to include it in the H-O theory, how much is the H-O really worth?

Since then many have addressed the issue but even there studies are confusing however some seem to be pointing in the right direction. First of all it seems that economists have wrongly been considering the nature of what can be considered as a factor in the H-O model. The factors considered should be immobile in the sense that this combination of factors (in those specific proportions and quantities), is unique to this particular nation(i.e. natural resources and labour). However many economists have considered capital as being one of those factor inputs. But capital nowadays is something that can travel more freely than ever. This is largely due to the fact that many free trade areas have been created (EU, NAFTA?), and the appearance of big trans-national companies that can easily move large sums of capital to a subsidiary branch in another nation. Another assumption that greatly hinders the H-O model of trade is the fact that it assumes that technology is the same everywhere and even though machines can be bought it can be argued that technology is relatively immobile, thus creating greater differences in the needs of firms to operate with skill or unskilled labour.

Another problem is how the different sectors have evolved ; the primary sector depends much more upon natural resource allocation than any other sector. Natural resources are truly immobile and specific to a country thus the H-O model applies quite well to patterns of trade applied to primary goods. On the other hand it is more complicated to compare and set a pattern of inter-sector trade because of the difference between the nature of primary agricultural goods (traded by the south) and industrial goods (traded by the north). This is because agricultural goods prices have a tendency to fall or increase relatively slowly compared to the price of industrial goods who increase rapidly. Thus the benefits of trade implied in the H-O model can be greatly deformed or void.

However it is important to point out that the evidence that arises from the Leontief report against the H-O model must be taken into it?s context, the US has a unique status, in the fact that it is the technologically most advanced country in the world which maybe implies that it specialises in exports of relatively new sophisticated products, which are maybe to sophisticated to be produced by capital instead of skill. Thus explaining why it imports more mature products from heavy manufactures that are more capital intensive.

It is now clearer what are the weaknesses of the H-O theory, however it is possible to make it perform relatively well under certain conditions. First of all it is necessary to chose factors that are immobile the best examples of this is of course is the level of skill amongst labour relative to their wages, and the natural resources of a country. Secondly if capital should be included it should under the form of interest rates, a country with a lower interest rate (compared to world average), thus has a comparative advantage in capital endowments. However this can be generally omitted because interest rates do not change much from a country to another. Finally H-O must be applied to sectors where resource allocation is crucial because like North South trading or primary products, otherwise similarities between nations can make endogenous factors come into account like national preferences or protectionism (to a certain extent).

The H-O theory is a very complete instrument that can help if correctly used with the right factors in the right sectors. However it is far from giving us a complete general theory on how countries trade. The limitations thus imposed restrict it mainly to north-south trading, it also helps put into perspective the true role of labour skill in trade patterns as well as the role of technology. The H-O model is not the truth but simply an instrument that can give us an idea what the big picture is.

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-A.Wood, ?Give Hecksher and Ohlin a Chance?, SLC.

-W.Staiger ?An evaluation of factor endowments and??,SLC