**International Raw Materials Market**

**Introduction**

Raw Materials - A natural of semifinished god that is used in manufacturing or processing to make some other good. Bauxite is the raw materials (ore) from which aluminum is made; aluminum is turn can be the raw material from which household utensils are manufactured.[1]

There is another definitions from the subject area of raw materials distinct from the above mentioned:

Raw materials are products immediately extracted from nature which have undergone a first processing through which they have become marketable and, consequently, a tradable commodity. Raw materials include all energy raw materials (crude oil, natural gas, coal, uranium), metals, semi-metals and industrial minerals (kaolin, graphite, sulfur, salts, phosphates), rocks, water as well as all plant and animal products, whether they come from tropical regions (coffee, jute, tropical timber) or from temperate latitudes (wheat, meat, wool, etc.).[2]

Raw material economy: It comprises all activities which are part of the planned handling of raw materials, i.e. explanation, evaluation, extraction, conversion into a tradable product, trade and forecasting. "Planned" here means economically useful, ecologically and socially responsible activities.[2]

Resources are all natural material systems which as such are no commodities, but the intactness of which is a basic prerequisite for the continued existence of the earth's chemical and physical equilibrium and, consequently, for the survival of mankind. Resources include: the ozone balance, the CO2 balance, the equilibrium of sea water, the tropical forest, the krill and fish population, etc.[2]

World resource balances are the planned (i.e. ecologically useful and socially responsible) handling of resources. This comprises: the explanation, evaluation, risk assessment and forecasting regarding world resources.[2]

Current research emphasis [2]

international raw material balances

supply problems of the industrial countries

location disadvantages of the developing countries

dumping problems in international raw material trade

recycling as a source for raw materials

raw material deposits and connected environmental problems in east Siberia (addendum 1)

structural questions and environmental problems of the Polish energy and metal economy[2]

**I. Trade intermediates and natural resources**

Once international trade in more than final consumer goods is allowed, basic notions of comparative advantage need to be re-examined. We have already discussed the limitations in a multi-commodity word of comparing autarky prices in two countries to predict item-by-item the pattern of trade; generally only correlations can be made except under additional assumptions. With trade in intermediates allowed, the problems in predicting trade in final goods became even greater. As MakKenzie (1945) remarked in one of his classic problem on the Ricardian model, the familiar nineteenth century trade pattern in which Lancashire produced and exported cotton textiles would most probably not have been observed if England had had to grow its own cotton [[1]](#footnote-1). We shall have occasion both in this section and to revert to this theme: the pattern of trade in final goods may not be readily deducible from the comparison of pre-trade relative prices in these markets.[3]

**I.I Middle products (intermediates)**

The phrase “middle-products” was used by Sanyal and Jones (1982) to encompass what traditionally are referred to as intermediate goods, goods-in-process, and natural resources which have been extracted and prepared for trade on world markets. The core concept in their model is that of a productive spectrum whereby, at initial stages, natural resources and raw materials are processed and, in the final stages, goods-in-process and intermediate products are locally assembled for national consumption. International trade, according to this view, takes place in commodities, somewhere in the “middle” of this productive spectrum, freeing up a nation’s input requirements in the final stages of production from its output tradeable middle products at earlier stages.[3]

Such a view of the role of international trade suggests a natural division between that part of the economy which produces commodities (middle products) for the world market (including the local economy), called the Input Tier, and that section of the economy which makes use of internationally traded middle products as input along with local resources to produce none-trade goods for final consumption (the Output Tier). Ruled out by assumption in the simple version on this model is the notion that the “middle” stages of the productive spectrum might be “thick” in the sense that tradeable middle products might use other tradeable middle products as inputs. In addition, in production structure in each tier of the economy as assumed to resemble that of the specific-factors model. Labor is mobile both among sectors in each tier and between tiers. The balance of payments provides an additional link between the two tiers; if the trade account is balanced, the value of total output from the Input Tier of the economy is matched by the value of middle products used as inputs (along with labour) in the Output Tier.[3]

Several types of questions have been raised in the context on this model, and of central concern in each case is the allocation of labour between tiers and the real wage. Fore example, a transfer payment which gives rise to a trade surplus requires labour to be reallocated to the Input Tier as consumption falls, and this serves unambiguously to reduce the real wage.[3]

If domestic (and world) prices of trade middle products remain constant to the small country, all non-labour inputs in the Output Tier can be aggregated, a la Hicks, into a composite middle product input, which serves to convert the production structure in the Output Tier from an (n+1)-factor, n-commodity specific-factors model into a two-factors, many-commodity Heckscher-Ohlin model.[3]

In the middle-products model Input Tier is the existence of a world market in which middle products can be exchanged for each other that permits such a conversion.[3]

The middle-products model allows countries and sectors to differ in the extent to which local value must be added to transform middle products into final commodities, and much depends upon this comparison. It does not, however, focus upon another question: in à vertical production structure with many stages, which goods-in-process or middle products does à country import and which does it export? Two recent papers have tackled this issue independently and with different models. Sanyal (1980) assumes that in each of two countries à commodity is produced in à continuum of stages, with different Ricardian labor-only input structures. Depending upon technological differences and relative country size, à cut-off point will be determined, with one country producing the commodity from raw material stage to some intermediate point, and then exporting this good-in-process to the other country where labor is applied to finish the production process. By contrast, Dixit and Grossman (1982) use à specific-factors model, with one of the commodities (manufacturing) produced in à continuum of stages using capital and labor (the other sector using land and labor) [[2]](#footnote-2). These stages are arranged such that, as goods-in-process develop towards the final stage, more labor-intensive techniques are required. Thus with two countries, the labor-abundant country will tend to specialize in later stages of the productive spectrum[[3]](#footnote-3).[3]

They analyze how endowment changes alter the cut-off point, as well as investigating issues related to content protection.[3]

**I.II Natural resources**

As Chapter 8 in this volume discusses, the normative question of pricing natural resources (exhaustible or renewable) has received much attention in the literature of the past decade. The middle-products approach stresses that some activities, the extraction of natural resources, must take place locally although international trade then allows other countries access to these resources. Obviously, comparative advantage changes over time for countries engaged in exporting exhaustible resource. In early work Vanek (1963) traced through the changing pattern of United States trade in natural resources, and suggested that asymmetries in resource use and availability could account for the Leontief paradox. In à context of multi-level trade, the costs of recourse extraction in one country often depend on the availability of foreign capital. Kemp and Ohyama (1978) have presented à simple model of North - South trade in which South makes use of Northern capital to develop its resources and exports these resources to the North where they are used to produce final commodities[[4]](#footnote-4). They put their model to use in exploring the normative issue of different degrees of bargaining strength and ability to exploit via export taxes and tariffs in the two regions. But the model also stresses the involvement of capital flows in resource extraction. Schmitz and Helmberger (1979) argue strongly for complementarity between trade in resources and trade in capital, à point also stressed by Williams in his 1929 article. We turn to consider more generally, now, the interaction between trade in goods and trade in factors.[3]

**Addendum 1**

Siberia is Among Leaders in Raw Materials Markets[5]

Siberia's rating looks more impressive in some groups of goods than its 7-th general placing. Split the whole flow of commercial projects into 9 groups of goods, and for 6 of them Siberia joins the leading three:

**Timber and Paper**

I Siberia 32.6

II Moscow 19.1

III St.-Petersburg 14.2

**Fuel**

I Siberia 20.3

II Urals 13.2

III Moscow 12.3

**Chemical Products**

I Moscow 17.2

II Siberia 15.7

III St.-Petersburg 11.9

**Construction Materials**

I Moscow 22.0

II Siberia 14.1

III Urals 5.6

**Transportation**

I Moscow 23.6

II Siberia 12.4

III Volga 12.1

**Metals**

I St.-Petersburg 20.9

II Urals 19.6

III Siberia 11.7

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1. In Jones (1980) a two-country Recardian model is illustrated in which one commodity requires an intermediate input and technologies differ between countries The pattern of trade can be reversed as a result of variations in the price of the traded intermediate. [↑](#footnote-ref-1)
2. Both papers cite the use of the continuum concept in Dornbusch, Fischer, and Samuelson (1977). [↑](#footnote-ref-2)
3. À limitation of both papers is the assumption that costs (or factor proportions) move monotonically from lower to higher stages of production. If not, trade may take place à1 many points in the productive spectrum in the absence of inhibiting transport costs. [↑](#footnote-ref-3)
4. This model is described in simplified terms by Findlay (1979). [↑](#footnote-ref-4)