balance of imports and exports of each country to and from *all* the others, which would be transformed into that of the balance of the several bilateral accounts by adding to both members some properly selected quantities. Therefore, as far as the ratios of trade and exchange rates go, the system of equilibrium would allow the same solution as in the case of multilateral trade, the only solution that is changed being that relating to the quantities imported and exported by each country.

In short, on the supposition that indirect trade does not entail higher costs for carriage than direct trade does, the system that secures an international equilibrium under a system of multilateral trade is determined *as regards the quantities imported and exported* by each country, only, if the possibility of arbitrage transactions is excluded. Otherwise, it is undetermined and among the infinite number of possible solutions any number can be imagined as would satisfy the condition of the balance of the bilateral accounts, which is after all a case of multilateral trade.

The final conclusion we come to is that made evident in the analogy with which we started, i.e. that the equilibrium level obtained in the three containers is independent of the modalities that characterise the communications between them and of the process by which the equilibrium is obtained.

If we take into account the heavier charges for carriage that indirect exchanges entail as compared to direct ones, the equilibrium is more or less modified, but in each case the trend will be towards a static equilibrium in which the exchange rates will be congruous.

It should be remembered that the complicated procedure that a system of bilateral trade calls for and the possible difficulties from the dynamic standpoint of carrying it out, may contribute to prolong the incongruence of exchanges rates; nevertheless it is ascertained that this incongruence can only be considered as a contingent dynamic disequilibrium.

A Reply

by

Professor C. BRESCIANI-TURRONI

Only a few words so as not to weary the reader.

Prof. Gini and Dr. D'ippolito have shifted the question from the position taken by the International Monetary Fund and in my two articles.

The argument advanced by the International Monetary Fund is the following:

(a) under a system of bilateral exchanges and of inconvertible currencies, discrepancies arise on the free markets of the several countries between the cross rates and the official parities fixed by the Fund;

(b) these discrepancies lead to arbitrage transactions on goods that are injurious to some countries. For instance, traders in countries outside the sterling area buy sterling on the free market, with which they purchase raw materials in the sterling area and export them, thus depriving that area of dollars. It was England herself that raised the problem of the differences between the cross rates and the official parity for sterling;

(c) to avoid these unfavourable results the discrepancies between cross rates and official parities must be suppressed by the action of the several Governments which should fix cross-rates in keeping with the official parities fixed by the Monetary Fund.

The criticisms contained in my two articles relate to point (c). I show that an attempt to impose the general equilibrium of exchange rates (i.e. concordance between cross rates and official parities) under a system of bilateral trade means placing a number of « conditions » exceeding the number of the « unknown quantities », and that this makes it impossible for all the conditions to be satisfied simultaneously.

This leads to a disequilibrium which manifests itself above all in the bilateral trade balances. We have evidence of this in the very heavy deficit of England's bilateral trade balance with Italy, which arose after the Italian Government agreed to impose on the foreign exchange market the rate of 4.03 dollars for one pound sterling. Should the Governments wish to take action to reestablish the balance of bilateral trade accounts, this action would entail (this was the main contention of my second article) the establishment of a series of burdensome controls which would lead the market ever further away from that commercial and monetary freedom which is one of the purposes the Fund aims at securing.

Prof. Gini and Dr. D'Ippolito should have turned their attention to that which, according to my two articles is the crux the question. But instead of that Prof. Gini, starting from some considerations on « marginal utility », endeavours to show that even under a system of bilateral trade a general equilibrium of exchange rates is quite possible. In my second article I have criticised the demonstration that Gini tries to give; as Dr. D'Ippolito makes no reference to it I suppose he accepts my criticism.

Dr. D'Ippolito supports the same proposition as Gini, but with other arguments. Unfortunately for my two critics *their arguments are contradicted by facts*, which show beyond all shadow of doubt that under a system of bilateral agreements a discrepancy immediately arises between cross-rates and the official parities of the several currencies. The same thing occurred before the second world war, when Germany developed the system of bilateral agreements. The result was that the German mark had a different value on different markets. The most recent and best known example is that of the dollar-sterling rate above mentioned. It is quite useless to try to deny this discrepancy. Do not the criticisms of Prof. Gini and Dr. D'Ippolito remind one of that famous character of Manzoni's who tried to prove by his dialectis that the plague did not exist?

A Rejoinder

by

Dr. G. D'IPPOLITO

If facts suffice to prove a theory it would be enough to quote facts without demonstrating the theory, and it would, therefore, be unnecessary for Bresciani-Turroni to trouble to demonstrate his theory, already so amply proved by facts, and to clinch his demonstration by stating: « *I show that an attempt to impose the general equilibrium of exchange rate (i.e. the concordance between cross rates and official parities) under a system of bilateral trade, means placing a number of "conditions" exceeding the number of "unknown quantities" and that this makes it impossible for all the conditions to be satisfied simultaneously* ».

I do not consider that I am shifting the terms of the problem when I resolve the proposition above quoted into its logical component parts, as follows:

(a) *hypothesis* : a system of bilateral exchanges;

(b) *thesis* : the exchange rates cannot be congruous;

(c) *demonstration* : it follows from the hypothesis that the number of *conditions* exceeds the number of the *unknown quantities* (congruous exchange rates); hence the impossibility that the conditions be satisfied.

Now, I affirm:

(1) that the hypothesis (a) does not give rise to the thesis (b), but to the opposite one;

(2) that the demonstration (c) is a mistaken one, because it is not true that the number of conditions exceeds the number of the unknown quantities; on the contrary, the system of equilibrium, which is determined as regards the