Siebert, Horst

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Trade balances and capital mobility

Kiel Working Paper, No. 372

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Kiel Working Paper No. 372

Trade Balances
and Capital Mobility

by

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Institut für Weltwirtschaft an der Universität Kiel
The Kiel Institute of World Economics

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Trade Balances and Capital Mobility*

In this paper, we study potential policy issues relating to trade balances and capital mobility. Are trade imbalances a matter of concern? More specifically, do trade imbalances represent a problem when capital movements in Europe are liberalized? Does the European Monetary System affect the interrelation between trade balances and capital mobility?

We here assume that the segmentation of capital markets will be reduced according to the Hannover guideline of June 24, 1988. This requires that capital controls will be abolished including controls on the exchange of currencies, on the flow of commercial credits, personal capital movements, direct investments, interest rates, market entry of banks, insurance companies etc. Moreover, recourse to still existing safeguard clauses must be tightened (Commission of the European Communities, 1988; Morgan Guarant Trust Company, 1988).

Trade Imbalance a Policy Issue?

1. Trade imbalances seem to attract the concern of the policy maker. The mercantilistic philosophy of praising a positive balance is still roaming around, and according to the Keynesian approach a negative balance of trade should be avoided because of the alleged impact on employment. A

trade deficit, if it occurs over several years, may trap a country in a situation of a high negative service account and may force it to an abrupt and involuntary adjustment. For these reasons the policy maker may feel that action is required to reduce negative trade balances.

2. The relevant budget restraint for an economy is not the trade balance, but the balance of payments. In any period, a country cannot spend more foreign currency than it receives (or withdraws from its reserves). As a rule, markets make sure that the budget constraint "bites", so that the budget of a country with the rest of the world is in balance as a result of decentralized decisions.

3. The balance of payments requirement can be accommodated by a change in foreign currency reserves. For instance, a trade deficit may be financed by running down foreign currency reserves. If we abstract from a variation in foreign currency reserves, the current account can be viewed as the mirror image of the capital account. The capital account represents the financing side of the current account. As a definitional relationship, let \( X \) be exports, \( M \) imports, \( Tr \) transfers and net services, \( S \) private savings, \( I \) investment, \( T \) taxes and \( G \) government spending, then we have

\[
(X - M) + Tr = S - I + (T - G) = V.
\]

\( V \) is the change in the net asset position. In policy debates, the service and the transfer account are often neglected so that the trade account is regarded as the mirror image of the capital account.

4. The current and the capital account are determined simultaneously. Consider for instance a situation in which
absorption is higher than national output and in which
private agents are not willing to finance the trade
deficit. Then absorption must be reduced in real terms by
- an increase in the interest rate bringing down
  investment and consumption,
- an increase in the price level (and a lagged increase
  in nominal income),
- a devaluation improving the competitive
  position (increasing the price of tradables relative
  to non-tradables as an incentive to produce) or
- by a reduction in the government's budget deficit.

Reducing absorption, that is reducing the trade deficit,
increases loanable funds (savings) available for investment
so that the gap in the capital account is closed
simultaneously with the trade deficit.

5. Interpreting the balance of payments as the budget
restraint of an economy, it does not make sense to require
bilateral balances in the balance of payments among
countries. This holds specifically for trade imbalances.
Otherwise we go back to the exchange economy of Asterix and
Obelix (or to the proposed Gephardt amendment). Bilateral
balances would impose unnecessary constraints on the system
of international exchange and imply efficiency losses.
However, if the exchange rate of a country is pegged with
the exchange rate of some countries and not with respect to
others, imbalances in the balance of payments may be of
interest. They may indicate a need for adjustment of a
specific country, for instance a need for realignment.

Trade Balances of European Countries

6. A survey of the trade balances of the individual EC
countries with the rest of the EC since 1970 is given in
Table 1. In this picture of the balance of intra-EC trade a
negative trade balance through 1970-1987 prevails for Denmark, Greece, France, Italy (except for 1971/72 and 1977-1979), Ireland (except 1986-1987), Portugal, Spain and the United Kingdom (except 1980/81). The U.K. is a special case with a positive service account. Germany and the Netherlands have a positive trade account in intra-EC-trade. Figure 1 shows the trade balance of selected countries with the rest of the EC in relation to GNP.

7. Using data for the OECD countries, the Netherlands is a net capital exporter nearly throughout the whole period (except for 71, 78, 80, 87); similarly for the U.K. (since 1977). Germany is a net capital exporter (1975-1977, 1982-1988); the positions of France and Italy vary. Greece, Portugal and Spain are net capital importers (Spain with the exception of 1985, 86).
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Trade Balances of Selected Countries with the Rest of the EC in relation to GNP

- Netherlands
- Germany
- Spain
- France
- Portugal
- Greece

8. Table 2 shows trade balances of EC-countries with the world as a whole and with the EC in relation to GNP. The Netherlands, Ireland and Denmark have reduced their deficits (or increased their surplus) with the rest of the world relative to GNP; this also holds for Belgium, France, Germany, Italy, and to some extent for Spain since 1980. It is interesting to note that France and Denmark have a larger relative deficit with the EC than the world. Similarly, the Netherlands have a much larger surplus (around 10 per cent) with the EC than with the world (3 per cent). Greece, Spain and Portugal have much lower relative deficits with the EC than with the world (Portugal: around 5 per cent versus 11 per cent).

9. When we look at the trade imbalances and corresponding imbalances in the capital account, we have four different spotlights with which we can analyze the problem. The four spotlights look at the same object, but the lighting and the perspective may be somewhat different, namely:

- efficient capital allocation
- competitiveness and the trade balance
- fixed exchange rates and partial immobility of labour
- the interplay of the purchasing power and the interest rate parity.

Efficient Capital Allocation

10. Reducing the segmentation of capital markets in Europe will increase the efficiency in the use of capital. Capital will flow to firms, sectors and regions where the rate of return is highest. The condition under which efficiency is increased is that the marginal productivity of capital in one country is higher than in the other (see box I). Improvement in the efficiency of capital accumulation can be measured by a reduction in the Harburger triangle. The
additional capital stock accumulated in the country with a high marginal productivity will be instrumental in paying interest or dividends in later periods.

Capital flows are important for European countries with a high development potential. They will be able to attract capital and thus realize their development potential more quickly.

11. Mobility of the capital stock is linked to the free flow of portfolio capital, the convertibility of currencies and the deregulation of the financial markets. Restraining private capital to flow out of the national market, letting national financial institutions have a preferential access to the savings of nationals or using different exchange rates for international trade and financial transactions represent market segmentations. Segmenting Europe from the world capital market is another case in point.
Box I

In Figure 1, the efficient capital accumulation is illustrated. \( F_K \) is the marginal productivity of capital in a specific country and \( F_K^* \) in the other European countries. \( OK \) is the total supply of funds at a given moment of time. With market segmentation, the capital stock \( OD \) of a specific country is too low and the internal interest rate \( DB \) (equal to \( F_K \)) is too high relative to \( DC \) in the rest of Europe. With a reduced segmentation capital will flow to the country. If technological progress (a shift in the \( F_K \)-curve upward) occurs, the capital stock will increase to \( OD' \). Part of the efficiency gain \( A'CB' \), namely \( A'EB' \), will be enjoyed by the country.

![Figure 1](image-url)
The approach of efficient allocation implies that a country is willing to let financial capital leave the country if better investment opportunities exist in other European regions. This may be the most severe temptation to regulate capital flows - by preventing capital exports.

Competitiveness and the Trade Balance

12. The negative balance in the trade account at a given moment of time may reflect a lack of competitiveness at a given moment of time which is caused by too high absorption (private and government consumption, investment and/or conditions of the supply side determining comparative advantages). The exchange rate comes into play as an additional factor influencing absolute price advantage.

13. Capital mobility is instrumental in correcting a negative trade balance by allowing capital accumulation. This improves competitiveness for future periods. Capital accumulated will help to generate export earnings in future periods allowing the payment of interest and dividends. In this case, capital imports start a full debt cycle in which a country eventually becomes a creditor (Siebert 1989a). Another view of a negative trade balance is that of intertemporal trade, that is to interpret a negative trade balance as the mirror image of a positive trade balance in later periods. A country imports investment goods today and since it has a high marginal productivity relative to the foreign country, it will repay with exports later.

14. A negative trade balance may also be the result of consumption loans. Absorption exceeds national output due to high consumption, either private or government. The capital market (or the central banks) then finance the
deficit of savings relative to investment; but in later periods the opportunity costs of financing private or government consumption out of debt will become apparent. A The people of a country would not be well advised to go the road of consumption loans. In this case, the country is impatient relative to the rest of the world, and foreign borrowing starts a half debt cycle in which the country may remain trapped as a debtor.

If markets are no longer willing to finance excess spending, the country in question has to adjust:

- An increase in the interest rate will reduce absorption by choking off investment, but this has a detrimental effect on future periods.

- Prices for tradables in home currency will have to rise thereby making the production of tradables more interesting (and discouraging the production of non-tradables). This will result in a real depreciation.

- A nominal depreciation will eventually lead to a real depreciation. However, price level effects and stagflationary phenomena come into play.

- Reducing the budget deficit lowers absorption. If government spending was mostly for consumption purposes, such a policy is appropriate in the long run.
Partial Immobility of Factors of Production

15. In the EMS, corrections in the nominal exchange rates are to be avoided. Thus, an important mechanism of adjustment is no longer available. An analogy to regions in a nation helps in the analysis. Consider for instance the divergencies between northern and southern Germany: When the northern region experiences a loss of competitiveness, a devaluation of its currency would help to partly restore comparative advantage; without realignments, the northern region can regain comparative advantage if factors of production migrate to the south increasing the marginal productivity in the north.

If a factor of production is immobile such as land, the factor price must fall. Again, the region becomes more competitive. If labor in general or specific types of labour are immobile, wages must be differentiated among European countries.

16. If wages are not differentiated and sticky, we will experience so-called structural unemployment in European regions. For instance countries with an important comparative advantage in labour-intensive activities see their comparative advantage quickly eroded by an increase in wages. A trade deficit would be the result. This will put pressure on the acceptance of a single market, and political pressure for a transfer mechanism will be strong. There is a danger that a transfer mechanism will take the place of a competitive process among regions.
Box II

The hierarchical layer of balance of payments adjustment mechanisms is illustrated in Figure 2. The first layer is the adjustment in the nominal and real exchange rates. If exchange rates are constant, we have two different approaches to adjustment. If factors are mobile, they will migrate to the country with the best opportunity. If factors are immobile, factor prices must adjust. If factor prices are sticky, a political transfer mechanism will be established.

The other approach to adjustment in the balance of payments relies on monetary policy. If purchasing power parity is satisfied, exchange rates will remain stable. This can be achieved by harmonizing the increase in the money supply (accounting for growth in real GNP). If purchasing power parity is not satisfied voluntarily by monetary authorities, it will be forced upon them. This will be done by a wedge in the interest rate at home and abroad necessary to keep markets willing to sustain a trade deficit.
Figure 2:
Balance of Payments Adjustment Mechanism

- Balance of Payments
  - No Realignment of Exchange Rates
    - Immobility of Factor of Production
      - Inflexibility of Factor Prices
        - Political Transfer Mechanism
      - Flexibility of Factor Prices
    - Mobility of Factor of Production
  - Realignment of Exchange Rates
    - Purchasing Power not Satisfied
      - Interest Rate Parity
        - Forced
        - Harmonizing the Increase in the Money Supply
    - Purchasing Power Parity Satisfied
      - Voluntary
17. Europe would be well advised to allow differences in endowment including labour endowment to play in the process for integration. At least for a time period of ten to fifteen year wages and social security systems can be different between nations in order to allow benefits from trade and specialization to all countries. This also holds for environmental policy instruments, signalling the scarcity of an immobile factor of production (Siebert 1989a).

18. If instead of a competitive process among regions including the differentiation of wages, social security and environmental policy instruments a political transfer mechanism becomes dominant, there is the danger of a vicious circle. For instance, uniform wages imply trade deficits of countries where comparative advantage would be founded on lower labour costs. The resulting trade deficits imply the political transfer mechanism which in turn allows to keep wages uniform. Thus, the mechanism is reinforcing. Moreover, if the transfer mechanism cannot be financed, protection against products from low-wage non-European countries may be tempting for the politician.

The Interplay of Purchasing Power and Interest Rate Parity

19. Whether private investors are willing to finance a trade deficit of a country depends on interest parity.

\[ i - \dot{\varphi}^e = i^* \]

A country can attract capital as long as its interest rate, \( i \), plus the expected appreciation of its currency\(^2\), \( \dot{\varphi}^e \), (or minus the expected depreciation) exceeds the interest rate in the other country, \( i^* \).
Although the EMS is intended to establish stable exchange rates and although credit facilities push realignment to the background, there is pressure for realignments if inflation rates among countries differ too strongly for some time and if a rise in the interest rate to prevent depreciation is too costly. Thus, purchasing power parity in Europe still is operating, though in a somewhat revised interpretation. If price levels start to diverge between countries, purchasing power parity forms the expectations on the exchange rate,

$$\hat{e}^e = \hat{p} - \hat{p}^*$$

With a higher depreciation expected, the country must pay a higher interest rate to attract capital (and reduce excess demand by lowering investment). A higher interest rate, of course, hurts future generations in reducing investment (and the capital stock). Consequently, policy makers are interested to prevent an increase in the interest rate.

A higher interest rate only serves to prevent a correction of the exchange rate. A devaluation shows to the general public the evaluation of the home currency by the capital market - an unbribeable indicator of the value of a country's currency. Thus, monetary policy is restrained because it can only prevent a long-run interest rate increase or a depreciation if the price level does not change with a higher rate than abroad.

20. In a fixed exchange rate system, capital mobility enforces the interplay between the interest parity and purchasing power parity. At the same time, credit facilities play an important role in a fixed exchange rate system. These credit facilities have been extended in the EMS system. By further increasing the role of the credit facilities, the interplay of purchasing power and interest
parity will be destroyed. Then the danger exists that the
EMS will no longer satisfy price level stability. This also
holds if a political transfer mechanism plays a more
prominent role in Europe.

21. When the European Monetary System is further developed
and when exchange rates become irrevocably fixed, the
interplay between interest rate parity and purchasing power
parity is disrupted. This implies that the increases in the
money supply of the different countries have to be in line
with each other. Moreover, the problem arises whether
fiscal policy has to be harmonized among the European
countries (Giavazzi 1989). A country with a high budget
deficit not used for investment purposes may face high
opportunity costs of foreign borrowing and may be under
severe pressure to realign its currency.

Summary

22. We come to the conclusion that trade imbalances should
not be an issue of European policy.

(1) As long as international investors are willing
to finance a trade deficit, the budget restraint of an
economy is satisfied and there is no policy issue. As long
as a trade surplus is accompanied by sufficient capital
exports financing capital accumulation in another country,
Bobby McFerrin's advice is right: "Don't worry..."

(2) Trade deficits associated with capital accumulation are
a normal phenomenon in the development of a country. A
negative trade balance today is the mirror image of an
export surplus tomorrow. An increase of capital mobility in
Europe is instrumental in financing these developmental
trade gaps.
(3) Trade deficits arising from private or government consumption (budget deficits) may represent an issue of national monetary policy or of national fiscal policy in order to reduce future opportunity costs.

(4) Trade deficits should not be created politically by not letting comparative advantage play. A harmonization of factor endowments is not possible in Europe.

(5) If prices for immobile factors of production such as specific types of labour or specific environmental services are not differentiated among European countries, structural trade deficits will result. Then a political transfer mechanism may become dominating, reinforcing structural deficits and increasing political pressure for outside-protection.

(6) Capital mobility increases the interplay between interest parity and purchasing power parity. In the given institutional setting of the EMS, this interplay is decisive for monetary stability. Credit facilities in the EMS should take care not to destroy this interplay.
Notes

1) Some people may conclude that these data suggest that there is scope for a realignment. But an imbalance in sub-account of the balance of payment does not necessarily imply the need for adjustments. One would have expected an increase of increase in trade account deficits and surpluses because fixed exchange rates tend to be associated with credit facilities for imbalances in the trade account. These facilities representing a temporary financing of trade accounts by central banks have been extended in the eighties.

2) $\hat{\omega} > 0$ means a depreciation of the home currency, $-\hat{\omega} > 0$ an appreciation.
References

Commission of the European Communities 1988, European Economy, 36, 3-40


Wissenschaftlicher Beirat beim Bundeswirtschaftsministerium (1989), Europäische Währungsordnung, Bonn