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The Theory of Optimum Currency Areas and the Rand	B. C. Muzorewa Mr. Muzorewa lectures in Economics at the University of Botswana, Lesotho and Swaziland.

THE THEORY OF OPTIMUM CURRENCY AREAS AND THE RAND*

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At the present moment, the Rand Currency area (composed of Botswana, Lesotho, Swaziland and South Africa) is under serious review by its members. The fact that the present arrangements are being re-examined suggests that improvements of one kind or another are being sought. In fact, there have been two commissions of enquiry on behalf of Botswana, Lesotho and Swaziland into the pros and cons of maintenance of the status quo. Since Botswana, Lesotho and Swaziland are politically independent, it is quite normal for these countries to wish to have their own currencies instead of the Rand. Indeed, monetary-fiscal independence (though it may be limited) is an important attribute and parameter of national sovereignty.

The purpose of this short paper is to examine the Rand Currency arrangements in terms of the "Theory of Optimum Currency Areas". My hope is that this exercise will throw additional light on the functioning of the present currency and monetary arrangements. It is also hoped that this paper will help in the shaping of future relationships.

The Theory of Optimum Currency Areas

Some international economists have developed an excellent exposition of the Theory of Optimum Currency areas.[1] A currency area has been defined as one within which there is a single currency regime or an area of national currencies on a fixed exchange-rate system, with guaranteed convertibility. Such a territory is said to be optimum if full-employment, price stability and external balance can simultaneously be realised with the aid of monetary-fiscal instruments and flexible rates of exchange with the rest of the world.

For example, let us assume that a common currency area is composed of two countries—A and B—with zero trade balance, full-employment and price stability. There is factor immobility between A and B. Now a fall in demand (due to changes in tastes, etc.) for A's products and a rise in demand for B's products will result in excess demand for factors of production in B, tending to raise factor and commodity prices there. A experiences a trade deficit while a surplus emerges in B. Excess supply of factors of production appears in A, tending to lower factor prices and therefore commodity prices. If the price mechanism was permitted to do its work, demand in the area would shift to the now cheaper goods in A, thus stimulating production and employment in this country. Unemployment and trade deficit in A could be eliminated and thus equilibrium can be restored in both countries.

However in the present-day world economy, factor and commodity prices are not permitted to move sufficiently in directions indicated above. For example, prices in B may not be allowed to rise to sufficient levels for the price

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* Mr. C. Stahl and students of International Economics at the University of Botswana, Lesotho and Swaziland deserve my sincere gratitude for the useful discussions I have had with them on this topic.

[1] R. Mundell, "A Theory of Optimum Currency Areas", *American Economic Review*, 1961, 60, pp. 657-665; R. McKinnon, "Optimum Currency Areas", *American Economic Review*, 1963, 53, pp. 717-725; P. Kenen, "The Theory of Optimum Currency Areas: An Eclectic View", In: R. Mundell and A. Swoboda, eds., *Monetary Problems of the International Economy* (University of Chicago Press, 1969), pp. 41-60; D. Snider, *Optimum Adjustment Processes and Currency Areas* (Princeton University Press, Essays in International Finance Section, No. 62, October, 1967).

mechanism to restore equilibrium. Thus, if monetary and fiscal instruments are applied in B to check inflation, then trade deficit and unemployment in A will persist, unless factor prices in A can be reduced sufficiently. If country A has no institutional arrangements which make factor prices inflexible, it is possible for unemployment to be eliminated via a sufficient fall in the money wage rate. However, minimum wage laws and trade union action might make it difficult for the price of labour to fall. Under conditions of sticky factor prices in the downward direction in country A and application of disinflationary monetary and fiscal measures in B, unemployment is likely to persist in the former region. An attempt might be made to expand demand in A through an increase in money supply in an effort to raise production and employment. This approach would only result in defeating the disinflationary measures in B. Unemployment and inflation cannot be eliminated at the same time under the above conditions.

It would appear, therefore, that if factors of production were very mobile between the two countries, excess-demand for and excess-supply of factors would not exist for long in B and A, respectively. The optimum currency area theorists would say that these two countries should have separate currencies with flexible exchange rates between them, unless a high degree of factor mobility can be promoted between them.

The ideal adjustment process depends on several factors. According to Mundell, "An essential ingredient of a common currency, or a single currency area, is a high degree of factor mobility."[2] However, Kenen disagrees with this criterion on the grounds that perfect mobility of labour is usually rare. "Diversity in a nation's product mix, the number of single-product regions contained in a single country, may be more relevant than labour mobility."[3] Thus, a less diversified economy may have to alter its national exchange rate more frequently than other economies. This is because a single export product economy is bound to be exposed to external shocks arising from changes in demand or technology abroad. Production of a number of export products means that the amplitude of fluctuations in export receipts is likely to be less than otherwise. "At any point in time, a country can expect to suffer significant reversals in export performance, but also to enjoy significant successes."[4] Thus, from Kenen's point of view ability to produce a wide range of products is an essential qualification of an optimum currency area. Diversification is also a "prerequisite to the internal factor mobility that Mundell has emphasized."[5] Since it is a prerequisite to the internal factor movement, it would appear that the difference between Mundell and Kenen is merely one of emphasis.

Earlier on it was mentioned that ideal adjustment also requires the use of appropriate monetary-fiscal instruments. It is possible for independent monetary and fiscal authorities to co-ordinate their policies in order to achieve equilibrium. "More realistically, however, it can be fulfilled only if there is a single monetary-fiscal authority."[6] It appears, therefore, that a fully co-ordinated or single monetary and fiscal authority is also an essential requirement for an ideal currency area.

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[2] Mundell, *Theory of Optimum Currency Areas*, pp. 661.

[3] Kenen, *op cit.*, p. 49.

[4] *Ibid.*

[5] *Ibid.*, p. 54.

To sum up, for an area to qualify as an optimum one the following main criteria should be met: first, there must be a single monetary-fiscal authority within the currency area or a high degree of co-ordination of independent monetary-fiscal policies; and second, a high degree of factor mobility must prevail within the area in order to avoid substantial unemployment. It is these two criteria which will be used to examine the optimality of adjustment in Southern Africa. By no means does it mean that these are the only qualifications but these appear to be the most important ones.

The Rand Currency Area

Within the Rand area, Botswana, Lesotho and Swaziland (BLS) are far less developed economically than the Republic of South Africa (SA). The South African Reserve Bank (SARB) is the sole issuer of the Rand circulating in the whole territory but it has no branches in Botswana, Lesotho and Swaziland. The question to be answered is, "Does the Rand domain fulfil the qualifications of an ideal currency area?"

A closer examination of the monetary arrangements in Southern Africa shows that the Reserve Bank of South Africa has effective control of the monetary situation within South Africa only. However, it does regulate the foreign exchange transactions since it is the sole issuer of the Rand. The commercial banks in BLS generally conform to the monetary conditions (lending principles and interest rate changes in South Africa) but the South African monetary authorities do not control internal operations of these credit institutions. This is mainly because the banking firms in BLS (which are London based) are not legally bound to follow the SARB or Bank of England's regulations or directives—thus, banking firms in BLS are practically operating in a legal vacuum. If, in general, South African Reserve Bank monetary controls or regulations are ineffective in BLS, this would suggest that the currency area is not optimal, according to the first criterion—that is, the boundaries of the Rand circulation do not appear to coincide with the boundaries of effective monetary-fiscal control.

However, it is obvious that the lack of a formal agreement on monetary arrangements in Southern Africa may be the main factor making the policies of the South African monetary authorities ineffective in BLS.

Next, we must ask, "Will a formal agreement on monetary matters make the area an optimal one?" The answer is no, because there are other important economic conditions which must be fulfilled for the Rand Currency Area to be an optimal one.

At the end of the 19th Century all states in Southern Africa were on about the same level of economic development. But seventy-one years later, South Africa has evolved a more diversified one. What could have happened is that demand in the Rand area shifted in favour of South African and against BLS products, leading to a trade surplus and deficit, respectively. The result has been increased demand for South African factors of production, tending to raise factor and commodity prices there. A fall in demand for BLS products meant the appearance of excess supply of factors of production in these countries. Part of the unemployment has been absorbed by a limited movement of labour from the less developed to the more developed region (mainly in the form of migrant workers). However, this mobility of labour is reduced by the need for work permits and job reservation act in the Republic which makes

[6] McKinnon, *Optimum Currency Areas*, p. 14.

occupational flow very difficult, if not impossible in many cases. These institutional restrictions make the possibility of promoting a higher degree of mobility of labour remote, and it is unrealistic to expect that a common labour policy in the Rand area can be formulated.

In the absence of a high degree of flow of this factor of production, optimum adjustment within Southern Africa would be possible if factor and commodity prices were free to rise in South Africa and to fall in BLS sufficiently. Such a development might shift demand from more expensive goods produced in the inflation-ridden region towards cheaper goods from the unemployment-ridden area. The fact is that the South African authorities have been applying monetary-fiscal instruments to disinflate the economy. It would not be in the interest of the South African economy for the monetary officials (even if it were legally possible) to expand money supply in BLS in order to relieve unemployment there. BLS minimum wage laws could prevent sufficient fall in the already low money wage rate. Thus, a trade deficit and unemployment will persist in the less developed members of the area.

Because of the use of a common currency, capital has been more mobile than labour in Southern Africa. When investment opportunities declined in BLS as a result of a fall in demand for products of this area, capital funds generated here were free to move out into S.A. The existence of banking firms in the former region which are branches of credit institutions in the latter guaranteed the swift and smooth movement of savings within the Rand area. However, "Studies in many countries have shown how the banking system, if not regulated to act differently, tends to become an instrument for siphoning off the savings from the poorer regions to the richer and more progressive ones where returns on capital are high and secure."[7] Deposits with BLS banks increase as a result of export earnings but are quickly lost to South African banks due to the very high propensity to import on the part of the former countries.[8] An estimate of the outflow of capital funds generated in BLS is given by a rather low ratio of local advances to local deposits, which was 0,5 for Botswana as at March, 1970; about 0,3 for Lesotho and 0,87 for Swaziland at the end of December, 1970.[9] It must be mentioned that very little is known about the net long-term private capital movements. Though a common currency facilitates smooth movement of long-term capital, it cannot be relied upon to restore balance of payments of chronically undeveloped regions within the territory. "If an enduring decline in exports reduces incomes in a region, capital imports into the region cannot be expected to remedy the situation, and capital is more likely to move out."[10] The mobility of capital has, however, also been reduced by legal and procedural means, especially when savings attempted to flow from the more developed to the less developed area. For example, until quite recently, South African Building Societies were not permitted to invest deposits mobilised in BLS outside their country. It is also believed that before 1969, the movement of funds from S.A. to BLS in excess of R100 000 needed approval by the South African authorities. At the present time, residents of BLS are treated as non-residents of the Rand area for the purposes of con-

[7] G. Myrdal, *Economic Theory and Under-developed Regions* (Gerald Duckworth & Co. Ltd. 1957), p. 28.

[8] J. Ingram, "State and Regional Payments Mechanisms", *Quarterly Journal of Economics*, 1959, LXXIII, pp. 619-632.

[9] Botswana: *National Development Plan* 1970-1975, p. 10.
Lesotho: *First Five-Year Development Plan* 1970/71-1974/75, p. 15.
Swaziland: *Annual Statistical Bulletin* 1971, p. 57.

trolling transactions in securities.[11] Thus, the proceeds of a sale of South African securities by a resident of BLS to a South African resident are credited to a Blocked account.[12] Although special consideration is given to all residents of BLS, the South African exchange control system is restrictive to the free flow of capital funds within the area under study. On the other hand, the less developed members of the Rand territory have taken and are taking measures to reduce the outflow of domestic savings to S.A., in order to engage in capital formation for economic growth within their borders.[13] These actions by all members of the area are very likely to reduce the mobility of capital.

The above description clearly indicates that the Rand Currency Area is not optimal, since it lacks the two most important ingredients of optimum adjustment—a high degree of factor mobility and an effective monetary and fiscal authority coinciding with the currency area. The possibility exists that the present currency arrangements could have been detrimental to the rapid economic development of Botswana, Lesotho and Swaziland for the past decades. The absence of a development orientated common monetary policy (in spite of the use of a single currency) has helped in perpetuating inequalities in the rates of economic growth in Southern Africa, and this is the main reason for the expressed concern by BLS about the direction and swiftness of the flow of capital. "In fact, one of the outstanding empirical regularities to be observed in the process of growth of countries which have long been unified is that some regions have persistently had higher unemployment and/or grown more slowly than others."[14]

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[10] B. Balassa, *The Economic Theory of Economic Integration* (George Allen & Unwin Ltd. 1962) p. 256.

[11] *I.M.F. 21st Annual Report on Exchange Restrictions*, 1970, pp. 50, 306, 455.

[12] D. Franzsen *et al*, *Report on Fiscal and Monetary Policy in South Africa* 1970, pp. 253-254.

[13] For expressed concern see Botswana: *op. cit.*, p. 148; *Lesotho First Five-Year Development Plan* 1970/71-1974/75, p. 15.

[14] G. Magnifico, European Monetary Unification For Balanced Growth: A New Approach, In: *Essays in International Finance*, No. 88 (Princeton University Press, August 1971), p. 8.

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