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CAPITAL FLOWS FROM REGIONALLY DEPRESSED
AREAS AND IMPLEMENTATION OF
REGIONAL CONTRA-CYCLICAL POLICIES:
A RESEARCH PROPOSAL

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I. Introduction

Currently (January, 1972) the unemployment rate in the United States is 6.0 percent. However, most forecasts predict that this will be substantially reduced during the incoming year. In the Seattle-Metropolitan Area, the current unemployment rate is 15 percent. It has been at approximately this level for the past several years, with no foreseeable improvement. The current situation stands in vivid contrast during most of the 1960's; unemployment reached a minimum of 2.8 percent in 1968. Also, the current unemployment rate amongst blacks is alarming: it's over 20.

Setting aside the tremendous economic losses to the Seattle-Metropolitan Area, as well as the incalculable psychological effects on the unemployed and their families, one trained in economics might say that there is nothing unique about the situation in the Northwest, or, for that matter in any other regionally depressed area in the U.S. This is inherent in the dynamics of the market system and there exists automatic equilibrating mechanism

in the pricing system which will **eliminate** unemployment in regionally depressed areas.

What we do first is present this equilibrating model. Secondly, we present the details of our research proposal, which consist of three areas: (1) We examine the empirical validity of the regional equilibrating model. As **shown** subsequently, this will be done by examining several of the major implications of the model which pertain to the flow of funds and interest levels in depressed areas. For example: Are the activities of private lending agencies pro-cyclical or anti-cyclical? This is one of several empirical questions examined. (2) Articulate a theory of regional monetary-fiscal policy. It will be argued that the same fundamental theoretical reason for needing macro monetary-fiscal policies -- they are a substitute for the absence of wage and price flexibility -- applies equally to regions as well. (3) Finally, we shall examine the merits and failures of selected policy tools to assist regional economic development and mitigate the structural disturbances that arise from the excessive amplitude of regional fluctuations in economic activity.

II. The Regional Self-Correcting Model

We shall consider as one trading unit some region served by a regional Federal Reserve Bank. Name this region Alpha. Trade between this region and the rest of the United States will be internal to the nation. This trade will, of course, be carried out using dollars and these dollars must exchange with the dollars of any other region in the nation on a 1-for-1 basis. What we have, obviously, is internal trade with fixed exchange rates. As a result, all changes in demand and supply that lead to a disturbance in the balance of payments of the Alpha region will not affect the rate at which Alpha money -- Federal Reserve notes and demand deposits -- exchanges for the notes and deposits of other Federal Reserve regions.

Investment, or changes in the stock of real capital, in the Alpha region will depend primarily on entrepreneurial expectations of profits from the future flow of capital services, the cost of capital, the ability of entrepreneurs to obtain finance, the rate of capital depreciation, and the supply elasticity of the capital goods producing industries.

A few words should be said about the loanable funds market in a regional area such as Alpha. It is illuminating to contrast such a market, which is part and parcel of an open economy, with that of a closed economy. In a closed economy, as in an open one, the demand for money capital is negatively related to interest rates, and is also subject to (rightward and leftward) shifts because of technological changes, income and employment changes, migration of labor, and so forth. Similarly, the supply of money capital is positively sloped with respect to interest rates as funds are made available because the reward for waiting induces more savings on the part of income recipients.

However, the pure theory of an open regional economy implies, by contrast, that financial funds flow rapidly into and outside of the region in response to shifts in demand and interest rate differentials. Thus, a closed economy has a positively sloped supply of funds curve while an open regional economy has a horizontal (or nearly horizontal) supply of funds curve.

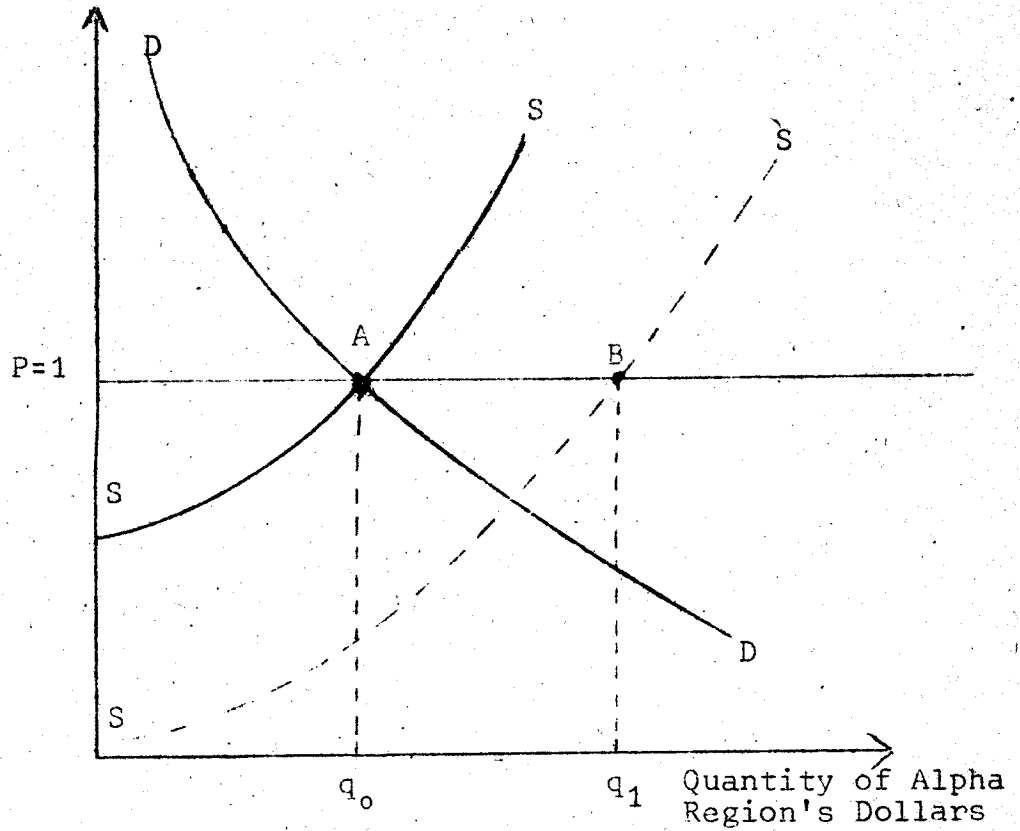
If the supply curve of monetary capital is not horizontal it is nearly so. However, the data required to be more definitive than this in the matter is currently

absent. Surely, the development of rapid transfer of fund ownerships regionally by electronic means has greatly reduced the degree of "closedness" of any region in our country.

Building on these thoughts, note that if a closed economy faces a decline in the demand for funds (leftward shift) one would expect interest yields to fall, given a positively sloping supply curve. Assuming that the supply curve of funds is positively sloping, the reduction in the quantity demanded of loan funds is less than the leftward shift in the demand curve. However, if the supply of funds curve is horizontal instead of positively sloped the quantity of funds demanded falls by the full amount of the reduction (shift to the left) in demand. Also, there is no reduction in the rate of interest. It is clear that if the region were closed rather than open, which causes a rising supply of funds curve, the adverse effect of reduced demand would be partially mitigated by falling interest rates. In an open economy no such partial offsets to adverse shocks exist. Now let us analyze the theoretical adjustment mechanism between the Alpha region and the rest of the economy.

Consider the situation depicted below. Assume that the balance of payments between the Alpha region and the rest

Rest of Nation's Dollar
Price of Alpha Region's
Dollar



Supply and Demand for Alpha Region's Dollars

of the nation is on balance at point A. At this point, Alpha region's sales of goods plus other receipts from the rest of the economy are precisely equal to the purchases from plus other payments to the rest of the country. (One can formulate the balance-of-payments equilibrium position more rigorously than this, but this definition suffices for our purposes). Under these idealized conditions, the holdings of money assets in the Alpha region -- and the rest of the economy -- are stable.

Suppose that there is a disturbance on Alpha's balance of payments causing it to incur a deficit in its current account -- i.e. imports exceeding exports. This could have developed either from a sharp reduction in its exports, imports remaining the same, a rise in imports, exports remaining the same, or a combination of the two. In any event, let us simply describe this deficit in value terms by saying that the citizens of the Alpha region have increased their supply of dollar to the rest of the economy: e.g., the shift from SS to S'S' in our Figure. Since the exchange rate is fixed at 1, Alpha's balance of payments deficit is $q_1 - q_2$. The money holdings of the citizens in Alpha will fall over time by $q_1 - q_2$ dollars. This decline

in the ~~cash~~ balances of the Alpha region has several consequences. And, given the explicit and implicit assumptions of the model, each of these consequences helps to decrease the deficit in the Alpha region's balance of payments and restore equilibrium.

(1) Money assets and incomes fall in Alpha. This causes a reduction in demand for all goods and services, both locally produced goods and goods produced in the rest of the nation. This general decline in the demand for goods and services will result in the supply function $S'S'$ shifting to the left, back in the direction of point A. Not all the way as some of the burden will be carried by the decrease in the demand for locally produced goods.

(2) As money assets and income in the Alpha region are falling, the opposite is occurring in the rest of the country -- i.e., its money assets and income are growing. This increase in wealth and income will result in a general increase in the demand for goods and services by residents of the rest of the nation and hence they will increase their demand for goods produced in the Alpha region. As a consequence, the demand for Alpha region's dollar will increase,

shifting the schedule DD to the right in the direction of point B.

(3) As aggregate demand falls in the Alpha region, its price level will fall; aggregate demand in the rest of the economy will increase resulting in a rise in its price level. Thus, this change in relative prices will make goods in the Alpha region cheaper relative to the rest of the country so that the residents of Alpha will reduce their demand for goods produced outside the region. This shifts the supply function $S'S'$ back in the direction of point A, thus reinforcing effect 1 above. Conversely, the people in the rest of the economy are being faced with higher local prices. The DD function shifts to the right, thus reinforcing effect 2 above.

(4) The outflow of money from the Alpha region to the rest of the nation changes the money supply in both areas. It falls in Alpha, and increases in the rest of the economy. As a result, interest rates change. They rise in the Alpha region and fall in the rest of the nation. As a consequence of these interest rate changes, loans made in the Alpha capital markets are more profitable than if made outside the region. The schedule $S'S'$ will, again, shift to

the left toward point A and then reinforce the effects of items 1 and 3 just discussed. Furthermore, because the rate of interest is now higher in the Alpha region than elsewhere, capital will flow into the region. These capital flows will result in an increased demand for Alpha region's dollar. The demand schedule DD shifts toward point B and this reinforces the effects given in items 2 and 3.

In more conventional terminology, we would say that in the local capital market there occurs an increase in the supply of loans, partly from the rest of the economy and from local sources. All of this results from interest rates differentials.

(5) Because income and prices are falling in the Alpha region, federal government tax collections in this region fall relative to collections in the rest of the nation. So long as the expenditures of the federal government in the Alpha region and the rest of the nation remain the same, this change will result in a leftward shift in the schedule $S'S'$ toward point A. In addition, we know that the federal government expenditures in the Alpha region are likely to grow because it is now becoming a "depressed area."

Those that grow automatically are unemployment compensation and other welfare programs. This results in the schedule DD shifting to the right towards point B.

The above describes the usual textbook version of how an imbalance in the balance of payments for a particular region automatically puts into motion a set of self-correction adjustments. These adjustments may be classified as one of two types: (1) adjustments 1 through 3 are adjustments in the balance on current account, i.e., they involve adjustment in the level of exports and imports of the Alpha region; and (2) adjustments (4) and 5 are adjustments affecting the balance in capital account, i.e., they involve movements of capital from the rest of the nation to the Alpha region. When the process is completed, the supply of dollars by the Alpha region to the rest of the nation and the rest of the nation's demand for Alpha region's dollar will once again be equal at the fixed exchange rate of 1 to 1. Hence, the net flow of dollar out of the Alpha region disappear and its balance of payments position is restored to one of equilibrium.

Please note the most important variables which produce the regional equilibrating mechanism. Price level changes,

which tend to promote Alpha's exports and reduce its imports, and the adjustment on current account (which is "painful and unpleasant" for the residents of the Alpha region because this adjustment results in falling income, employment, and prices) has been reduced by the adjustment on the capital account caused by the interest rate differential.

III. The Model's Relevance for Depressed Areas

Has the above model's set of predictions pertaining to the tendency for self-correcting adjustments occurred in the recent economic depression in the Seattle-Metropolitan-Area, or for that matter, other depressed areas? More generally: Can we rely upon relative price level and interest rate changes as sufficient factors, along with others like labor out-migration, to provide for the needed balance-of-payment adjustments as between deficit and surplus regions? Maybe capital flows are perverse, therefore, aggravating the economic recession in the deficit region? Or, if not perverse, maybe the interregional flow of capital is not sufficiently responsive to interest rate differentials so as to help eliminate the unemployment in the deficit area. And, possibly, exports in the depressed

area cannot be stimulated by interregional price level and income effects.

The above are all empirical questions which we propose to explore for the Seattle-Metropolitan-Area. In our judgment, our findings for this area will be applicable elsewhere. First off, we wish to examine whatever regional data are available to see if the area experienced capital flows as the theory suggests. This is a rather important consideration, and it is complicated because in the Seattle economy, a decline in local demand for monetary capital was accompanied by higher yields nationally so the area ended up with a simultaneous leftward shift in demand and upward shift in the horizontal supply of funds schedule so that not only was there no regional mitigation of the adverse shift, but there was an externally imposed accentuation of the shift. The theory then suggests that capital should, because of the fact that interest rates out of the region exceeded those locally, flow out of the Seattle economy. Whether this, in fact, occurred is an empirical question.

Although we wish, as stated above, to examine whatever regional data are available to see if the funds did flow as the theory suggests in our currently depressed region, this examination is not the only focus of our capital flow study. We wish to consider and examine the possible arrangements that could be made to introduce what we might call "automatic stabilizers on regional capital flows" for the purpose of reducing the amplitude of regional economic disturbances, assuming that capital flows out of the depressed region, rather than into it. The issue then becomes: What, if anything, can be done to introduce moderate restraints upon the exodus of capital from a depressed region -- an exodus that accentuates adversity? It should be noted here that we are considering capital flows out of the deficit region, not capital inflows. Given the empirical interest rate structure the theory may predict this, but the equilibrating mechanism becomes partially, if not totally, non-operative.

Procedure for the Capital Flows Study

The first step is to examine the behavior of private lending agencies to see if their activities seem to be pro-cyclical or anti-cyclical. In a recent newsletter published by a local (Seattle) private financial institution the following statement appeared: ". . . the regional housing market . . . has been strong enough over-all to permit continuation of . . . (the announced policy and promise to its savings and local customers that it will reinvest all deposits in the Oregon and Washington

territory from which those deposits are derived.

In the past two years of economic crisis in Washington and Oregon we have not exported one single dime of our (your) resources out of these two states."

Theory suggests that most other private institutions did not follow the procedure of retaining local savings to finance local projects. It will be desirable to examine the flows of savings in an operational and objective way. The unique experience of an economy with 15 percent unemployment in the midst of a national economy with only 6% unemployed provides an excellent situation for examination. Of course, it's an observation of only one item, and generalizations can be drawn only with caution, but, at least the detailed evidence can be collected on a single "experiment." While observing regional flows of funds we also wish to examine the data for perceptible regional interest rate differentials. Through the market for "federal funds" the commercial banks of the country adjust their reserves. The rate on this "overnight money" varies from day to day and is always the same throughout the country. But, in the longer-term maturity areas of the capital market, interregional rate differentials

do exist. These must be examined in order to complete an interpretation of the effect of regional unemployment on regional capital flows.

The facet of the presumed current account adjustment mechanism we want to examine is whether price levels in a depressed region fall relative to non-depressed regions. This, along with accommodating capital flows, form the essence of how an imbalance in the balance of payments for a particular region, given a fixed exchange rate, automatically puts into motion a set of self-correcting adjustments.

IV. The Development of a Theory of Regional Monetary-Fiscal Policy

We shall also examine the entire question of the appropriateness of regional monetary policy. This can proceed while the empirical work progresses. While doing this we shall consider the ways of effectively implementing regional fiscal policy.

It is a commonplace that monetary policy, as it is currently used and with its orthodox monetary tools, can do little, if anything, to eliminate unemployment in specific areas once the over-all economy has reached full employment. In one sense, this is rather paradoxical because the Federal Reserve System was established with a "regional" frame of reference. We would like to review the thinking and legis-

lative intent of those who argued for this frame of reference and consider the arguments in the light of current monetary thought, and current institutional arrangements.

It should not be forgotten, that the fundamental reason for contra-cyclical monetary-fiscal policy is because the economy does not have perfect price and wage flexibility -- i.e., contra-cyclical monetary-fiscal policy is a substitute for wage and price flexibility. In a world of perfect price and wage flexibility money only serves as a numéraire. Given the fact that unions in depressed areas similar to the Seattle-Metropolitan-Area not only prevent wages from falling, but actually increase money wages above competitive levels, there will be persistent unemployment, given non-expanding aggregate and regional monetary demand functions. Since unions are an institutional fact, with their relative freedom of behavior fostered and guaranteed by the federal government, and since their unemployment impact is regional, it seems appropriate to re-think through what regional monetary-fiscal policy might do to offset the union induced unemployment. Obviously, unions are not the only, or major, cause of regional unemployment in non-inflationary periods. Reductions in exports, or private investment spending, are

the major factor contributing to regional unemployment. So our model will be general, dealing with all various causes of regional unemployment, and what a regionally oriented contra-cyclical monetary-fiscal policy might do to eliminate it.

V. Selected Tools to Assist Regional Economic Development

Income Bonds

Another facet of our research proposal, which actually will be the primary focus of our study, is to examine selected policy tools which would assist regional economic development, as well as offset regional fluctuations in economic activity. One such tool is the establishment of a program under which an "income" bond could be used by a regional government agency to encourage entrepreneurial activities in a depressed area. The feasibility of this plan might be established by a pilot study in the Seattle-Metropolitan area. Results would be useful and likely applicable to all other depressed urban areas. We believe that an important ingredient in the war on poverty is the channelling of funds to uses that contribute to the initiative of the recipient, and that enable the recipient to help himself. Liberalized eligibility standards, long

maturity, and lower interest (coupon) rates than would be required to induce private lenders into the market should be considered. Such a plan may, therefore, help to accomplish objectives that elude direct legislation and administration. The need for such a plan is clear, especially to potential entrepreneurs from minority groups, especially Negroes, who feel shut-off from the normal flow of credit. One of the most pressing difficulties facing all new entrepreneur's, white or non-white, is the task of obtaining funds. The problem exists despite extensive commercial banking facilities in the major cities in the state of Washington and inspite of the Federal agencies which operate throughout Washington -- e.g. the Federal Small Business Administration loan and guarantee program.

Income bonds could be subordinated to all other indebtedness. They are bonds for which interest payments specified in the contract must be paid in a given accounting period only if enough earnings to do so have been raised in that period. Otherwise the interest payment is postponed. Obviously, such securities would not be attractive investment instruments for profit maximizing buyers in the capital markets. But the unattractive feature associated with income

bonds for private purchasers is a feature that makes them a good instrument to encourage entrepreneurship in depressed areas. Interest is paid only when earned. Thus, they represent something similar to equity capital in many respects. However, detailed consideration of the terms and conditions of their issue and guarantee would be necessary.

Reserve Requirements

Another regional contra-cyclical tool we want to examine pertains to the institutions that compose the supply side of the loanable funds market. The proposal is to have a reserve requirement against the assets of a financial institution (rather than against liabilities as is now the case) such that assets representing loans to local entrepreneurs would be favored. The concept of reserves against categories of assets is not new, but it has recently been suggested again by a member of the Board of Governors of the Federal Reserve System. Governor Andrew F. Brimmer has suggested an asset reserve against types of loans such as consumer, mortgage, business. Here we suggest that regional location of loan use be considered in the asset classification scheme.

We understand that the FDIC limits the extent to which state authorities can change reserve requirements for state-chartered banks. We wonder whether this form of

limitation on regional contra-cyclical monetary policy is desirable. The issue should be examined.

Summary

Details of the study would have to be worked out. However, to repeat, we wish to (a) briefly examine flows of funds and interest levels in our depressed area, (b) articulate a theory of regional monetary-fiscal policy and (c) examine the merits and failings of selected policy tools to assist regional economic development and mitigate the structural disturbances that arise from the excessive amplitude of regional fluctuations in economic activity. Part C is the primary focus of our study.