Economic Policies of President Vargas: Wirth on THE POLITICS OF BRAZILIAN DEVELOPMENT, 1930-1954

1. Introduction

The purpose of this essay is to show some of the inconsistencies in a recent monograph on the trade, steel and oil policies of President Vargas [17]. It is difficult to form an over-all judment of Wirth's work for the reason that besides the Vargas Presidency – which in true perspective had three very different and not uniform periods, *Govêrno Provisório, Estado Nôvo,* and the early 1950's – Wirth does not have a generalized subject, but three somewhat isolated *case studies.* The Introduction and the Conclusion fail to bring together the material discussed in the book and the reader's painful effort to find a chain of reasoning ends with frustration. Thus, the title of the book is deceiving; the subject matter is elusive. In many respects, in addition, the book reflects the inordinate emphasis of American universities on interdisciplinary explanations of Latin American problems. To be sure, as Schumpeter aptly remarked, the social process is one indivisible whole but the present state of knowledge varies differently among the social sciences and attempts to weld different methods into a cogent explanation end up in confusing failure. The retreat of the non-technical economist today, for example, is to claim vaguely that there are many other social and political factors besides abstract thought and rigorous measurement. What this approach actually achieves is the frustration of sound economic research. And this is perhaps the principal problems with Wirth's work in which the historian's method of obtaining obscure manuscripts and documents results in a distortion of what is acceptable professionally to economics and political science. Wirth's work is void of economic and political substance; it is neither economics nor politics. What follows is a revision of some of the inaccuracies, from an economist's standpoint, to be found in Wirth's monograph.

2. Trade Policies of the Govêrno Provisório of President Vargas.

The *structuralist* economists in Latin America have repeatedly emphasized the importance of the Great Depression in promoting industrialization, economic growth, and more generally social *change* [3; 4; 5; 13]. Celso Furtado has claimed that the truly important change in the *structure* of the Brazilian economy took place during the *Govêrno Provisório* of

President Vargas [3; 4; 5]. It is convenient to discuss Furtado's thesis as composed of two interdependent argument's: the *recovery argument,* and the *transfer argument* [8]. According to the *recovery argument*:

a) National income in Brazil did not decline as drastically as abroad; recovery was also earlier than in most industrial countries.

b) The maintenance of income levels was due to the policies toward coffee. The purchase and incineration of large stocks of coffee was financed by money creation and resulted in large federal deficits which brought the economy back to full employment. The *Govêrno Provisório* engaged in a Keynesian countercyclical policy of proportions "not even dreamed" in the industrial countries.

c) The income of the coffee sector was maintained at high levels.

d) According to Baer, the Economic Reajustment of farmers was financed by money creation and constituted an extra source of multiplier effects, maintaining income levels for the economy as a whole and specially for the export-agricultural sector.

And according to the *transfer argument*:

e) The monetary flows from the non-coffee through the government into the coffee sector constituted the source for industrial capital as farmers responded to the increasing profitability of import-competing manufactures relative to export agriculture.

These analyses had, according to *structuralist oral tradition,* important consequences for public policy in Brazil:

a) *Deficit financing* of economic development, similar to that alleged for the *Govêrno Provisório* is an ideal avenue to change the structure of the economy and indispensable for rapid economic growth in a *dependent economy.*

b) Conditions of *near complete protectionism,* similar to those obtained during the 1930's are required for industrialization and economic progress.

c) Since the old coffee planter oligarchy took control of domestic industry during the 1930's, the only possibility for democratic progress in Brazil is the *socialization* of industry.

Over the years there has been no fundamental reshaping of these ideas. In his recent best-seller on Latin American economic history, Furtado claims:

> ...a outra condição essencial para que se realize a substituição de importações é que ocorra uma expansão da renda monetária capaz de anular o efeito depresssivo no nível de emprêgo da contração das atividades de exportação. Esta condição adicional foi preenchida mais fàcilmente nos países de agricultura permanente, como a do café no Brasil, cuja produção passou a ser adquirida pelo Govêrno com financiamento baseado em crédito concedido pelas autoridades monetárias. Ali onde foram preenchidas essas condições, ocorreu rápida expansão da produção industrial, crescendo ainda mais a sua rentabilidade... [5, p. 141].

Wirth follows right on this mythical explanation of the Depression decade. While he claims that my criticism of Furtado is "persuasive" [17, p. 229], he states contradictorily: "Aranha, who controlled economic policy from 1931-34, was remarkably successful [17, p. 11]. In another connection he quotes from Oswaldo Aranha: "In general, revolutions throughout the world are, and have been spendthrift. But ours was the first to economize. (Efforts to balance the budget and reduce expenditures) are reasons for Brazilian pride and respect, and for praise from our creditors [17, p. 10]. Wirth obviously misses the relevant economic significance of this remark, made in 1932. In true fact of history, the finance ministers of the *Govêrno Provisório,* J. M. Whitaker and Oswaldo Aranha, were remarkably *unsuccessful.* Their effort to achieve budgetary equilibrium during the worst economic crisis ever experienced by the world ranks as the more drastic financial mismanagement in Brazil's economic history. The Bank of Brazil was trying to reduce by all possible means – likely only preventing expansion – the money supply, based on the view that increase in the money supply was the standard Bolchevik strategy to create chaos and disrupt the nation [9, p. 29, note 39]. But these policies were actually undertaken under the influence of foreign advisers from England and France [7; 14]. The fact is that like the United States, the Brazilian economy did not recover until World War II. The Depression decade was a period of severe stagnation, and of low levels of capital formation, but it is true that some moderate industrialization took place specially in São Paulo.

During a period of thirty eight years, 1906-1944, Brazil, in its legislation, in statements of State and Federal policy, and in the writing of the policy makers of that time, intervened in the coffee market in order to bring about the Law of Supply and Demand, in order to "equate the supply and demand for coffee" [11]. A battery of public controls were used in this effort but it never occurred to the makers of this policy that intervention in the coffee market – besides the cyclical nature of the market due to the lagged adjustment of farmers to prices – actually prevented this market equillibrium together with its welfare implications. The social cost of maintaining a minimum price for coffee over thirty years was the maintenance and accumulation of resources in the production of coffee. It is true that money creation was used sometimes during the period 1906-1929 in the support of the coffee sector, but this generally was not the case during the Vargas Presidency. Export taxes, and subsequently a tax in kind (the so-called *Quota de Equilíbrio*) were the primary source of finance for the destruction of coffee [11; 18; 19]. No monetary authority in Brazil issued money for the implementation of coffee policies during the *Govêrno Provisório* and only partially during the *Estado Nôvo*. Brazil did not engage in compensatory fiscal policy. On November 13, 1937, in one of the truly great achievements of his presidency, Getúlio Vargas decreed that the coffee support program be gradually phased out. The cost had been great: Brazilian coffee exports in foreign currency had declined to one of the lowest levels in the century, and Colombian coffee was rapidly capturing the market with high quality coffee. The extraordinarily indebted coffee planter, who incidentally always hoped for a new coffee export boom, was hardly the source of industrial capital.

In the mythical fashion in which structuralist ideas are generally introduced, Werner Baer pointed out the Economic Readjustment of Farmers as another source of liquid funds for the export-agricultural sector and available for resource transfer into industry. No sources were mentioned by Baer [1, p. 22-3] so that we do not actually know where the idea was first exposed and must content with attributing it to the "structuralist oral tradition". Elsewhere it has been shown that the Economic Readjustment of Farmers was of insignificant proportions to Brazilian income levels during the 1930's [10]. As for resource transfers between coffee and the industrial sector, it can be shown on the basis of well-stablished fact and measurement that coffee income disposable for transfer net of a transfer into cotton export could not have financed a single industrial enterprise [11]. It is more meaningful to consider a model in which real resources in the production of coffee are rigid for tranfer into urban-industrial activities but nevertheless flexible for transfer into export agriculture. This transfer rigidity of land, labor, transportation, entrepreneurship, capital and finance leads to the conclusion that coffee and cotton should have coincided geographically. Geographical proximity is then one text of the hypothesis that the phenomenal cotton export boom of the 1930's in São Paulo was financed by recources from the coffee sector and the Economic Readjustement. Table I shows the data for one of many tests of this hypothesis. The 270 municipalities of São Paulo are allocated into the ten agricultural regions of the 1934 and 1939 censuses. The declaration of debt, indemnification granted, and indemnification granted to coffee by *Câmara de Reajustamento Econômico* are computed for the 270 municipalities and the 10 agricultural regions of the state of São Paulo. The 1939 census data for cotton and coffee production are also listed. Tre coefficient of rank correlation between cotton production and coffe production is .952 and highly significant, so that the null hypothesis of geographical proximity of cotton and coffee

TABLE 1

Agricultural Regions of State of São Paulo: Declaration of Debt and Indemnification Granted by Câmara de Reajustamento Econômico, 1934-1945, and 1939 Census Production of Coffee and Cotton
(In thousand current cruzeiros and thousand tons)

(1) Agricultural Regions of São Paulo	(2) Declaration of Debt to Câmara de Reajustamento Econômico, State of São Paulo, December 1, 1933,	(3) Indemnification Granted by Câmara de Reajustamento Econômico, State of São Paulo, 1934–1945	(4) Indemnification Granted to Coffee Planters, State of São Paulo, 1934–1945	(5) Production of Cotton in 1939	(6) Production of Coffee in 1939
1	95,270	20,764	9,392	8.2	12.3
2	22,777	7,092	4,183	(*)	2.7
3	9,178	2,081	436	.0	1.4
4	32,285	11,337	4,697	52.6	5.0
5	141,639	38,788	37,127	128.4	108.1
6	173,192	54,643	47,262	95.2	61.5
7	270,958	87,022	80,935	118.8	86.8
8	337,986	110,237	92,761	76.9	85.3
9	402,053	128,911	122,069	255.4	259.9
10	148,063	32,318	29,938	104.0	100.9
Total	1,633,501	493,191	428,798	840.6	724.9

(*) Results omitted in order to avoid individualization of information. Omitted data are included n totals. All data are rounded.

Source: Pelaez. *An Economic Analysis of the Brazilian Coffee Support Program 1906-1945: Theory, Policy and Measurement*, forthcoming.

production is rejected. The coefficient of rank correlation between idemnification to coffee planters and cotton production is .806 and also highly significant. The hypothesis of no geographical proximity of *Reajustamento Econômico* idemnification and cotton production is also rejected. It was, therefore, precisely in those municipalities and regions were coffee was planted and financially supported that cotton was produced, probably with the increase in liquid funds resulting from the Economic Reajustment. And this is only one of many tests of the competing model which is strongly supported by an overwhelming amount of information now available from the financial records of the time [11].

An important aspect of Wirth's book is the emphasis on trade policies during the *Govêrno Provisório.* And again here the same interdisciplinary veil prevents the writer from selecting the meaningful trade policies. The fundamental preoccupation is with the Brazilian approachment to either Germany or the United States. But the trully fundamental trade policies are neglected to such an extent that they are not even mentioned. One of them was the 1937 policy of *competition* in coffee, designed to increase Brazilian exports [11]. The second was the use of a Mill-Bickerdike optimum trade impediment to correct the terms of trade, the truly substantive economic problem of the coffee support program [11]. The structuralists ignored completely the microeconomics of coffee support; after all, for a structuralist, economic theory is an abstract construct of no practical application to the problem of development. The third crucial policy, which encompasses all Brazilian trade policies during the 1930's was beggar-my-neighbor remedy for unemployment. The policy target of Brazil was to achieve trade balance in order to repay the foreign debt. The instrument was trade impediment in all of its varieties. While internal and external balance can be achieved under such a policy, there is a negative employment effect abroad (Appendix). But what is trully different in this model from the alleged structuralist Keynesian recovery program is that recovery is attained at lower levels of welfare due to the massive reduction in the number and availability of commodities caused by the trade impediments. The practice of this policy in conjunction with a policy of domestic budget equilibrium does not result in full employment and does not improve social and economic welfare.

In Brazil's most accomplished work of normative economics, Professor Mário Henrique Simonsen states:

É compreensível que, estèticamente, as teorias que procuram reduzir ao mínimo as hipóteses, e interpretar do ponto de vista endógeno a maioria dos fenômenos, mereçam a máxima simpatia. Històricamente, a mecânica newtoniana talvez tenha representado a mais notável conquista nessa direção. Mas os esforços de Einstein para englobar a física num modêlo de campo unificado não chegaram a nenhum resultado convincente. E, se isso ocorre na física, é natural que na economia as tentativas de unificação ainda se revelem cientìficamente muito pobres. O marxismo construiu um grandioso edifício de explicação endógena dos grandes lances da história econômica – mas que só pode ser aceito quando se sacrificam à estética as regras elementares de confronto empírico. O estruturalismo, até agora, tem funcionado como uma espécie de marxismo de varejo que talvez irritasse o próprio autor de *O Capital*. De fato, sua tentativa é a de fornecer explicações endógenas não para as grandes linhas, mas para os pormenores da histórica econômica. Compreende-se, por isso, que haja quem diga que os estruturalistas nada mais fazem do que construir teorias obscuras para justificar os desmandos dos Governos de sua simpatia [16, p. 68].

This is precisely the case of the structuralist interpretation of the *Govêrno Provisório* which does ill service to other achievements of the Vargas Presidency. The structuralists have succeeded in creating a mystic about the alleged "Keynesian pyramids" of the 1930's, but John Maynard Keynes would have been really appalled to see the use of his theories in the defense of the advice to Brazil of Sir Otto Niemeyer, a functionary of the most ortodox monetary authority in England, a functionary whom incidentally Keynes had met in his lifetime [6, p. 202, 359]. The fact is that it can be shown that within the serious limits of a simple Keynesian model, in which hardly an economist today has great faith, the structuralist interpretation is incompatible with events. Once those rigorous constraints of simple Keynesianism are abandoned, the Furtado thesis is meaningless. None of the strict Keynesian institutional assumptions existed in Brazil during the 1930's and the behavior of the economy is better explained by a classical model. Price flexibility would have better promoted economic recovery and resource allocation.

It is perplexing to see that a school of thought which dogmatically and persistently claims that modern economic theory does not apply to the "problem of development" should explain the economic growth of Brazil in terms of the most abstract construct ever in economic theory, the modern theory of the balance of payments, with its endless list of variables, elasticities and propensities. Marx would also have been irritated by structuralist thought in that it parodies Smith's invisible hand, only that in structuralist thought it is an intellectual *governmental invisible hand*: even when acting against simple economic principles government controls in the economy always promote social welfare. The method to *push* forward these ideas is the distortion of fact and the avoidance of rigorous measurement. Abstract throught and rigorous measurements are to be substituted by common sense, disguised politics, value judgments and casual empiricism. In an apology of this type of political economics, Werner Baer states:

I have heard it claimed that Furtado's type of approach to economics, especially in relation to development problems, was outside the mainstream of Anglo-Saxon economic thought and methodology, and that for this reason his impact in the United States has been very slight. This may well be. We might, however, ponder about the possibility that American economic thought on development might itself be outside of the mainstream of events [2, p. 25].

For those who accept disguised politics, value judgments and casual empiricism as a substitute for scientific inquiry, Furtado's work is the more accomplished exposition. But this implies rejection by the profession, no matter the acceptance by non-economists. And after all for the economist the most cherished applause is that of his profession:

... In the long-run the economic scholar works for the only coin worth having-our own applause. Lest I be misunderstood, I elaborate. This is not a plea for "Art for its own sake", "Logical elegance for the sake of elegance". It is not a plea for leaving the real world problems of political economy to non-economists. It is not a plea for short-run popularity with members of a narrow in-group. Rather it is a plea for calling shots as they really appear to be (on reflection and after weighing all evidences) even when this means losing popularity with the great audience of men and running against "the spirit of the time" [15, p. 1516].

3. Steel Policies during the Vargas Presidency

It is convenient to divide the history of the steel industry of Brazil into two periods. The first period is that of complete reliance on charcoal as a fuel which ends in the 1940's. The second period is that of production primarily based on coke but with a large number of charcoal producers. Wirth partially covers both periods, from 1918 to 1945. A feature of the charcoal steel period was Itabira Iron, a company formed by various international interests who wanted to capitalize on the low price of acquisition of Brazil's iron ore reserves. Wirth discusses the origins and difficulties of Itabira Iron and its final failure together with some hurried remarks on the charcoal streel industry. It is assumed by Wirth that the charcoal steel period has already been analysed in detail and that it is unimportant in comparison with the National Steel Company (Companhia Siderúrgica Nacional). In fact, the charcoal steel period is little known and understood. Those readers who have not dwelt in the primary sources on this period will be confused by Wirth as to the true economic consequences of policy making toward steel in Brazil before 1939. In addition, the Farquhar Plan is inadequately discused and Wirth fails to integrate it with the issue of steel production.

Once again Wirth has fallen into the structuralist myth about Brazil's economic history. Economic policy errors of governments favored by structuralist writers have been glorified; coffee is a case in point, and in many ways the case of steel is also evident. In his work on Brazil's economic growth, Furtado placed strong emphasis on the development of basic industries – iron and steel and cement – in Brazil during the 1930's [3, p. 218]. Once the government allegedly increased its participation in economic activity, once trade impediments were inforced, iron and steel and cement developed. The fact of history is that because of outrageous government incentives to certain private interests, primarily during the 1930's, Brazil may have failed to achieve its potential comparative advantage in the production of steel [12]. Wirth makes the point that Brazil has today the largest charcoal steel producer in the world [17, p. 88]. There is indeed a sad loss in resources resulting from that state. Brazil entered the 20th Century at a time in which it was most profitable to be a *lateccomer* in the steel market, when high quality iron ore was most important to the manufacture of steel. By 1900 almost no industrial country, with the exception of Sweden, manufactured charcoal steel. The true avenue for development of steel manufacturing would have been to train more engineers graduated from the School of Mines of Ouro Preto and other engineering schools in the more modern techniques of the production of steel. In view of the fact that Brazil had suffered a major setback in its most important competitive export, coffee, the country needed an extra source of foreign exchange to import, as Japan does today, the remaining inputs for steel manufacturing, specially high quality metalurgic coke. The ideal export was high quality iron ore, and subsequently manufactured steel.

A large number of government incentives, however, were responsible for the increase of charcoal steel production in Brazil during the 1930's. An embargo was declared on scrap iron so that charcoal steel producers could buy the product at prices lower than cost, and then reprocess the scrap into steel. The proportion of scrap used by steel manufacturers relative to stocks was minimal and the embargo had two drastic consequences: the ruin of domestic scrap dealers and their profitable exports, and the destruction of accumulated stocks of scrap since after a period of ten years the product loses its industrial usefulness. These steel producers also received government loans, tariff protection, exemption from import duties for capital equipment, transportation facilities, price fixing, and even at some point it was contemplated to prohibit the imports of capital equipment for steel production in order to *defend* the domestic industry which was in an overproduction crisis [12]. When Volta Redonda was planned, it was decided that coke steel production should not compete with charcoal steel production. Wirth is not aware of these facts of the development of steel in Brazil; his discussion is either dull and misses the major issue, or it is seriously misleading. A book which deals whith the "politics of development" should at least point out that in the case of steel, by choosing a short-run, prestige policy, a political solution was given to an essentially economic problem.

The only shade of an analytical framework in Wirth's work in his discussion of economic nationalism:

By economic nationalism I mean a policy that has as its goal sufficient national economic power to assure a nation's political independence. Such a policy has two main presuppositions: first, that the nation's natural resources ought to be controlled and allocated by nationals or by the State; second, that there is a value system for determining priorities and evaluating results in terms of the nation's needs – a way of deciding between an emphasis on heavy industry and an emphasis on agriculture, a way of determining the mix of military factors with strictly economic factors, a way of assessing how long the nation can afford to wait for great power status. In asking what weight should be placed upon the future, economic nationalism is revealed as a future-oriented ideology. And while the actual working out of this policy is highly dependent upon circumstance, it will be shown... when economic nationalism became intense enough in the Vargas years to amount to an ideology of development [17, p. 7].

This brief paragraph is as much analysis as it is to be found in Wirth and even this much, vague as it is, is never applied explicity. Supposedly, it is an explanation for the establishment of Volta Redonda and Petrobrás. What Wirth never explicitly points out is that this economic nationalism can conflict seriously with social and economic welfare, and possibly with political stability. In fact, that way of determining priorities and evaluating results should not be decided by political philosophers on emotional grounds but by a team of economists at a planning ministry. Only by research and analysis of the essential economic and social paramenters can national economic policy be formed.

In Wirth's opinion, the national steelworks at Volta Redonda constituted an, outstanding success. It appears from continuous praise by Wirth of the establishment of the National Steel Company, that no serious errors were made. He concludes:

True, Volta Redonda was a most visible *monument,* a status symbol of the kind developing nations have been eager to obtain; but it was more. Contemporaries knew that the plant was justified economically. Furthermore, the new works also marked a commitment by the State to oversee, promote, and perhaps to undertake directly the development of Brazil's vast natural resorces. This was a giant step beyond the regulatory legislation of the early 1930's. Volta Redonda was thus a yardstick by which future governments would be measured [17, p. 129].

Undoubtedly, in view of the social and political pressures in this century, in view of the changed international economy, the participation of the state in large overhead projects and in industry was one great achievement of President Vargas which smoothly moved Brazil into a new phase of development. But there is a serious danger in an uncritical acceptance of the implementation of these policies and on the view that increased participation of the state into each and every economic activity necessarily promotes social betterment. Volta Redonda was at long last the cherished aspiration of Brazilians to produce steel with metalurgic coke, but unfortunately the view prevailed that poor quality coke from Santa Catarina, largely unsuited for steel production should be used in a fixed proportion in the Volta Redonda high furnaces. Increases in the costs of production and paralysation of the high furnaces together with a myriad of technical problems were the result of this protection to inefficient coal production. The location of the plant failed to correspond to sound economic location. But Brazil benefited from this experience and many of these earlier difficulties are being overcome presently.

4. Conclusion

The principal reservation about Wirth's book is that it conflicts seriously with fundamental economic principles. In addition, it adds, *undeliberately,* to the structuralist myth. This myth has long prevented clear thought on one of the more important periods in the economic history of Brazil; it has long prevented a lucid and balanced view of the economic policies of President Vargas. It is high time to undertake the reconstruction of the Brazilian past in the light of new ideas and more careful empirical research. But at all points it should be made clear that economic history, as most economists would agree, cannot be used as a source of policy making. It adds to our knowledge of economic problems. But policy making should be rooted on more solid and scientific grounds.

APPENDIX *

Keynesian Analysis of the Great Depression in Brazil
List of symbols –

a = autonomous
1, 2 = countries one and two (or rest of the world)
Y = income
H = domestic expenditure
M = imports
B = balance of trade
h = marginal propensity to expend
1 — h = s = marginal propensity to save
m = marginal propensity to import
d = operator for discrete changes

Structural form:

$$dY_1 = dH_1^a + h_1dY_1 + dM_2^a +_2^a m_2dY_2 - dM_1^a - m_1dY_1 \qquad 1)$$

$$dY_2 = dH_2^a + h_2dY_2 + dM_1^a + m_1dY_1 - dM_2^a - m_2dY_2 \qquad 2)$$

$$dB_1 = dM_2^a + m_2dY_2 - dM_1^a - m_1dY_1 \qquad 3)$$

* The notation and model were used in stimulating class exercises by Professor Peter B. Kenen at Columbia University, but he is in no way responsible for errors in this application.

or

$$\begin{bmatrix} s_1+m_1 & -m_2 & 0 \\ -m_1 & s_2+m_2 & 0 \\ m_1 & -m_2' & 1 \end{bmatrix} \begin{bmatrix} dY_1 \\ dY_2 \\ dB_1 \end{bmatrix} = \begin{bmatrix} dH_1^a+dB_1^a \\ dH_2^a-dB_1^a \\ dB_1^a \end{bmatrix} \qquad 4)$$

Reduced form—

$$dY_1 = 1/D\ [(s_2+m_2)\ dH_1^a+m_2dH_2^a+s_2dB_1^a] \qquad 5)$$
$$dY_2 = 1/D[(s+_1m_1)\ dH_2^a+m_1dH_1^a-s_1dB_1^a] \qquad 6)$$
$$dB_1 = 1/D[s_1m_2dH_2^a-m_1s_2dH_1^a+s_1s_2dB_1^a] \qquad 7)$$

where $D = s_1s_2 + s_1m_2 + m_1s_2$, the determinant of the matrix of structural coefficients.

Analysis of Brazilian Depression Policies:

disturbance: $dH_2^a < 0$, decline in expenditure abroad
target: $dB_1^a = 0$, trade balance

instrument: $dB_1^a > 0$, trade impediments.

Set $dB_1 = 0$ 8)
Since $dH_1^a = 0$,

$$dB_1^a = -\ (m_2/s_2)\ dH_2^a, \qquad 9)$$

in order to achieve the policy target.
Substitute 9) in 5) to obtain:

$$dY_1 = 0, \text{ i.e., internal balance} \qquad 10)$$

Substitute 9) in 6) to obtain:

$$dY_2 = (1/s_2)\ dH_2^a \qquad 11)$$

$1/s_2$ is the multiplier without foreign repercussions; there is consequently a negative multiplier impact abroad, since $dH_2^a < 0$. Trade and domestic balance are achieved but at the expense of foreign unemployment. Although internal balance is achieved, it is at lower levels of welfare since there has been a drastic decline in the number and availability of commodities due to trade impediments.

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