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CREDIBILITY AND STABILIZATION

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ABSTRACT

Credibility and Stabilization*

When governments try and stabilize, why do they not undertake a programme certain to succeed? The paper discusses credibility when it is inconceivable that a programme will succeed with probability one. A cost-benefit analysis establishes an equilibrium programme that has some *ex ante* probability of failure, so that credibility is always less than full. The context is a one-shot game in which policy-makers are uncertain about the response of the instruments or the post-stabilization economic environment. As a positive theory of stabilization, the paper identifies the factors that raise the success of a programme.

JEL classification: 300,110,130
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NON-TECHNICAL SUMMARY

Modern theories of stabilization policy typically focus on interaction between policy-makers and the public, with imperfect information about the true intent or nature of the policy-maker. The resulting strategic interaction involves reputation and punishment as central ideas, and the setting is one of a repeated game. But this model does not seem to help greatly in explaining stabilization attempts and failures that involve one-time-only (though not always successful) stabilization. Stopping hyperinflation in the 1920s and in the famous 1926 Poincaré stabilization in France would be examples of strong performance of the policy-maker failing to yield reputation benefits in another round. In this one-time-only context two important questions emerge: when do governments ultimately try and stabilize? When they do try and stabilize, why do they not undertake a programme that is certain to succeed? Surprisingly, these questions are quite new. The latter is addressed here.

A policy-maker would have a hard time indicating how much of a fiscal adjustment is enough to assure price stability and what exchange rate can be sustained without doubt. Even if the proper dosage could be determined, that might not be enough. Governments cannot create facts that are set once and for ever, immutably. Any programme can be undone (with more or less difficulty) by the next government. This potential lack of persistence feeds back to the current policy actions required to make the programme survive. Moreover, even a well-designed programme may not be sturdy enough to withstand shocks such as a major, unexpected deterioration in terms of trade. Thus credibility is a relative term, and there is a need for a model of credibility. A stabilization is *ex ante* more or less credible. We need a theory to capture how the public forms a judgement of this credibility and how that judgement possibly interacts with the credibility.

There are basically two reasons why a stabilization might fail. First, the wrong policies are undertaken – say, price controls rather than fiscal adjustment. We do not have a good theory why a rational, informed government might act thus and therefore concentrate on the second reason: programmes might fail because, following the implementation of policy measures, the realization of certain variables relevant to the success of the programme turns out to be unfavourable. Uncertainty may take two forms: the policy-maker may be subject to instrument uncertainty, for example because the response of tax yield to tax rates or of trade flows to real exchange rates is random. Alternatively, productivity or the terms of trade may be random, and realizations may affect the performance of the programme adversely.

The paper deals with stabilization as a one-shot problem. This approach is used to asking what 'credibility' might mean in a world where it is inconceivable that a programme will succeed with probability one. A model is spelled out where the equilibrium programme has some *ex ante* probability of failure so that credibility is always less than full. The model draws attention to the factors that raise or lower the probability of success of a stabilization programme and thus offers a positive theory of stabilization. The following conclusions are reached:

Programme failure is less likely the higher the initial stock of reserves. Note that an increase in reserves brings about a reduction in adjustment effort, since reserves provide a cushion.

The presence of reserves draws attention to the role of foreign loans in stabilization programmes. In the present model they do play a role because they are to some extent a substitute for adjustment. In a model where, unlike here, the timing of stabilization also plays a role, the arrival of a stabilization loan may be the occasion for stabilization because, in conjunction with adjustment, it creates a sufficient probability of success.

A higher marginal cost of adjustment implies a higher probability of programme failure. In societies that are politically highly polarized adjustment is much more costly. As a result, adjustment effort will be less, and hence the probability of programme failure will be larger. The adjustment cost could be interpreted in terms of the scope for cooperation between unions and the government: in Israel and Mexico such cooperation is possible and important, in Argentina it is excluded.

The higher the cost of programme failure, the larger the adjustment effort and the lower the probability of failure. One might conjecture that in a situation where there have been many previous failures the costs in terms of prestige or politics are small. Hence the investment in stabilization will be small and, in a self-fulfilling way, most programmes will fail unless they experience unusually favourable (unexpected) conditions.

A higher responsiveness of the trade balance to adjustment effort implies in the case of a triangular distribution a reduced optimal adjustment effort. But in combination with the effectiveness of adjustment, the impact of adjustment actually increases so that programme failure becomes less likely. More generally, as long as the distribution is unimodal higher responsiveness of trade to adjustment effort implies a lower probability of programme failure. But it is uncertain in general whether adjustment effort rises or falls.

This responsiveness of trade flows can be interpreted as the extent to which an economy is open or closed. An open economy can achieve major trade improvements with relatively small real depreciation. Very closed economies have to achieve larger depreciation or expenditure cuts.

The impact of increased volatility on adjustment and collapse probabilities is ambiguous. If reserves are relatively large, there is a possibility that optimal adjustment effort actually declines. Moreover, since the probability of collapse rises for a given adjustment effort, increased volatility may raise the probability of a collapse.

This set of predictions constitutes a positive theory of adjustment. A test of the theory involves a cross section of stabilization programmes where the characteristics of countries are used to determine their *a priori* probability of success.

It is sometimes said that a stabilization failed because it was not credible. Either this represents a judgement in hindsight, with an almost circular reasoning, or else it raises the interesting question why a government might initiate a programme that was less than fully credible. The model developed here explains why stabilization programmes are less than fully credible. A number of characteristics of stabilization situations are identified and constitute a positive theory of stabilization in that they help predict the *ex ante* probability or credibility of a programme.

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Modern theories of stabilization policy typically focus on interaction between policy makers and the public, with imperfect information about the true intent or nature of the policy maker. The resulting strategic interaction involves reputation and punishment as central ideas and the setting is one of repeated game.[2] But this model does not seem to help greatly in explaining stabilization attempts and failures that involve one time-only (though not always successful) stabilization.[3] Stopping hyperinflation in the 1920s ir the famous 1926 Poincare stabilization in France would be examples where strong performance of the policy maker does not yield reputation benefits in another round. [4] In this onetime-only context two important questions are just now being introduced in the literature: when do governments ultimately try and stabilize? And when they do try and stabilize, why do they not undertake a program that is certain to succeed? Surprisingly, these questions are new and there are no answers.

The timing and extent of stabilization are rather obvious questions in view of the fact that stabilization is often postponed until extreme conditions prevail and that before stabilization actually succeeds, two or

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[1] I am indebted to Jose deGregorio, Avinash Dixit and Elhanan Helpman for helpful suggestions. The research for this paper was supported by a grant from the National Science Foundation.

[2] See Barro [1986] and Barro and Gordon [1983]. For surveys of this approach see Persson [1988], Driffill [1988] and Blackburn and Christensen [1989].

[3] For a different approach to one-shot stabilization, relying on information asymmetries between the private sector and the government, see Anderson [1989].

[4] For the historical experiences see Sargent [1986]. It is interesting to note that Poincare in fact had failed in a stabilization attempt, in 1926.

three attempts will have failed. The new political economy literature has started addressing these issues more formally. Alesina and Drazen [1989] discuss the question of when to stabilize in terms of a game between parties who are uncertain about who bears the costs of stabilization. Work by Fernandez and Rodrik [1990], although concerned with trade reform, can also be interpreted in these terms since they argue that it is not enough for a specific policy action to represent a positive sum game for it to be undertaken. The timing and fact of stabilization is thus coming under investigation and offers a highly promising research area. The failure of stabilization programs -- more than 6 attempts in Argentina since 1982, several in Brazil, a handful in Israel before the successful one in 1985 -- remains largely unexplored. This is surprising because much of the informal discussion of stabilization is conducted as if it were known without much ambiguity what needs to be done to achieve stabilization, for a stabilization to be called credible.

In fact, a policy maker would have a hard time indicating how much of a fiscal adjustment is enough to assure price stability and what exchange rate can be sustained without doubt? Even if the proper dosage could be determined, that might not be enough. Governments cannot create facts that are set once and for ever, immutably. Any program can be undone,(with more or less difficulty, by the next government. And this potential lack of persistence feeds back to the current policy actions required to make the program survive. Moreover, even a well-designed program may not be sturdy enough to withstand shocks such as a major, unexpected terms of trade deterioration. Thus credibility is a relative term and there is a need for a model of credibility. A stabilization is ex ante more or less credible. We need a theory to capture how the public forms a judgment of this credibility and how that judgment possibly interacts with the credibility.

There is, of course, an ample literature on credibility in models of repeated games and reputation, but their primary focus is on dynamics, learning and dissimulation.[5] The strand of literature is particularly appropriate in analyzing the role of reputation in ongoing policy situations as the year-after-year performance of the Fed. It is far less interesting in those instances where an isolated stabilization takes place, say in the case of a hyperinflation, and where success by definition implies that there is no repeat. Of course, to the extent that an isolated stabilization fails there will be another one, but there is no reputation building at work. It is therefore useful to highlight the issues that arise in a one-shot game as is done below. This paper offers a first attempt to model the cost-benefit analysis of stabilization and give content to the notion of credibility. The result is a positive theory of stabilization which highlights the characteristics which make a stabilization more likely to succeed. The analysis is, however, incomplete in that it remains static and thus avoids the full issue linking timing and size of stabilization.

There are basically two reasons why a stabilization might fail. First, the wrong policies are undertaken -- say price controls rather than fiscal adjustment. We do not have a good theory why a rational, informed government might go this way and therefore leave it out of consideration. Even

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[5]See footnote 2 above.

so, the prevalence of this reason for failure requires an explanation rather than a simple dismissal on the grounds of government ignorance. Second, programs might fail because, following the implementation of policy measures, the realization of certain variables relevant to the success of the program turns out to be unfavorable. Uncertainty may take two forms: the policy maker may be subject to instrument uncertainty say because the response of tax yield to tax rates or of trade flows to real exchange rates are random. Alternatively, productivity or the terms of trade may be random and realizations affect the performance of the program adversely.

The paper deals with stabilization as a one-shot problem. This approach is used to ask what "credibility" might mean in a world where it is inconceivable that a program will succeed with probability 1. A model is spelled out where the equilibrium program has some ex ante probability of failure so that credibility is always less than full. The model draws attention to the factors which raise or lower the probability of success of a stabilization program and thus offers a positive theory of stabilization.

I. A MODEL OF CREDIBILITY

Consider an exchange rate stabilization. We think of the problem as a one-shot game where the policy maker must decide how much adjustment effort to exert. For the time being we disregard capital movements as well as any uncertainty associated with the policy instruments. The stabilization program is the solution to minimizing a loss function:

$$(1) \qquad L = pK + \lambda A^2/2 ,$$

where p denotes the probability of program failure and A stands for adjustment effort. The government assigns a cost K to failure and hence pK is the expected cost of program failure. The second term measures the cost of adjustment. Adjustment means real wage cuts or real spending cuts and as such is politically costly. More generally, as in Fernandez and Rodrik [1990] the cost may simply come from the fact that politicians do not know whether their constituency will bear the adjustment cost and hence will extract a price for cooperation in stabilization.

The adjustment effort, A, is one of the determinants of program success or failure. The model is completed by a realization from the stochastic process that influences foreign exchange revenues. Our attention now focuses on the construction of the ex ante probability of program success or failure.

The program fails if net foreign exchange disbursements, F, exceed available reserves, R.

(2) $$F = x - \alpha A > R$$

Net foreign exchange disbursements have two components. There is a random component, x, and there is also the component that depends on adjustment effort (i.e. the real exchange rate). The more substantial the adjustment effort, other things equal, the smaller expected net disbursements. Specifically, a real depreciation (an increase in A) would reduce the trade deficit and hence the foreign exchange drain.

The probability of failure is the probability of net foreign exchange disbursements in excess of reserve holdings:

$$(3) \qquad p = p(\, x > R + \alpha A) = \int_{\psi}^{\infty} f(x)dx \quad ; \psi = \alpha A + R$$

The government minimizes the loss function subject to (3). The first order condition then is:

$$(4) \qquad Kf(\psi) \frac{\partial \psi}{\partial A} = \lambda A$$

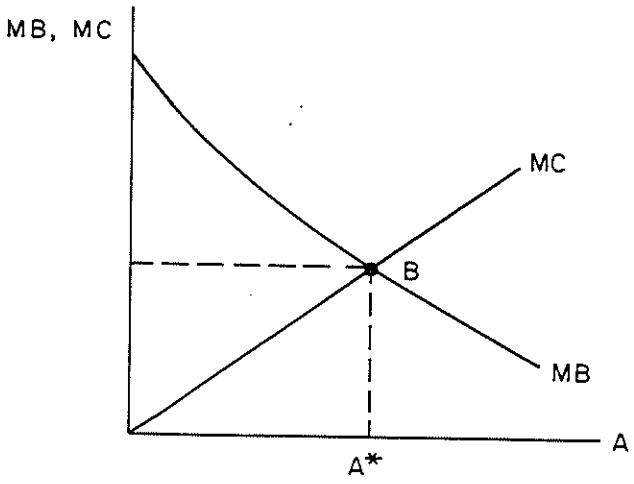
Figure 1 illustrates the solution. The marginal cost of adjustment (MC = λA) is proportional to the level of adjustment effort, λA. The coefficient λ is the parameter determining the marginal cost of adjustment. The marginal benefit MB (= -K∂p/∂A) derives from the reduction in the expected cost of program failure is shown by the downward sloping schedule.

The optimization expressed in (4) yields an optimal adjustment effort A* equal to:

$$(5) \qquad A^* = A^*(\alpha, K, R, \lambda, \sigma) \ ,$$

where σ denotes the characteristics of the distribution of x. The equilibrium probability of program failure, substituting from (5) in (6) is:

$$(6) \qquad p^* = p^*(\lambda, K, \alpha, R, a)$$


MB, MC
MC
B
MB
A
A*

As an example, suppose the distribution of x is unimodal and, for concreteness let it be triangular. We are concerned with collapse arising from large positive realizations of x and hence look at the density $f(x) = (a - x)/a^2$ for the interval $0 \leq x \leq a$: The probability of collapse, with $a > \psi$, then is:

(3a) $$p = 1/2 - \xi(1-\xi/2); \quad \xi = (\alpha A+R)/a$$

Using (3a) to derive the first order condition yields an optimal adjustment effort and a probability of collapse given by:

(5a) $$A^* = \kappa(a-R)/\alpha; \quad p^* = 1/2 - \xi^*(1-\xi^*/2), \quad \kappa = 1/(1+ \lambda a^2/K\alpha^2),$$

where ξ^* is given by ξ evaluated at A^*.

The next step is to enquire what are the properties of this probability. Using the diagram or equations (5) and (6) it is straight forward to derive the following properties.[6]

(i) Program failure is less likely the higher the initial stock of reserves, R. Note that an increase in reserves brings about a reduction in adjustment effort since reserves provide a cushion. But the offset is less than complete since $-1 < \alpha\partial A^*/\partial R = -\kappa$.

The presence of reserves draws attention to the role of foreign loans in stabilization programs. Austria in the 1920s benefited from League of

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6 The results in the text assume that $f'<0$. They can be derived for any distribution by differentiating the first order condition $\lambda A = Kf(\psi)$ and the definition of the probability of program failure $p = p(\psi)$.

Nations Loans and Israel in its stabilization could call on US aid. In much the same way Bolivia announced suspension of external debt service which amounted to a self-administered external loan. In the literature on stabilization foreign loans are discussed as the sine qua non. In the present model they do play a role because they are to some extent a substitute for adjustment. In a model where the timing of stabilization also plays a role, unlike here, the arrival of a stabilization loan may be the occasion for stabilization because, in conjunction with adjustment, it creates a sufficient probability of success.

(ii) A higher marginal cost of adjustment (a larger λ) implies a higher probability of program failure. In societies that are politically highly polarized adjustment is much more costly. As a result adjustment effort will be less and hence the probability of program failure will be larger. The coefficient λ could be interpreted in terms of the scope for cooperation between unions and the government: in Israel and Mexico such cooperation is possible and important, in Argentina it is excluded. Alesina [1988], Eichengreen [1988] and Dornbusch [1985] have emphasized the political costs in polarized societies of undertaking adjustment programs.

(iii) The higher the cost of program failure, K, the larger the adjustment effort and the lower the probability of failure. One might conjecture that in a situation where there have been many previous failures the costs in terms of prestige or politics are small. Hence the investment in stabilization will be small and, in a self-fulfilling way, most programs will fail except if they were to experience unusually favorable (unexpected) conditions.

(iv) A higher responsiveness of the trade balance to adjustment effort implies in the case of a triangular distribution a reduced optimal adjustment effort A^*. But in combination with the effectiveness of adjustment, the impact of adjustment αA^* actually increases in the case of a triangular distribution so that program failure becomes less likely. More generally, as long as the distribution is unimodal higher responsiveness of trade to adjustment effort implies a lower probability of program failure. But it is uncertain in general whether adjustment effort rises or falls.[7]

This responsiveness of trade flows can be interpreted as the extent to which an economy is open or closed. An open economies can achieve major trade improvements with relatively small real depreciation. Very closed economies have to achieve larger depreciation or expenditure cuts.

(v) The impact of increased volatility on adjustment and collapse probabilities is ambiguous.[8] If reserves are relatively large ($a < 2R$), the possibility exists that optimal adjustment effort actually declines.[9] Moreover, since the probability of collapse rises for a given adjustment effort, the possibility then readily exists that increased volatility raises the probability of a collapse.

This set of predictions make up a positive theory of adjustment. A test of the theory involves a cross section of stabilization programs where the

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[7] Let $f(x)$ be the density function. From the expression for p^* we have: $\partial p^*/\partial\alpha = -Af - \alpha f \partial A/\partial\alpha = -Af(1+\theta)$ where θ is the elasticity of the adjustment effort. Differentiating the first order condition $\alpha Kf = \lambda\alpha$ with respect to α we obtain: $\theta = (\alpha fK + \alpha^2 f'K)/(\lambda A - a^2 f'K)$. From the first order condition $\alpha fK = \lambda A$ and $f' < 0$ it is readily shown that $-1 < \theta$.

[8] For the uniform distribution the MB schedule would be flat and shift down. In that case adjustment effort unambiguously declines.

[9] Adjustment effort will fall if $2(1-\kappa)(a-R) < a$.

characteristics of countries $(R,\alpha,\lambda,\sigma,K)$ are used to determine their a priori probability of success.

II. SUPPORTIVE SPECULATION

A critical aspect of stabilization may be supportive private speculation which is, of course, dependent on a program's credibility and influences it in turn. A proper model of stabilization must embody the endogeneity of speculation as a force that supports or weakens a stabilization effort. In part the role of speculation brings with it dynamic elements: if there is a risk that the reforms are not sustained then speculation will not be supportive and hence that stabilization may not occur. But before getting to the dynamic issues of reputation and precommitment there is already some fruitful ground to be covered with a cost-benefit analysis of stabilization.

The most immediate complication is to consider a role for capital flows. Specifically assume that private capital will return depending depend on the probability of program success or failure anticipated by the public which we denote by p'. Our criterion for the probability of program failure now becomes:

$$(8) \qquad p = p(\ x > R + \alpha A + \beta(1-p')) = \int_{\psi}^{\infty} f(x)dx \ ; \quad \psi = \alpha A + R + \beta(1-p')$$

where β measures the response of capital return flight to the perceived probability of program success.

We consider the case where the government selects its adjustment effort, followed then by the capital return decision of the public before the realization of the trade shocks is seen. In this case a Stackelberg solution is appropriate. The government recognizes that the public will evaluate the adjustment effort in the same way the government does and hence arrive at the same estimate of the probability of success. We therefore immediately set $p=p'$. The marginal benefit of stabilization becomes:[10]

$$(9) \qquad MB = -K\frac{\partial p}{\partial A} = \frac{\alpha K f}{1-\beta f} \quad ; \quad 1-\beta f > 0$$

so that stabilization benefits from a multiplier effect deriving from the supportive inward speculation associated with an increase in the probability of program success. The equilibrium adjustment effort and the probability of program failure will now depend on the degree of support derived from capital return.

The impact of supportive speculation on adjustment effort is uncertain. In the case of a uniform distribution, for example, both adjustment effort and the probability of success will rise. But, as shown in Figure 2, optimal adjustment effort may rise or fall depending whether the economy moves from A to A′ or from B to B′ corresponding to different marginal cost situations. The impact of a higher β on equilibrium failure probability is:

$$(10) \qquad \partial p^*/\partial \beta = \frac{-f}{1-\beta f}\left[(1-p) + \alpha\frac{\partial A^*}{\partial B}\right]$$

It can be shown that with $f'<0$, as assumed before, increased capital mobility will in fact will reduce the equilibrium probability of default.

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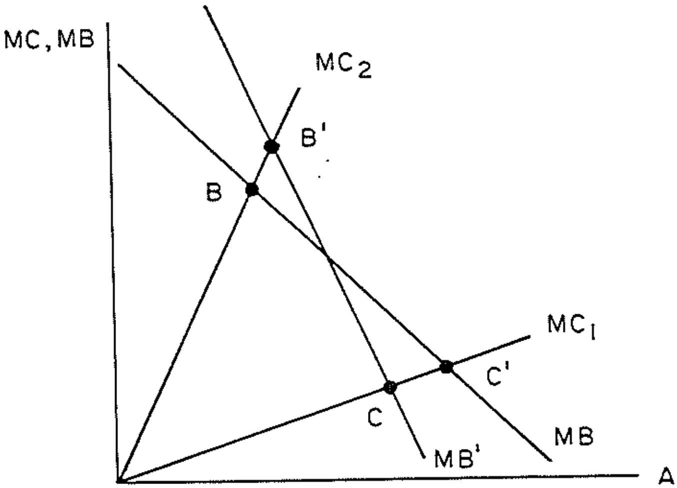
[10]We assume that $1 > \beta f(\psi)$.



MC, MB
MC2
B'
B
MC1
C'
C
MB
MB'
A

Private Information

An interesting complication emerges when private speculators do not know the amount of reserves held by the central bank or when they do not know how much of a known stock of reserves will be sacrificed in a stabilization. Let R' be the reserves which speculators believe the Central Bank is willing to commit. Now it is no longer correct to assume that the policy maker's evaluation of the probability of failure equals that of the public. But even so it remains true that the government can fully internalize the adjustment of speculators to adjustment effort. Specifically, it is readily shown that the marginal benefit of adjustment effort becomes:

$$MB = \frac{\alpha f(\eta)}{1-\beta f(\psi')} \qquad (9a)$$

where $\eta'$is equal to η evaluated at R'.

The question we must now ask is whether the public can recover from the observed optimal adjustment effort uniquely what the government's planned reserve commitment in fact is. If so, then full internalization or a Stackelberg game is appropriate and Eq. (9) applies. Since in fact optimal adjustment effort is a decreasing function of the level of reserves, given R', it is easy to establish that the public can determine the fixed point $R = R'$ from the observed adjustment effort and thus will in fact be able to estimate reserve commitments. Accordingly the government must proceed immediately on that assumption and assume full information.

III. INSTRUMENT UNCERTAINTY

Consider next the case where there is uncertainty about the effectiveness of the policy multiplier α. The analysis here differs from Brainard [1967] not only in respect to adjustment costs but also in that overshooting the target is not penalized; this is appropriate in the context of fiscal or exchange rate stabilization unlike in the area of output stabilization.

We can again think of the foreign exchange stabilization studied above or, for example, of a fiscal stabilization. In this case A would represent the tax base or the tax administration effort and α represents the uncertain yield coefficient. Stabilization involves the the problem of putting in place an optimal tax administration or collection effort with an uncertain outcome.

The policy maker's loss function is the same as in Eq. (1), but now the probability of a program failure is given by:

$$(11) \qquad p = p(y/A > \alpha) = \int_0^v g(\alpha)d\alpha \; ; \qquad v = y/A; \quad y = x - R$$

where y is now deterministic.[11] Given the adjustment effort, program failure occurs if the multiplier turns out to be too small. Optimal adjustment effort

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[11]We omit here explicit consideration of capital movements but it is apparent that they can be introduced by writing $y = x - R - \beta(1-p')$.

must incorporate this uncertainty about the effectiveness of the policy instrument. The first order condition accordingly becomes:

$$(12) \qquad \frac{g(v)yK}{A^2} = \lambda A$$

Figure 3 illustrates another example for the case of a symmetric triangular distribution on the interval zero to unity. The equilibrium is at point A (point B is a local maximum of the loss function). In this case the equilibrium probability of program failure is simply:[12]

$$(13) \qquad p^* = \frac{x - R}{\sqrt{K/\lambda}}$$

Going beyond this simple case, the following properties are readily established for any distribution g:[13]

(i) An higher cost of failure raises both adjustment effort and therefore the probability of success.

(ii) A higher in the marginal cost of adjustment reduces both effort and the probability of success.

(iii) Higher financing requirements, x, have an ambiguous effect on adjustment effort. But a higher level of x must raise the probability of program failure. Conversely, higher reserves (or, in this context, ability for debt finance) reduce the probability of program failure.

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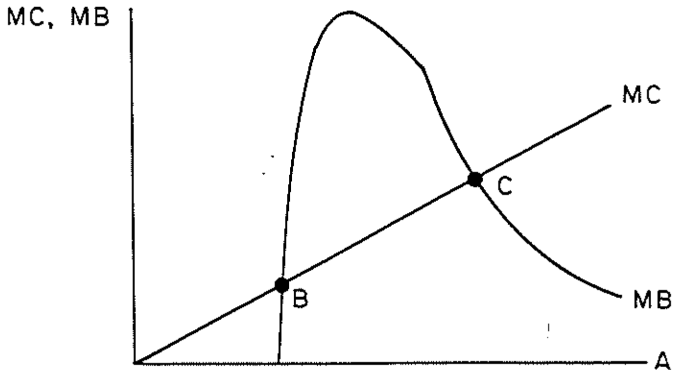
[12] This solution holds for sufficiently low values of λ.
[13] The proofs require using the second-order condition for a minimum of the loss function, $3\lambda + kg'y^2/a^4 > 0$.


MC, MB
MC
C
B
MB
A

We note that they parallel the results already obtained for the case of uncertainty about net disbursements thus reinforcing the generality of the earlier conclusions.

IV. EXTENSION

Consider now an extension to a two-period problem. Failure of a stabilization in the current period implies that the government carries into the next period both the need to stabilize again,m with new adjustment costs, but also a loss of reserves and hence worse initial conditions. In planning the current adjustment effort, recognizing that it may not succeed, these future costs in case of failure are taken into account. The term K in the loss function in Eq. (1) becomes the vehicle to introduce these intertemporal aspects.

Formulating now explicitly the two-period problem, we have as a cost function:

$$(14) \qquad L = p_1(F + J(R_2)) + \lambda A^2/2$$

where J is the present value of the minimized second period loss function which is conditional on the value of reserves, R_2, carried into the second period. Assume next that if stabilization in the first period fails the government loses a maximum of reserves Δ before abandoning the effort and restarting in the following period.

With these assumptions our problem now is to evaluate the marginal benefit of adjustment effort in the current period:

$$(15) \qquad MB_1 = -(F + J(R_1-\Delta)) \frac{\partial p_1}{\partial A_1}$$

where F is a fixed cost of current failure.

The two-period model highlights the incentive to front load adjustment effort. the payoff on the initial stabilization attempt involves not only avoidance of the current fixed cost of failure. An extra benefit arises from the fact that current success avoids the costs of renewed failure. Conversely, current failure carries the price of having to try again, but with the handicap of reduced reserves. Thus policy makers have a strong incentive to do well on the first turn since every successive future attempt one will involve higher adjustment efforts with a lower probability of success. Failure breeds failure because the declining reserves weaken the future chances, and hence credibility, of adjustment programs.

V. CONCLUDING REMARKS

It is sometes said that a stabilization failed because it was not credible. Either this represents a judgment in hindsight, with an almost circular reasoning, or else it raises the interesting question of why a government might initiate a program that was less than fully credible. The model developed here explains why stabilization programs are less than fully credible. A number of characteristics of stabilization situations are identified and make up a positive theory of stabilization in that they help predict the ex ante probability or credibility of a program.

The model does not explain when stabilizations are undertaken. Policy makers delay stabilization and increasing inflation, right up to mega or hyperinflation, is not even uncommon. The model offered here does not help understand this propensity to delay. An extension has to consider the way in which a deterioration of economic conditions affects the political costs of stabilization. There appears to be some evidence that when economic performance becomes appalling the political regime shifts from stalemate to a national unity government which, all of a sudden, appears to be able to accomplish a stabilization of the scope and ambition that eluded earlier governments. Thus the cost-benefit analysis developed here must be combined with a political model of shifting costs of stabilization.

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