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STABILIZATION WITHOUT CRISIS:
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by
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1. Introduction

As a result of the second Indochina War, the former market-oriented South Vietnam underwent a "socialist transformation" in the course of the reunification with North Vietnam (1976). In consequence, average per capita incomes declined in the late seventies. Economic growth could be restored in the early eighties with the large financial aid of the Soviet Union only. In 1986, after almost a decade of reform tinkering the Vietnamese government announced a broad stepwise liberalization of the centrally planned economy. The plan comprised a reform of the microeconomic incentive structure, an export-oriented development strategy and a stabilization program, which was initiated in early 1989.[1]

The urgent task for Vietnam in the late eighties was to control the high inflation, which had been running at an annual rate of several hundred percent since 1985, and at the same time to recover economic growth. The inflation was caused by persistently high budget deficits, which were to a large part financed by currency issue. The banking system was not able to enforce credit discipline, since this would have interfered with the plan fulfilment of public enterprises. The 1989 stabilization plan comprised a drastic cut in public expenditures and a restrictive monetary policy, but the fiscal reform component has been delayed until 1991. Nevertheless, inflation came to a standstill in the first half of 1989, and the price level increased by only 35% in the whole of 1989. In the next two years inflation regained momentum, but decreased even further to 15% in 1992. This rapid disinflation was not accompanied by a sharp decline in real production and employment, which has been a typical by-product of many stabilization attempts in developing countries. The large lay-offs in the public sector were compensated by increasing employment in the private and collective sector. In 1989-1991, per capita national income remained fairly stable in real terms, and in 1992 economic growth recovered.

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1 For a summary of the Vietnamese reform program see Diehl (1993).

This paper attempts to explain the apparent success story of the Vietnamese stabilization since 1989. Section 2 reviews the theoretical background of disinflation programs, contrasting shock approach and gradualism. Section 3 identifies the key elements of the Vietnamese reform with respect to the credibility of stabilization efforts and to the sequencing of liberalization measures. In Section 4 a monetary model of hyperinflation with two equilibria is presented to explain the stabilization experience of Vietnam. The evidence for Vietnam supports the hypothesis that a sudden decrease of actual and expected inflation rates can be achieved in spite of a postponed fiscal adjustment if significant liberalization measures are introduced in an early stage of system transformation to avoid unnecessary output losses.

2. Theoretical Aspects of Disinflation Programs

Since 1989 most of the socialist economies in transition have attempted to put in place a stabilization program. When examining the effects of the reform programs substantial differences can be easily noticed, especially with respect to the speed of stabilization and the sequencing of liberalization measures (Kolodko et al., 1992). Based on the experience in developing countries (e.g. Bruno et al., 1991) important criteria for success or failure of stabilization programs can be identified. These considerations can be used as analytical foundation for a first attempt to explain the success of the 1989 Vietnamese stabilization program. For this reason, some characteristics of the Vietnamese economy are mentioned in this section to illustrate the respective theoretical argument.

In general, there is no dissent about the real costs of high and erratic inflation rates (Fischer, Modigliani, 1978). First, the informational content of price changes is reduced. In an inflationary environment, it is difficult to discriminate between absolute and relative price changes. Therefore, resources are not allocated to optimal production possibilities. This effect is even stronger in economies with a high degree of state-administered prices, e.g. in centrally planned economies. Second, domestic investment is discouraged for the same reason, since the investment risk increases because reliable rates of return can hardly be calculated. This leads to a portfolio shift in favour of low risk assets with relatively low rates of return, e.g. real estate, gold or consumer durables, and hence to lower income growth rates. Third, government tax revenues are shrinking in real terms due to delayed tax payments (Oliveira-Tanzi-effect). The government

pushes inflation rates even higher, if it resorts to currency issue to finance the budget deficit ("inflation tax") and thereby loses its reputation.

For these reasons, a stabilization program is necessary to recover real income growth and to ease structural adjustment. Especially for socialist economies in transition, structural changes are unavoidable in order to gain from an efficient allocation of domestic resources and from international trade. Persistently high inflation rates are always caused by the lack of monetary discipline, especially with respect to currency issue to finance the budget deficits. In the late eighties money creation for the Vietnamese budget deficit ranged between 5 and 10 per cent of the national income. Therefore, there is no doubt about the basic measures to reach sustainable low inflation rates: a fiscal reform to reduce the budget deficits and a tight credit policy. Opinions differ, however, how a rapid disinflation can be achieved without major costs in terms of unemployment and real production losses. Since private agents not only react to present price signals but also according to their expectations, the (subjective) credibility of government announcements and the (objective) sustainability of initiated policies is at the core of the discussion. Hence, recommendations are controversial with respect to the speed of the stabilization program, to additional measures apart from fiscal and monetary restriction, and to the sequencing of stabilization and liberalization.

The arguments in favour of a *gradual approach* are based on two assumptions about structural impediments against a sudden and costless disinflation (Dornbusch, Simonsen, 1987; Fischer, 1981). First, an economy which experienced a long period with high inflation may carry the symptoms of "inflation inertia". In this setting, the short run process of wage bargaining and price setting is characterized by backward-looking inflation expectations, either through legal indexation mechanisms or slowly adapting expectations. Information on incomes policy in Vietnam is scarce, but it can be assumed that at least in the state sector wages have been adjusted to a costs-of-living index at regular intervals. Hence, a sudden restrictive policy would lead inevitably to an increase in real wages, followed by unemployment and a significant fall of real production. Second, even if the expectations of the population could be made more forward-looking, the inflation inertia would not always disappear. If the government has lost reputation in the past, any announcement of persistent changes in the fiscal and monetary regime is not credible for

the public until the results of this change are clearly perceptible. According to this view, only a gradual stabilization program could lead to lower inflation without high adjustment costs, since there is time left for expectations to be corrected and reputation to be built up.

The advocates of a *shock approach* argue that "gradualism invites speculation about future reversals in policy" (Sargent, 1983, p. 94). Hence, only an abrupt change in the policy regime could signal the government's commitment to reform and result in low inflation rates without a substantial fall in output (Sargent, 1982; Taylor, 1989). The inflation inertia of the past would disappear immediately, if the institutionalized backward-looking indexation is abolished and the credibility of the stabilization program is high enough. Moreover, the public would be more likely to switch to low inflation expectations, the more unstable the initial conditions are and the less it has accommodated itself to inflation (Végh, 1992). In case of a low government reputation, the credibility can be enhanced by the creation of an independent central bank and a simultaneous shift in the fiscal policy regime. In other words, the strict adherence to the changed rules in itself creates the credibility (Guidotti, Végh, 1992). However, it remains debated whether additional measures are apt to raise the credibility of a stabilization program, and whether the costs of undesirable side-effects are higher than their benefits (Dornbusch, 1991).

For the advocates of a pure shock approach, credibility could only be enhanced by the announcement of strict limits for the issue of currency, significant fiscal reforms and external assistance such as rescheduling or partial relief of external debt.[2] Additional measures would have only little influence on expectations, since they are known to be temporary. Conversely, the arguments in favour of additional measures are based on the assumption that the credibility of any stabilization program is influenced by several other factors apart from economic consistency. First, the government often lacks reputation due to policy failures in the past or announcements to which it didn't stick. For instance, the Vietnamese government lost reputation due to the failure of the 1985 currency reform. Second, the reform program may be considered as

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2 After the dissolution of the CMEA, Vietnam suffered from high foreign debt service obligations and limited access to international capital markets.

socially unbalanced, which causes the resistance of the respective pressure groups. Third, the possibility of ex-post deviations from the announced strategy ("cheating") may lead to adverse ex-ante changes in the expectations of the public (Calvo, Végh, 1991; Funke, 1991).

Accordingly, the adherents of gradualism recommend temporary price stops and the fixing of the exchange rate. These measures (which are commonly termed "heterodox", since they deviate from "orthodox" pleas for flexible prices) could be used to enforce a sudden interruption of the inflation inertia. A complete freeze of present prices and wages stops the possibly existing inertial inflation of all domestically produced goods by definition; the fixing or retarded devaluation of the (nominal) exchange rate stabilizes the domestic prices of foreign goods, which indirectly damps domestic inflation. Hence, the exchange rate could provide a nominal anchor, if the monetary authority does not pursue an independent monetary policy, i.e. if changes in national reserves are not sterilized by the central bank (Edwards, 1992). Moreover, the exchange rate could be a good indicator for the success or failure of the stabilization program, which can easily and without delay be observed by the public in contrast to the growth rate of money supply or the budget deficit. A fixed exchange rate would signal a credible reform program since it can only be defended if the government sticks to the announced austerity policy. In addition, both measures could be interpreted as a temporary respite for a government with low reputation to realize time-consuming fiscal and monetary reforms (Kiguel, Liviatan, 1992). In the process of disinflation, the collection of taxes usually increases in real terms, since the inflationary losses of the public budget from delayed tax payments are automatically shrinking (reversed Oliveira-Tanzi-effect).

Both price controls and a fixed exchange rate have their disadvantages though. If the government doesn't take advantage of the "inflation-respite" for significant fiscal and monetary reform steps, its credibility will shrink and inflationary expectation will rise before the controls are lifted. Of course, this is the more likely the more frequent the price stop has been proven unsuccessful or unsustainable in the past. In countries like Vietnam with large informal goods markets a comprehensive price stop is probably not sustainable at all. In addition, wage bargaining and price adjustments were probably not organized in the same time pattern across industries. Hence the "frozen" structure of relative prices and wages contains some arbitrariness adding to the price distortions resulting from

centrl planning, which makes price adjustment necessary in the near future (Blejer, Cheasty, 1987). These inefficiencies will be even larger if international trade has been liberalized simultaneously, with the consequence that foreign prices increasingly matter. At that point, a gradualist would argue that these distortions "are far less costly than the unemployment that would otherwise be needed to drive inflation down" (Dornbusch, Fischer, 1986, p. 44).

The success of a fixed exchange rate is based on the assumption that the government does not follow an independent monetary policy. If it does, restrictions on imports or on capital account transactions would soon become necessary to maintain an otherwise depreciating exchange rate. Such interventions would lead to inefficiencies and hence are able to undermine the credibility of the whole program. If credibility is actually achieved, a real appreciation may occur due to capital inflows which may make necessary a correction of the fixed exchange rate (Calvo, Végh, 1991). For this reason, a nominally fixed exchange rate is only useful, if it has to a considerable extent been devaluated beforehand as a temporary cushion against real overvaluation, or if a steady inflow of foreign capital is to be expected (Edwards, 1992). By contrast, flexible exchange rates are consistent with any change in the speed of monetary restriction.

In recent publications it has been argued that some special characteristics of socialist economies in transition provide an argument for a gradual stabilization with additional heterodox measures (e.g. Fischer, Gelb, 1990). First, one may expect a certain amount of repressed inflation due to the monetary overhang of the past, which would become rampant as soon as prices are liberalized. Second, the monetary restrictions necessary for a shock approach could be counterproductive since domestic capital markets are not sufficiently developed. Emerging private enterprises would then have to carry the burden of high real interest rates or rely solely on earned profits to finance their investments, whereas public enterprises still have excess to preferential credits (Calvo, Coricelli, 1992). Third, the supply response after the liberalization of prices could only be moderate due to the inflexibility of public enterprises. The consistency of these arguments has been denied, however, on the basis of both theoretical arguments and the first evidence from former centrally planned economies. Due to the existence of seizable informal markets for goods and foreign currency in Vietnam it is probably only the underdeveloped domestic capital market that could be of some relevance

in this respect. First, if there really was something like a monetary overhang, than it should be erased by a confiscatory currency reform before the stabilization program starts, or by a one-time increase in the price level. But the larger the role of informal ("black") markets has been in the former CPE, the less likely is the existence of such an inflationary potential since consumers were able to bid higher prices according to their preferences (Cochrane, Ickes, 1990). Second, the institutional deficits of the capital markets are only a symptom of the political obstacles against the abolition of credit preferences. Hence, they will not be changed simply by following a gradual liberalization strategy. Third, the supply response obviously not only depends on the reaction of public but also of private enterprises. Therefore, the output shock can be expected to be the smaller the more developed the entrepreneurial capacity of the emerging private sector is and the less restrictions are imposed on it.

Whereas a large consensus exists that fiscal and monetary stabilization should be granted high priority in any reform program, views on the optimal sequence of stabilization and major liberalization steps differ. Of special importance in this controversy is the sequencing of trade reforms and of privatization of state-owned enterprises. Opponents to a simultaneous implementation of stabilization and trade reform argue that external trade would take place under wrong market signals as long as high inflation distorts relative prices significantly (Fischer, Gelb, 1991). Furthermore, in the case of a fixed exchange rate and assuming inertial inflation, it is feared that an undesired real appreciation of the domestic currency induces an unwarranted shift of resources to the sector which produces nontradables (Rojas-Suarez, 1987). Both arguments probably apply for gradual stabilization programs only. A third argument deals with the availability of budget revenues from import duties. It is feared that the budget reform is harder to sustain without these revenues, especially in the beginning when other taxes are not yet fully collected (Blejer, Cheasty, 1987). Hence, a gradual trade liberalization is recommended.

One has to remember, however, that the delay of any trade liberalization measures would perpetuate the inefficiency arising from large differences between domestic and international prices. As in all other socialist countries, prices and quantities in the foreign trade of Vietnam have been subject to central planning. Liberalizing external trade is the easiest way to introduce competition, since domestic producers immediately face world market prices (Krueger, 1981). The costs (in terms of output losses

and unemployment) of readjusting the production structure and increasing productivity, which are then to be carried in an early reform phase, are probably even larger in the case of a delayed trade reform. Moreover, the credibility of the whole liberalization program can be enhanced by a rapid trade reform. First, clear and understandable liberalization steps signal the strong intention of the government to continue the reform process. Second, the consumption standards are raised by imported goods, which may somewhat compensate the population for the costs of adjustment.

Private ownership of firms is one of the key features of a market economy. Although private ownership coexisted in Vietnam even after the 1976 unification, state and collective ownership always received special support. Yet, the sudden privatization of all state-owned enterprises is hardly possible, even if basic rules and institutions are already existing. Some authors argue that privatization should be postponed until macroeconomic instability is achieved and major distortions have been eliminated (e.g. Lipton, Sachs, 1990). Accordingly, the informational content of relative prices, necessary for the calculation of the market value of a firm to be privatized, is distorted under conditions of macroeconomic instability. In addition, the behaviour of former state-owned firms is changed only if the soft budget constraints, especially from the banks, are hardened. This would require a basic institutional reform of the banking sector. Taken at face value, this argument is similar to the one discussed with respect to disinflation and can be turned around in a similar way. The credibility of the reform program may even be supported by early privatizations, starting with small enterprises (Fischer, Gelb, 1991). During the period of continued state intervention on goods and credit markets in favour of state-owned enterprises, private firms could rely on informal ("black") markets. Hence, even under distorted market conditions, the private sector is able to realize new production opportunities. If relative prices are distorted, this problem has to be faced by any owner, public or private.

Summing up the controversies sketched in this section, the following conclusions can be drawn.[3] First, the success of a shock approach in terms of disinflation hinges on the institutional preconditions (stability-oriented central bank, relatively well developed capital markets and a

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3 For the empirical evidence see Bruno et al. (1991).

competent fiscal administration), since a fiscal and monetary regime shift is necessary to bring about the required change of inflation expectations and to accomplish a rapid disinflation with restrictive policy. Conversely, if institutional capacities are limited (either technically or politically) as in many former CPEs a gradual approach may have advantages until the institutional gap is filled. The danger is that such an approach may lead to a postponement of institutional reforms.

Second, the success of a shock approach in terms of productions and employment depends on the structural flexiblity of the economy, since the stabilization will probably cause reallocations of resources by triggering a change of relative prices. Under such conditions, a simultaneous liberalization of domestic markets and external trade can even improve the result. If this required flexibility does not exist, an inefficient allocation of resources is unavoidable, either under a shock approach or a gradual approach.

Third, all "heterodox" measures are suitable to break the possibly existing inflation inertia temporarily since they provide a nominal anchor. Still, they cannot be used as a substitute for necessary fiscal and monetary restrictions. On the contrary, these measures may give the impression of a time-inconsistent reform program since the public could be cheated, e.g. by a sudden and unexpected devaluation.

Fourth, in any case credibility is to be achieved for the announced reform program. Credibility can be enhanced by international trade liberalization and rapid privatisation. Whether credibility is actually best build up by a gradual or a shock approach (or variants thereof) remains an empirical question.

3. The Vietnamese Stabilization Program: A Success Story

Since 1986 - under the Dô'i Mói ("renovation") slogan of the VI. Congress of the Communist Party - Vietnam has carried out a comprehensive economic reform program (Ronnås, Sjöberg, 1990; Diehl, 1993). The central planning system has to some extent been replaced by market economy institutions, which has led to considerable productivity increases, especially in the agricultural sector. In addition, the external trade has been liberalized gradually. One of the most significant achievements of the reform period has been the successful stabilization

since 1989. The inflation was caused by persistently high budget deficits, which were to a large part financed by currency issue (Table 1).

Table 1 - Selected Economic Data of Vietnam 1987-1991

	1987	1988	1989	1990	1991	1992
Population growth	+2.0%	+2.0%	+2.0%	+2.3%	+2.2%	n.a.
Growth of national income (1982 prices)	+3.4%	+4.6%	+2.7%	+2.7%	+2.3%	+5.3%
therein:						
agriculture	-3.5%	+5.9%	+6.3%	+1.1%	-0.1%	n.a.
industry (excl. crude oil)	+10.3%	+3.2%	-6.3%	+0.9%	+3.5%	n.a.
State sector employment (Mill.)	4.09	4.05	3.80	3.42	3.23	n.a.
therein:						
industry labour (Mill.)	0.86	0.84	0.78	0.74	0.71	n.a.
Non-state employment (Mill.)	23.78	24.87	25.14	26.87	n.a.	n.a.
therein:						
Industrial labour (Mill.)	2.01	2.10	1.75	1.51	1.40	n.a.
Budget deficit/ National income	7.1%	11.3%	12.7%	8.1%	3.2%	n.a.
therein:						
financed by State Bank	4.7%	4.6%	11.3%	5.8%	2.2%	n.a.
Annual inflation rate (CPI)	+232%	+408%	+35%	+67%	+68%	+18%
Official exchange rate (VD/US-$)	368	3000	4300	6800	11 900	10 450
Parallel exchange rate (VD/US-$)	1750	5100	4500	-	-	-
Exports (Mill. TRb (a) and US-$)	854	1038	1946	2404	1970	2460
Imports (Mill. TRb (a) and US-$)	2455	2757	2566	2752	2194	2385

(a) In Vietnamese statistics transfer roubles (TRb) of the CMEA are converted to US-$ at parity.

Source: Official Vietnamese publications and international sources, cited in Diehl (1993); Far Eastern Economic Review, 28 January 1993.

The announced stabilization package comprised a drastic cut in public expenditures and a restrictive monetary policy, but no "heterodox" elements. By contrast, prices have been liberalized almost completely in early 1989 and wage indexation was not existent, at least not in the public sector (Kolodko et al., 1992). Since late 1988 the multiple official

early 1989 and wage indexation was not existent, at least not in the public sector (Kolodko et al., 1992). Since late 1988 the multiple official exchange rates have been sharply devaluated close to the black market exchange rate, and the thereafter unified rate is rather flexible since March 1989, although under supervision of the Central Bank. Hence, one is tempted to conclude that Vietnam followed an orthodox shock approach (Wood, 1990). However, this impression cannot be confirmed completely, especially with respect to the fiscal reform component.

Traditionally, the State budget was dominated by investment expenditures for public enterprises and subsidies on the expenditure side, and transfers from public enterprises on the revenue side. Despite considerable inflows of external assistance from the USSR until 1990, a substantial proportion of the resulting budget deficit had to be covered by currency issue. From 1988 onwards a number of measures were introduced which were aimed at a more market-oriented budget. A number of taxes for households and all types of enterprises were imposed, and public enterprises were granted increased financial autonomy. A cut in budget expenditures has not been realized until 1991. To some extent, this was due to the unexpected high military expenditures for the demobilization of Vietnamese troops from Cambodia in 1989. But even the abolishment of all subsidies, which has been announced by the government (Brabant, 1990), apparently has not led to a significant fall of public expenditures. The budget deficit remained high and money creation continued until 1991 when expenditure cuts and increased revenues, especially from domestic crude oil production, were realized.

The reform of the banking sector started in 1988 with the separation of the former monobank into several specialized public banks and a central bank, which is not yet able to perform a monetary policy independent of the government. In early 1989, nominal interest rates were increased and interest-bearing foreign exchange denominated bank deposits introduced, which lead the public to a large one-time increase of money holdings (Dang Duc Dam et al., 1991). This provided a short term cushion against the inflationary consequences of the inflation tax, since the budget deficit could be financed in the single year 1989 by these additional voluntary savings (Brabant, 1990). In addition, total outstanding bank credits to public enterprises were already frozen in real terms in 1988, i.e. the new disbursed credits were only to compensate for the inflationary losses (Diehl, 1993). In the following years this measure was maintained, and

the expansion of credits from the banking system to the enterprise sector stayed behind the expansion of bank deposits. Hence, the impact of monetary policy was clearly restrictive. Nevertheless, it is presumed, that public enterprises still have access to preferential credits (Radke, 1992).

The most significant reform component additional to the stabilization program was the external trade reform in conjunction with the abolishment of the multiple exchange rate system. The state monopoly in external trade has been gradually opened, and the state administration of export and import prices was replaced by a system of ad-valorem tariffs. As a result, exports almost doubled in 1989 compared to the previous year, whereas imports continued to be strictly controlled to reach a more balanced current account. Hence, it is not obvious to what extent import competition already became effective, especially since certain domestic industries are protected by import tariffs. Moreover, it is unknown to what extent the Vietnamese government pursued an exchange rate target. According to official statistics the nominal exchange rate depreciated in 1990 and 1991, but appreciated in 1992. Roughly compared to the retail price index, the real exchange rate appreciated moderately since 1989 (Diehl, 1993). But instead of being caused by a government target, this could simply be a result of the structural shift from CMEA trade partners to other countries. Finally, the very liberal Law on Foreign Direct Investment, which was codified in 1987, prompted the first encouraging results in 1988/89, although none of these licensed projects had lead to effective capital inflows before 1990.

Another part of the liberalization program should be mentioned in this respect: the liberal business laws that are to be applied for all types of ownership, including public enterprises. The codification of property laws, contract laws, tax laws, etc. is meant to provide equal opportunities for the hitherto discriminated private enterprise sector. Although the collection of laws is not yet complete - a bankruptcy law is still in the legislative process - productive resources have already become highly mobile. Employees of public enterprises have been laid off (Table 1) and many local state enterprises have de facto been closed down or sold out to former employees. However, the privatization of large public enterprises remains one of the large problems which are still to be tackled.

Concerning the assumed special characteristics of socialist economies in transition, for Vietnam probably two of them do not apply. First, there was

obviously no repressed inflation since the private retail trade, which was not subject to state-administered prices, had always had a high market share (Table 2). Second, the supply response of the Vietnamese economy was relatively quick, which can be attributed to the large agricultural sector (about 40% of GDP) and the entrepreneurial capacity of the private enterprise sector, especially in the South.

Table 2 - GDP and Value Added by Sectors and Type of Ownership 1989

	Share of the sector in GDP	Share of state (central)	Share of state (local)	Share of co-operatives	Share of private sector
All sectors	100.0%	20.7%	12.1%	32.8%	34.4%
Agriculture	40.5%	1.5%	1.9%	70.0%	26.6%
Industry	18.8%	34.0%	14.9%	11.8%	39.3%
Trade	10.2%	7.8%	31.2%	3.7%	57.3%
Transport	2.1%	54.8%	16.5%	12.7%	16.0%
Tourism	7.2%	2.7%	3.2%	2.9%	91.2%

Source: General Statistical Office, 1992.

The only one of the above mentioned points that could probably be of some relevance for Vietnam is the underdeveloped capital market, which created new distortions when the restrictive monetary policy was implemented. Private enterprises and cooperatives often claim to be discriminated against by the large state banks. In addition, many of the cooperative banks in rural areas are in a liquidity crisis since they do not have full access to the Central Bank refinancing facilities (Seibel, 1992). Hence, private enterprises often have to rely on earned profits or informal finance agencies to finance their investment needs. The political will to maintain credit preferences and other hidden subsidies for public enterprises probably contributed to the delay of strict fiscal adjustments, and probably even more so to a less elastic supply response than would have been possible.

With regard to the conclusions drawn in the previous section, the rapid success of the Vietnamese stabilization program leaves some open questions: First, the institutional preconditions in 1989 were not the result of a sudden significant regime shift, since fiscal discipline was not enforced, and money creation to finance the budget deficit continued. Second, factor mobility was de jure only limited, especially in the industrial

sector. In practice, however, productive resources were to some extent reallocated within the agricultural sector and between industries of the private manufacturing sector. Third, no "heterodox" measures were used to break a possibly existing inflation inertia. On the contrary, domestic prices were liberalized and the exchange rate regime was changed from fixed to floating. The fourth conclusion, stressing the need for credibility enhancing measures, is the only one which directly applies to the Vietnamese reform program.

It remains to be explained, however, through which mechanism the belief in a successful stabilization has been created in spite of the postponed fiscal adjustment. This belief must have been strong in 1989, since otherwise the voluntary money holdings would not have increased. In the next section, it will be shown how the floating of the exchange rate, internal and external price liberalization and the codification of business laws can best be understood as credibility enhancing measures which made possible the switch from a high to a low inflation equilibrium, although the monetization of the budget didn't change that much. The key parameters in such a setting are liberalization measures which can be shown to increase the output elasticity thus stabilizing the low-inflation steady state.

4. Dual Equilibria in a Monetary Model of Hyperinflation

The recent experience of Vietnam seems to suggest that the existence of multiple equilibria possesses some empirical relevance, especially in the course of economic transformation. If there exist two ore more equilibrium states in an economy, it is almost self-evident that the impact of the credibility issues is especially large. In such a setting, the expectations of the public are the most important factor in determining the final outcome. It can be shown with a simple monetary model that a given amount of seignorage revenue can be collected at either a high or a low rate of inflation. This framework has been used inter alia by Sargent and Wallace (1973), Evans and Yarrow (1981), Dornbusch and Fischer (1986), Kiguel (1989), and Bruno and Fischer (1990) with different assumptions on the formation of inflation expectations and the adjustment process of output and real balances. The crucial point for economic policy analysis within this class of inflation models is the stability of the steady states.

In the basic model a closed economy with constant output Y is considered, in which money is the only source of budget deficit financing. Following Cagan (1956), the demand for real balances M^D/P is assumed to be a function of the expected rate of inflation π^e:

(1) $$\frac{M_t^D}{P_t} = Y \cdot e^{-\alpha \cdot \pi_t^e}, \alpha > 0;$$

Accordingly, private agents reduce their money holdings in real terms if they expect inflation to rise, since the opportunity costs of holding non-interest bearing assets are increasing. The parameter α denotes the inflation elasticity of money demand.

The government budget constraint (with a dot above the variable for the derivative with respect to time) here implies:

(2) $$\dot{M}_t^s = d \cdot Y \cdot P_t$$

where $d \cdot Y$ equals the real budget deficit and d, the budget deficit as a fraction of output, is assumed to be constant. Combining (1) and (2) with the equilibrium condition $M^D = M^S$ gives:

(3) $$\mu \equiv \frac{\dot{M}_t}{M_t} = \frac{d}{\left(\frac{M_t}{P_t Y}\right)} = d \cdot e^{\alpha \cdot \pi_t^e}$$

which is shown in Figure 1 as the upward bending curve $BC + MD$. This curve represents a trade-off between inflation expectations and money growth: the higher the inflation expectations, the higher the money growth rate required to finance a given deficit. Due to the assumption of instantaneously adjusting real balances and the strict budget constraint, the economy is always moving along this curve. Note that the intercept on the μ-axis equals the chosen budget deficit as a fraction of output (see (3)).

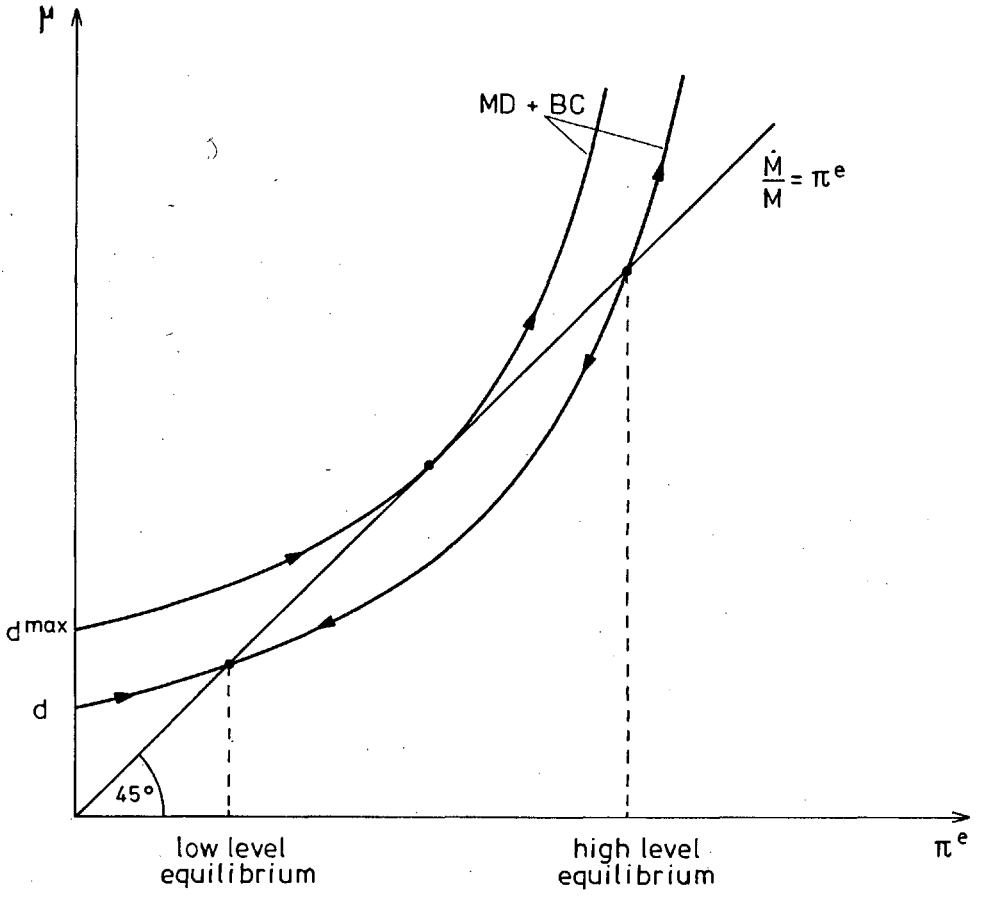
The equilibria of this system are characterized by the steady state conditions:

(4) $$\pi = \pi^e = \text{const.}; \frac{M}{P} = \text{const.}$$

Taking logarithms from (1) and differentiating with respect to time one gets:

(5) $$\mu - \pi = -\alpha \cdot \dot{\pi}^e$$

Figure 1 - Multiple Inflation Equilibria with Slowly Adapting Expectations



According to (5), inflation expectations π^e remain constant (and therefore are identical to actual inflation π) only if money growth μ equals inflation π, that is if real money holdings remain constant. Hence, the steady state conditions are simultaneously fulfilled along the 45°-line in Figure 1, where μ equals $\pi^e = \pi$. There exist always two steady states on the $BC + MD$ locus, as long as d does not exceed a certain level d^{max} (which is a function of α). The same fraction d of seignorage revenue may be obtained at either a low or a high rate of inflation. This is a consequence of the functional form of the money demand (1) which leads to a convex form of the $BC + MD$ schedule.[4] If the government increases the seignorage fraction d, the $BC + MD$ curve shifts upwards. The low equilibrium inflation rate increases and the higher one decreases, as can be seen from Figure 1. At the maximum level for d, the two equilibria fall together in one point, and above that level no steady state exists.

At this point the question arises how the economy adjusts to a change of the seignorage level, and whether the new steady state will always be reached. To analyze the stability of the two equilibria, the adjustment of inflation expectations has to be specified. Assuming adaptive expectations it follows that:

(6) $$\dot{\pi}^e = \beta(\pi - \pi^e); \beta > 0$$

Accordingly, the expected rate of inflation is corrected upwards, if the present inflation has been underestimated, depending on the speed parameter β. The case of rational expectations can be treated as the limit case of an increasing adjustment speed ($\beta \to \infty$). From (5) and (6) one obtains the differential equation for π^e:

(7) $$\dot{\pi}^e = \frac{\beta}{1-\alpha\beta} \cdot (\mu - \pi^e)$$

where m is determined by (3). For all points below the 45° line $\mu < \pi^e$ holds. From (7) it follows that $\dot{\pi}^e < 0$ below the 45° line if $\alpha\beta < 1$, i.e. if the adjustment speed β of inflation expectations or the inflation elasticity α of money demand are relatively low. Figure 1 shows, that the economy

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4 The same characteristic holds for a money demand function $M^D/P = Y \cdot (1+\pi^e)^{-\alpha}, \alpha > 1$, which has been proposed e.g. by Bernholz and Jacksch (1989).

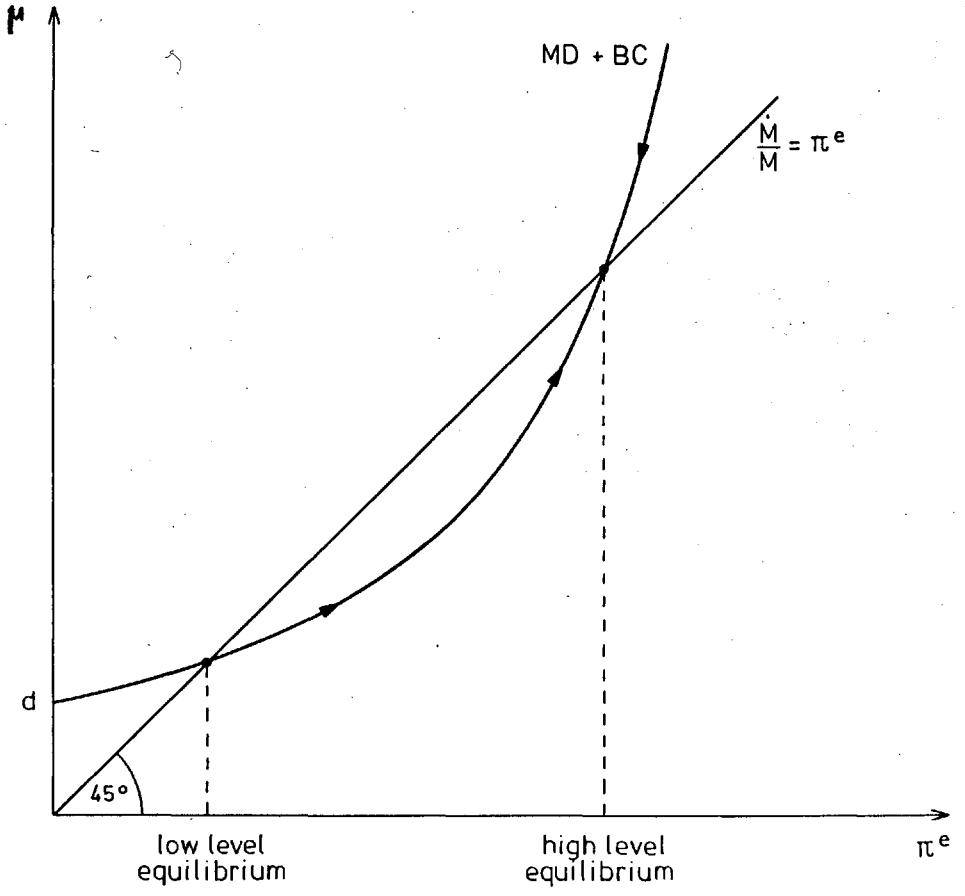
converges to the low inflation equilibrium if it starts in the vicinity of that point. Under the same assumptions about α and β one gets from (7) that π^e rises above the 45° line ($\mu > \pi^e$). Hence, points on the $MD+BC$ schedule above the high equilibrium reflect situations, where the government prints money at an ever increasing rate. In such a situation, no adjustment to a steady state takes place and expectations never catch up to actual inflation.

The stability properties are reversed, when β is sufficiently large ($ab > 1$). In particular, with instantaneously adjusting expectations only the high inflation equilibrium is stable, since one gets from (7) by letting $\beta \to \infty$:

(7') $$\dot{\pi}^e = -\frac{1}{\alpha} \cdot (\mu - \pi^e)$$

The alternative interpretations considered so far refer only to different adjustment speeds of inflation expectations. With slowly adapting expectations (low β) there is a gradual adjustment to a stable low inflation equilibrium. With fastly adapting expectations (high β) there is an adjustment towards the high inflation equilibrium whereas the low inflation equilibrium is unstable. This distinction has ignored the possibility of jumps from one equilibrium to another which are possible under rational expectations (Bruno, Fischer, 1990). Accordingly, the low level equilibrium can be achieved even under rational expectations, if only the public is made to believe that there is a permanent shift in government policy towards economic stability. This result is the analytical foundation of the arguments in favor of the shock-approach. In case of high credibility, the necessary fiscal adjustments may even be delayed. The jump of expected and actual rates of inflation to the low equilibrium will not reduce inflation to zero, but a significant step in disinflation can be achieved. In this situation, the low level equilibrium is not a stable one, however (see Figure 2). Any deviation from announcements of significant policy changes, that have made possible the downwards jump, will lead to fast return back to the high inflation equilibrium. Once again, this line of reasoning points to the question by what means the government can enhance its credibility.

Figure 2 - Multiple inflation Equilibria with Fastly Adapting Expectations



One way to improve the stability properties of the low inflation equilibrium is to extend the model by a Lucas-type aggregate supply function,[5] which allows for variable output and employment. Equation (8) describes how output is influenced by inflation expectations:

$$\frac{\dot{Y}}{Y} = \gamma \cdot (\pi - \pi^e); \gamma > 0 \qquad (8)$$

Accordingly, real wages are decreasing in case of an unanticipated rise of inflation $(\pi > \pi^e)$ since nominal wages are increased in line with inflation expectations, which has a positive impact on aggregate supply. With this variable output function (5) changes to (5'):

$$\mu - \pi - \frac{\dot{Y}}{Y} = -\alpha \cdot \pi^e \qquad (5')$$

In a similar way as for (7), one obtains the following differential equation for π^e:

$$\dot{\pi}^e = \frac{\beta}{1+\gamma-\alpha\beta} \cdot (\mu - \pi^e) \qquad (7'')$$

From (7'') it can be seen that the positive output reaction has a stabilizing effect[6] on the low inflation equilibrium, since the stability condition now only requires $\alpha\beta < (1+\gamma)$. The larger the real wage elasticity γ of aggregate supply, the more likely the economy can be kept in the low inflation equilibrium. This allows to identify one channel through which the low inflation expectations can be stabilized once they have been decreased in a sudden jump: measures such as internal and external liberalizations which are able to improve supply conditions are stabilizing the low steady state by increasing the output elasticity γ.

5. Conclusions

It seems fair to call Vietnam's reform program a gradual liberalization approach with important shock elements in the liberalization components.

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5 Lucas (1972); here the dynamic form is used, i.e. after differentiating with respect to time.

6 The stabilizing effect changes the dynamics only in the case of adaptive expectations. But, as Sargent and Wallace (1973) have noted, in the presence of feedback from inflation to subsequent rates of money creation adaptive expectations can be fully rational.

The stabilization was based on immediate monetary restrictions, whereas the budget deficit has not been reduced immediately. Especially the simultaneous liberalization of international trade and the promotion of the private enterprise sector have been important contributions to the credibility of the stabilization. As a result of these measures, output and employment losses in the adjustment period since 1989 have been avoided (Table 1).

The dual equilibria monetary model of inflation provides the opportunity to explain the success of such a stabilization-cum-liberalization program which does not comprise an immediate fiscal adjustment component. The credibility issue is at the core of the argument. The model has identified one explicit channel through which the low inflation steady state can be maintained after the "jump" of inflation expectations, namely the improvement of supply flexibility. This supports the hypothesis that liberalization measures should be performed in an early stage of the transformation process to avoid a long lasting stabilization crisis.

The case of Vietnam provides an empirical example, and hence supports the hypothesis that a sudden decrease of inflation rates can be achieved without "heterodox" measures. To the contrary, the abolition of price and wage controls, promotion of the private sector and the liberalization of international trade stabilized the Vietnamese economy and helped to avoid losses in production and employment during the transformation process. Even in the adjustment period the Vietnamese economy experienced output and employment gains.

Finally, the analysis of the model leads to the prediction that future increase of the budget deficit in Vietnam will seriously undermine the relative stabilization success achieved so far. With rational expectations, the low inflation equilibrium can only be maintained if the government policy does not lead to doubts about the irreversibility of the reform process. In this setting, a relatively small increase of the budget deficit, a growing discrimination of the private sector or a withdrawal of internal and external trade reform would lead to a sudden jump back to the high inflation equilibrium.

References

Bernholz, Peter, Hans Jürgen Jaksch, An implausible theory of inflation; in: Weltwirtschaftliches Archiv, Vol. 125 (1989), No. 2 (pp. 359-365).

Blejer, Mario I. and Adrienne Cheasty, "High inflation, >heterodox< stabilization and fiscal policy" [IMF Working Paper, No. 87/78]; Washington D.C. 1987.

Brabant, Jozef M. van, "Reforming a socialist Developing Country - the case of Vietnam"; in: Economics of Planning, Vol. 23 (1990) (pp. 209-229).

Bruno, Michael and Stanley Fischer, "Seignorage, operating rules, and the high inflation trap"; in: Quarterly Journal of Economics, Vol. 105 (1990), No. (pp. 353-374).

Bruno, Michael, Stanley Fischer, Elhanan Helpman and Nissan Liviatan (eds.), Lessons of economic stabilization and its aftermath; Cambridge 1991.

Cagan, Phillip, "The Monetary Dynamics of Hyperinflation"; in: M. Friedman(ed.), Studies in the Quantity Theory of Money, Chicago 1956 (pp. 25 -117).

Calvo, Guillermo A., "Are high interest rates effective for stopping high inflation?"; in: Simon Commander (ed.), Managing inflation in socialist economies in transition [EDI seminar series]; Washington D.C. 1991 (pp. 247-260).

Calvo, Guillermo A. and Fabrizio Coricelli, "Stagflationary effects of stabilization programs in reforming socialist countries: enterprise-side and household-side factors"; in: World Bank Economic Review, Vol. 6 (1992), No. 1 (pp. 71-90).

Calvo, Guillermo A. and Carlos A. Végh, "Exchange-rate-based stabilization under imperfect credibility" [IMF Working Paper, No. 91/77]; Washington D.C. 1991.

Cochrane, John H. and Barry W. Ickes, "Inflation stabilization in reforming socialist economies: the myth of the monetary overhang"; in: Comparative economic studies, Vol. 33 (1991), No. 2 (pp. 97-122).

Dang Duc Dam et al., Some aspects of the economic reform in Vietnam (Study commissioned by ADB); CIEM, Hanoi 1991.

Diehl, Markus, "Systemtransformation in Vietnam: Liberalisierungserfolge - Stabilisierungsprobleme" [Kieler Arbeitspapier, No. 557]; Kiel 1993.

Dornbusch, Rudiger, "Credibility and stabilization"; in: Quarterly Journal of Economics, Vol. 106 (1991), No. 4 (pp. 837-850).

Dornbusch, Rudiger and Stanley Fischer, "Stopping hyperinflation past and present"; in: Weltwirtschaftliches Archiv, Vol. 122 (1986), No. 1 (pp. 1-47).

Dornbusch, Rudiger and Mario H. Simonsen, Inflation stabilization with incomes policy support; Group of Thirty, New York 1987.

Edwards, Sebastian, "Exchange rates as nominal anchors" [NBER Working Paper, No. 4246]; Cambridge 1992.

Evans, John L. and George K. Yarrow, "Some Implications of Alternative Expectations Hypotheses in the Monetary Analysis of Hyperinflations"; in: Oxford Economic Papers (New Series), Vol. 33 (1981), No. 1 (pp. 61 - 80).

Fischer, Stanley, "The economics of deflation"; in: Shock therapy or gradualism? A comparative approach to anti-inflation policies; Group of Thirty, New York 1981.

Fischer, Stanley and Alan Gelb, "Issues in Socialist economic reform"; in: Paul Marer, Salvatore Zecchini (eds.), The transition to a market economy, Vol. I; OECD, Paris 1991 (pp. 169-183).

Fischer, Stanley and Franco Modigliani, "Towards an understanding of the real effects and costs of inflation"; in: Weltwirtschaftliches Archiv, Vol. 114 (1978); No. 4 (pp. 810-833).

Funke, Norbert, Wage formation and monetary policy rules (Kiel Working Paper, No. 514), Institute of World Economics, Kiel 1992.

General Statistical Office, System of national accounts of Vietnam 1986-1990. Statistical Publishing House, Hanoi 1992.

Guidotti, Pablo E. and Carlos A. Végh, "Loosing credibility: the stabilization blues" [IMF Working Paper, No. 92/73]; Washington D.C. 1992.

Kiguel, Miguel A., "Budget deficits, stability, and the monetary dynamics of hyperinflation"; in: Journal of money, credit and banking, Vol. 21 (1989), No. 2 (pp. 148-157).

Kiguel, Miguel A. and Nissan Liviatan, "When do heterodox stabilization programs work? Lessons from experience"; in: World Bank Research Observer, Vol. 7 (1992), No. 1 (pp. 35-57).

Kolodko, Grzegorz W., Danuta Gotz-Kozierkiewicz and Elzbieta Skrzeszewska-Paczek, Hyperinflation and stabilization in postsocialist economies; Boston etc. 1992.

Krueger, Anne O., "Interactions between inflation and trade-regime objectives in stabilization programs"; in: William R. Cline, Sidney Weintraub (eds.), Economic stabilization in Developing Countries; Washington D.C. 1981 (pp. 83-117)

Lipton, David and Jeffrey Sachs, "Privatization in Eastern Europe: The case of Poland"; in: Brookings Papers on Economic Activity, 1990 (pp. 293-341).

Mussa, Michael, On the inherent stability of rationally adaptive expectations; in: Journal of Monetary Economies, Vol. 4 (1978), 2 (pp. 307-313).

Radke, Detlef, Finanzsektorstudie Vietnam: Empfehlungen zum Aufbau eines zweistufigen Finanzsystems. DIE, Berlin 1992.

Rojas-Suarez, Liliana, "Financial constraints and the real effects of monetary stabilization policies under alternative exchange rate regimes" [IMF Working Paper, No. 87/85]; Washington D.C. 1987.

Ronnås, Per and Örjan Sjöberg (eds.), Dô'i Mói: Economic reforms and development policies in Vietnam (Papers and Proceedings from an International Symposium in Hanoi, December 1989); SIDA, Stockholm 1990.

Sargent, Thomas J., "Expectations and the neutrality of money"; in: Journal of Economic Theory, Vol. 4 (1972) (pp. 103 - 124).

Sargent, Thomas J., "The ends of four big inflations"; in: Robert E. Hall (ed.), Inflation: causes and effects; Chicago 1982 (pp. 41-97).

Sargent, Thomas J., "Stopping moderate inflation: the methods of Poincaré and Thatcher"; in: Rudiger Dornbusch and Mario H. Simonsen (eds.), Inflation, debt, and indexation; Cambridge 1983 (pp. 54-96).

Sargent, Thomas J. and Neil Wallace, "Rational expectations and the dynamics of hyperinflation"; in: International Economic Review, Vol. 14 (1973), No. 2 (pp. 328-350).

Sargent, Thomas J. and Neil Wallace, "Inflation and the government budget constraint"; in: Assaf Razin and Efraim Sadka (eds.), Economic policy in theory and practice"; London 1987 (pp. 170 - 200).

Seibel, Hans Dieter (ed.), The making of a market economy: Monetary reform, economic transformation and rural finance in Vietnam; Saarbrücken, Fort Lauderdale 1992.

Taylor, Dean, "Stopping inflation in the Dornbusch model: optimal monetary policies with alternative price-adjustment equations"; in: Journal of Macroeconomics, Vol. 11 (1989), No. 2 (pp. 199-216).

Végh, Carlos A., "Stopping high inflation: an analytical overview"; in: IMF Staff papers, Vol. 39 (1992), No. 3 (pp. 626-695).

Wood, Adrian, "Deceleration of inflation with acceleration of price reform: Vietnam's remarkable recent experience"; in: Cambridge Journal of Economics, Vol. 13 (1989), No. 4 (pp. 563-571).