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The Growing Shadow Economy: Implications for Stabilization Policy

by Dieter Cassel, Duisburg*

Not only has the shadow economy obviously been growing much more rapidly than the official economy in the Western industrialised countries, it also appears to have a growth cycle of its own, running counter to the official economy's growth cycle. This raises a number of important questions for stabilization policy.

According to Feige's "Social Income Concept"¹ the label "shadow economy" summarizes all those private economic activities which do not enter the computation of GNP, although they contribute to overall value added. On the one hand, this refers to the "self-service economy" ("domestic economy") in private households and their organizations, on the other hand, the term covers the "underground economy" ("hidden economy") as that part of private profit-oriented activities which is concealed. Clues found so far for the cases of the USA and the Federal Republic of Germany suggest that since the beginning of the 1970s the shadow sector has clearly grown faster than the officially recorded economy.

Estimates by Gutmann² and Feige³ indicate that in 1939-76 the US underground economy was growing at an average nominal rate of 8.1 and 8.3 per cent respectively, while the official nominal GNP expanded at a rate of only 7.8 per cent. Within the period 1976-78, Feige's estimates for the official economy amounted to 11.8, and the first and second economies taken together grew at an average annual rate of 16.9 per cent. Similarly, there has been a drastic rise of the underground economy in the Federal Republic of Germany in recent years. For the 1975-80 period a study by Kirchgässner⁴, resting upon the cash demand approaches of Tanzi⁵ and Klovland⁶, reveals an average annual growth rate in the underground economy of 14 and 18 per cent respectively, exceeding the real growth rate of the official economy many times (Table 1.1.).

* University of Duisburg. - I would like to thank Paul Welfens, Alfred Schipke and Konrad Wilms for their helpful assistance in preparing a paper in this shady field. For an extended version of this paper see D. Cassel: *Stabilitätspolitik und Schattenwirtschaft*, in: Wolf Schäfer: *Schattenökonomie*, Berlin 1984.

High values are also reported for the period 1970-75. In the second half of the 1960s, however, it seems to have decreased in real terms. According to Kirchgässner⁷, the underground economy reached its peak shortly before the 1967 recession of the official economy, slowed down simultaneously with the economic recovery and then accelerated again after the crisis of 1973.

Some clues for the USA as to the dynamics of the growth in the self-service economy have recently been presented by Kendrick⁸, Eisner⁹ and Eisner et al.¹⁰ These studies augment the traditional accounting system by private household production. Based on

¹ Edgar L. Feige: *Definitions and Measurement of the "Underground Economy" and the Full Compliance Budget Deficit*, Paper prepared for the Bielefeld Conference on the Economics of the Shadow Economy, Bielefeld, Oct. 10-14, 1983.

² Peter M. Gutmann: *Statistical Illusions, Mistaken Policies*, in: *Challenge*, Nov./Dec. 1979, pp. 14-17.

³ Edgar L. Feige: *How Big is the Irregular Economy?*, in: *Challenge*, Nov./Dec. 1979, pp. 5-13.

⁴ Gebhard Kirchgässner: *Verfahren zur Erfassung der Größe und Entwicklung des Schattensektors*, ETH Zürich, Discussion Paper No. 211-82, Zürich 1982; Gebhard Kirchgässner: *Size and Development of the West German Shadow Economy, 1955-1980*, in: *Zeitschrift für die gesamte Staatswissenschaft*, Vol. 139 (1983), pp. 197-214.

⁵ Vito Tanzi: *The Underground Economy in the United States: Estimates and Implications*, in: *Banca Nazionale del Lavoro, Quarterly Review*, Dec. 1980, pp. 427-453, reprinted in: Vito Tanzi (ed.): *The Underground Economy in the United States and Abroad*, Lexington 1982, pp. 69-92; Vito Tanzi: *A Second (and More Skeptical) Look at the Underground Economy in the United States*, in: *Ibid.*, pp. 103-118.

⁶ Jan T. Klovland: *In Search of the Hidden Economy: Tax Evasion and the Demand for Currency in Norway and Sweden*, Norwegian School of Economics and Business Administration, Discussion Paper No. 18/80, Bergen, Dec. 1980.

⁷ Gebhard Kirchgässner, *op. cit.*, p. 204.

⁸ John W. Kendrick: *Expanding Imputed Values in the National Income and Product Accounts*, in: *The Review of Income and Wealth*, Vol. 25, 1979, pp. 349-363.

Eisner's data for the period 1946-76 the average annual growth rate for real private household GNP is 3.5 per cent compared to 3.3 in the official economy (Table 2.II.); the difference of 0.2 percentage points p.a. appears to be rather small. Nevertheless, over a 30 year period this amounts to a significant discrepancy in the development of sectoral GNPs. Moreover, in 1966-76 the real growth rate of the self-service economy (4 per cent) clearly exceeded that of the official economy (2.6 per cent p.a.), such that the gap widened towards the end of the 1960s to the mid-1970s. Figures from Eisner's study indicate a growth cycle of the self-service economy, too: in the immediate post-war period 1946-56 its 4.5 average annual growth rate was one percentage point above that of the official economy. At a time when this sector was booming at a 3.9 average annual growth rate, the rate of the self-service economy of 1.6 per cent p.a. implied a decline of the ratio of its value added to total overall GNP from 0.44 to 0.39 (β_r in Table 2.II.); a reversed tendency is observed in 1966-76. According to a most recent study by Langfeldt¹¹ the share of the self-service economy in the FRG has continuously increased, namely from 37.5 per cent in 1961 to 48.5 per cent in 1977.

Certainly, the string of clues for the cyclical pattern of the shadow economy is far from complete and requires further research to gain a more detailed picture. Nevertheless, the dominating evidence leads to the following conclusions:

□ The shadow economy – that is, underground plus self-service economy – has been growing both in nominal and in real terms much more rapidly than the respective official economy in Western industrialized countries in the 1970s.

□ In the post-war period, the development of the shadow economy was not stable, i.e. its growth rate and its relative size have fluctuated considerably, which can be interpreted as a shadow economic business or growth cycle.

□ In a long-run perspective its development has not necessarily been parallel, but at least in some cases contrary to the official economy's growth cycle; it seems

⁹ Robert Eisner: Total Income, Total Investment, and Growth, in: The American Economic Review, Papers and Proceedings, Vol. 70, May 1980, pp. 225-231; Robert Eisner: Total Incomes in the United States, 1959 and 1969, in: The Review of Income and Wealth, Vol. 28, 1982, pp. 41-70.

¹⁰ Robert Eisner et al. Total Incomes in the United States, 1946-1976: A Summary Report, in: The Review of Income and Wealth, Vol. 28, 1982, pp. 133-174.

¹¹ Enno Langfeldt: Ursachen der "Schattenwirtschaft" und ihre Konsequenzen für die Wirtschafts-, Finanz- und Gesellschaftspolitik, Forschungsauftrag des Bundesministeriums für Wirtschaft, Kiel 1983, here p. 28.

Table 1
Nominal and Real Growth of the Underground Economy in the Federal Republic of Germany, 1960-80

	I. Nominal growth			II. Real growth		
	g_n^{OE}	g_n^{UE} (T)	g_n^{UE} (K)	g_r^{OE}	g_r^{UE} (T)	g_r^{UE} (K)
1960/65	6.5	23.4	18.4	4.8	20.1	15.6
1965/70	9.5	1.3	2.1	4.1	-2.4	-1.6
1970/75	8.4	21.7	23.0	2.1	15.3	16.3
1975/80	7.3	18.3	21.4	3.5	14.3	17.7

g_n^{OE} (g_r^{OE}) – growth rate of the statistically recorded nominal (real) GNP in the official economy in per cent p.a.

g_n^{UE} (g_r^{UE}) – growth rate of the estimated nominal (real) GNP in the underground economy in per cent p.a.

(T), (K) – procedure of *Tanzi* and *Kloviand* respectively.

Source: Computations (logarithmic averages) are based on: Gerhard Kirchgässner: Size and Development of the West German Shadow Economy, 1955-1980, in: Zeitschrift für die gesamte Staatswissenschaft, Vol. 139 (1983), pp. 197-214, here p. 203 and p. 206

Table 2
Nominal and Real Growth of the Self-service Economy in the US, 1946-76

	I. Nominal growth				
	g_n	g_n^{OE}	g_n^{DE}	β_n	
1946-56	8.5	7.2	10.4	.41	(1956)
1956-66	5.4	6.0	4.4	.37	(1966)
1966-76	9.5	8.5	10.8	.43	(1976)
1946-76	7.8	7.2	8.7	.40	(ave.)
	II. Real growth				
	g_r	g_r^{OE}	g_r^{DE}	β_r	
1946-56	3.9	3.4	4.5	.44	(1956)
1956-66	3.0	3.9	1.6	.39	(1966)
1966-76	3.2	2.6	4.0	.42	(1976)
1946-76	3.4	3.3	3.5	.41	(ave.)

g_n (g_r) – average annual growth rates of total nominal (real) GNP in the official economy and the self-service economy; figures are drawn from the Total Incomes System of Account (TISA)

g_n^{OE} (g_r^{OE}) – average annual growth rates of nominal (real) GNP in the official economy; figures refer to the statistics of the Bureau of Economic Analysis (BEA).

g_n^{DE} (g_r^{DE}) – average annual growth rates of the nominal (real) value added in the self-service economy.

$$\beta_n = Y_n^{DE} / Y_n; \beta_r = Y_r^{DE} / Y_r$$

$$g_r^{DE} = g_r / \beta - (1-\beta) g_n^{OE} / \beta$$

Source: For original figures see Robert Eisner et al.: Total Incomes in the United States, 1946-1976: A Summary Report, in: The Review of Income and Wealth, Vol. 28, 1982, pp. 133-174, here p. 148 and p. 161.

to be booming whenever the official economy reveals secular stagnation symptoms and vice versa.

These findings are not surprising as both sectors are subject to a common causation and rationale. The shadow and the official economy are simultaneously affected – mostly with opposite impact signs – regardless whether shifts in their relative size and growth patterns are supposedly due to the burden of taxation and regulation, to real capital and human capital endowments or to the change of social and moral standards.¹²

Implications for Stabilization Policy

The intellectual discovery of a booming shadow economy in recent years is obviously related to the crisis symptoms in the Western industrialized countries. Consequently, important questions for stabilization theory and policy arise:

□ Hasn't the anticyclical, predominantly demand-oriented stabilization policy, implemented since the 1960s, contributed to the ongoing growth of the shadow economy and, in a long-run perspective, induced cycles of the shadow economy? Stabilization policy itself may hence be questioned as a potential cause for the growth of the shadow economy.

□ Is it possible that stabilization policy is misguided by biased information to such an extent that instead of solving the problems of inflation and unemployment the situation is aggravated? That is the problem of diagnosis and therapy in the presence of a growing shadow economy.

□ Doesn't the effectiveness of stabilization policy – be it for preserving or for restoring economic stability – require an adjustable shadow economic sector absorbing real and monetary impulses, thus contributing to the overall inherent stability of the private sector? Therefore, the shadow economy also presents an efficiency problem for stabilization policy.

There is obviously an interrelationship between the shadow economy and the official economy, a link which is influenced by stabilization policy. The interdependence can be explained by a simple model of the time allocation of a representative household.¹³ The

¹² For an overview see: Dieter C a s s e l : Schattenwirtschaft – eine Wachstumsbranche?, in: List-Forum, Vol. 11, Sept. 1982, pp. 343-363, here p. 356.

¹³ Garry S. B e c k e r : A Theory of the Allocation of Time, in: The Economic Journal, Vol. 75, 1965, pp. 493-517.

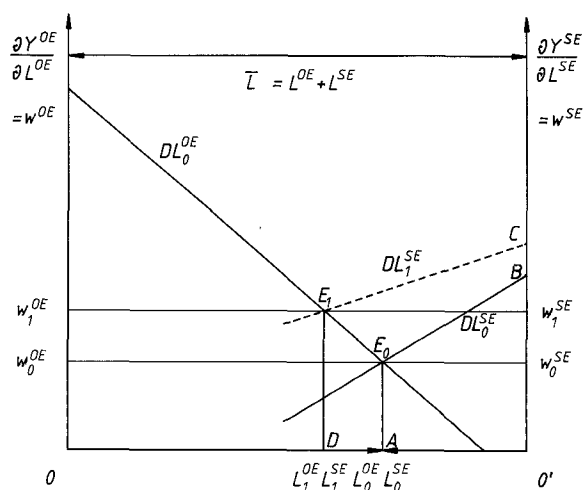
¹⁴ I gratefully acknowledge the elaboration of the model's presentation by my assistant Paul J. J. W e i f e n s . The basic idea for this concept is found in: Garry S. B e c k e r , *ibid.*, who presents a representative household with domestic and market production activities.

optimizing approach described suggests that "immigration into the shadow economy" stands for a strategy by which private households try to offset income losses which are the consequence of external shocks to the official economy.

The Model

The rationale of private household behaviour allocating total working time \bar{L} between work in the official economy, L^{OE} , and the shadow economy, L^{SE} , can be explained by a simple model for a representative multi-person household (Figure 1):¹⁴ For a given capital stock and technology in the official economy the graph DL_0^{OE} stands for the demand for labour in the official economy as a function of the real wage rate following the marginal product rule. A similar reasoning explains the graph DL_0^{SE} reflecting the "self-demand" of the household for work in the shadow economy as a function of its real net return. With flexible working time in the official sector the optimal time allocation requires to equate the marginal products of the two alternative uses. This condition is met at the intersection point E_0 of the two marginal product schedules (demand curves). The real wage rate is w_0 and the corresponding quantities are $L_0^{OE} + L_0^{SE} = \bar{L}$. If working time in the official economy or the real wage rate were fixed at L_1^{OE} and w_1^{OE} , respectively, the household would establish a new optimum increasing its own demand to DL_1^{SE} . In this case the household accumulates more real capital and human capital – that is, it realizes additional investments or introduces a superior technology. At E_1 , total household income has increased, entailing a

Figure 1
Time Allocation of a Representative Household



correspondingly higher fraction of income from shadow economic activities.

The model of time allocation presented here can also describe other causes of shadow economic growth. The burden of taxation (and regulation) in the official economy implies a counter-clockwise rotation of the DL^{OE} - line about F (DL_1^{OE} in Figure 2); the higher the tax rate on real labour income the greater the downward movement of the DL^{OE} schedule. At the new household equilibrium point E_1 , net real wage rate has fallen to w_1^{OE} : with official working time being reduced to L_1^{OE} , the gross wage rate paid by the firm is w_1^{OE} and the tax burden per hour amounts to $\tau w_1^{OE} = W_1^{OE} - w_1^{OE}$. The optimum point E_1 (E_2) is also established when the position of the official demand curve shifts downwards (DL_2^{OE} in Figure 2). A possible cause for this could be a depreciation of the capital stock in the official economy, e.g. by an oil price shock or by inflation-induced misallocations. The results regarding real wage development and the shift in the time allocation are similar to the first case. Consequently, on the aggregate level an increasing tax and regulation pressure as well as "capital supply shocks" suffered by the official economy induce an expansion of the working time devoted to shadow economic activities.

In both cases, however, total household income in E_1 (E_2) is smaller than in E_0 . If the household wants to offset this income loss it should - as already shown in Figure 1 - shift its DL^{SE} schedule upwards by increasing capital formation or by improving the technical know-how. Therefore all causes that induce a shift in the time allocation towards the "shadow" will also

Figure 2
Effects of Stabilization Policy on Time Allocation of a Representative Household

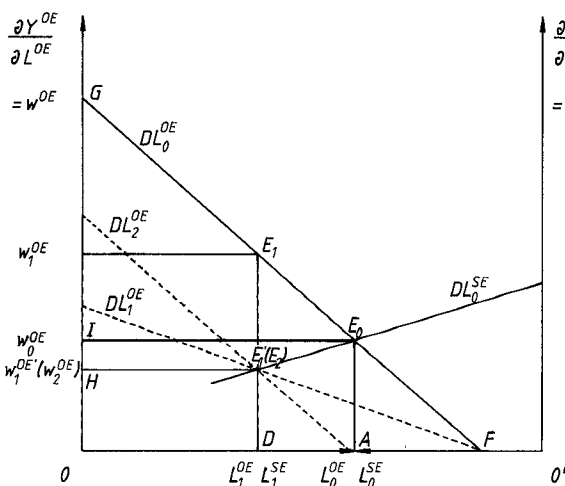


Table 3
Growth of the Capital Stock in the Self-service Economy of the US, 1946-76

	I. Capital formation in nominal terms			II. Capital formation in real terms		
	g_{K_n}	$g_{K_n}^{DE}$	γ_n	g_{K_r}	$g_{K_r}^{DE}$	γ_r
1946-56	7.0	7.8	.55 (1956)	3.3	4.0	.58 (1956)
1956-66	5.6	6.1	.59 (1966)	4.0	4.2	.59 (1966)
1966-76	9.7	10.4	.63 (1976)	3.9	4.8	.64 (1976)
1946-76	7.5	8.1	.59 (ave.)	3.8	4.3	.60 (ave.)

$g_{K_n}(g_{K_r})$ - growth rate of the estimated nominal (real) capital stock in the official and the self-service economy - derived from the Total Incomes System of Accounts (TISA) - in per cent p.a.

$g_{K_n}^{DE}(g_{K_r}^{DE})$ - growth rate of the imputed nominal (real) capital stock of the self-service economy in per cent p.a.

$$\gamma_n = K_n^{DE} / K_n; \gamma_r = K_r^{DE} / K_r$$

Source: Computations based on figures in Eisner et al. (see Table 2), p. 167.

provide a stimulus for an acceleration of domestic capital accumulation. Increasing the capital stock in the shadow economy requires correspondingly higher savings. Figures presented by Eisner et al.¹⁵ reveal that the growth rate of capital formation in households was 4.3 per cent on average in 1946-76 (official economy: 3.8 per cent p. a. in real terms), thus exceeding the pace of capital accumulation in the official business sector (Table 3.II.). The fraction of the household capital stock - based on the overall capital stock of the economy - increased from 0.58 in 1956 to 0.64 in 1976, thus reaching a considerable scale.

The cases discussed above suggest that immigration into the shadow economy is a "survival strategy" by which private households try to offset setbacks in their income development or a drop in their standard of living caused by changes in exogenous conditions.¹⁶ To the extent that unemployment, reductions of overtime and average working hours, early retirement, or cuts in the net real wage potentially lower household income in real terms, shadow economic activities will expand aiming at a compensation of income losses in the official economy. This does not only explain why official and shadow economy show a countercurrent development,

¹⁵ Robert Eisner et al., op. cit.

¹⁶ Lawrence H. Nitz: Net Wealth Generation in the Shadow Economy: An Exploration of the Domestic Home Improvement Production System, Department of Political Science, University of Hawaii, August 9, 1983; Richard Rose: Getting By in Three Economies: The Resources of the Official, Unofficial and Domestic Economies, University of Strathclyde, Studies in Public Policy No. 110, Glasgow 1983.

but also accounts for the partial responsibility of stabilization policy. Policy itself is the underlying cause for the change of these (exogenous) conditions inducing the "immigration into the shadow economy"; namely to the extent that stabilization policy does not succeed in establishing price level stability, full employment and external equilibrium at a sufficient and steady growth.

Distortion of Indicators?

Another important question is whether and if so, to what extent, failures of stabilization policy are caused by a growing shadow economy. This hypothesis, clearly stated in the "Unobserved Incomes Hypothesis" of Feige and Gutmann,¹⁷ argues that the growth of the shadow economy is distorting the indicators of stabilization policy; hence, policy runs the risk of prescribing – due to misspecified diagnoses – inadequate remedies:

□ The growth of the shadow economy results in a systematically biased reproduction of reality, namely by overemphasizing officially recorded indicators of inflation, unemployment and productivity slowdown. Stabilization policy is likely to react to fictitious problems instead of coping with the true deviations from policy goals.

□ Taking well-intended counteractions, stabilization policy triggers off unnecessary destabilizing impulses in the official economy with the consequence that fictitious problems become real ones. Policy based on a wrong diagnosis therefore runs the risk of establishing a vicious circle in which a greater shadow economy leads via higher inflation and unemployment to an even greater shadow economy.

Adopting the view of the Unobserved Incomes Hypothesis, the recent economic crisis in Western industrialized countries appears to be merely one of the imagination – or to be at least the consequence of such a misperception. In view of the continuous prosperity of the shadow economy, the crisis is artificially overstated. To the extent that the term crisis matches reality, the crisis is supposed to be the result of a misguided stabilization policy with an insufficient information basis.

¹⁷ Feige and Gutmann contended this for the first time (cf. Edgar L. Feige, 1979, op. cit. and Peter M. Gutmann, 1979, op. cit.); later this was elaborated towards the "Unobserved Incomes Hypothesis" in: Edgar L. Feige: Die Makroökonomie und der nichterfaßte Sektor, in: Die erste österreichische Spar-Casse, Sonderausgabe, Feb. 1982; Robert R. Alford, Edgar L. Feige: Social Indicators, Information Distortion, and Public Policy: The Unobserved Economy and Other Observer-Subject-Policy Feedbacks, in: Edgar L. Feige (ed.): The Unobserved Economy, Cambridge University Press, forthcoming; and Robert T. McGee, Edgar L. Feige: Policy Illusion, Macroeconomic Instability and the Unobserved Economy, in: Edgar L. Feige (ed.): The Unobserved Economy, Cambridge University Press, forthcoming.

As long as there is a parallel development the levels are systematically distorted, whereas the growth rates are (quasi-) correct. In this case policy hardly runs the risk of following a misleading evaluation of reality. A considerable distortion arises, however, when the shadow economy's development is less or more than proportional to that of the official economy. The indicators are biased now and may overemphasize or understate the true situation.

GNP Growth Rate

To point out the potential information bias take the example of economic growth: Defining overall (real) GNP, Y, as the sum of its sectoral components Y^{OE} and Y^{SE} according to

$$Y = Y^{OE} + Y^{SE}$$

we obtain, stated in growth rates:

$$g_Y = g_Y^{OE} + \beta(g_Y^{SE} - g_Y^{OE}); \text{ where } \beta = Y^{SE} / Y$$

Officially recorded is only the growth rate g_Y^{OE} . Consequently, the term $\beta(g_Y^{SE} - g_Y^{OE})$ stands for the potential bias, expressed in percentage points. If both sectors are expanding at the same rate the information bias clearly is zero; however, if the pace of the shadow economy's expansion exceeds (falls short of) that of the official economy, the overall growth rate is understated (overstated) by the recorded rate g_Y^{OE} . Therefore the distortion is underestimating or overestimating the true growth rate.

The importance of the diagnosis problem depends on the absolute value of the distortion. It is the greater the higher the relative size of the shadow economy, β , and the difference of sectoral growth rates. Table 4 gives an

Table 4
Hypothetical Information Bias in a Growing or Shrinking Shadow Economy

$g_Y^{SE} - g_Y^{OE}$	± 1.0	± 3.0	± 5.0	± 7.0
β				
.05	.0	.2	.3	.4
.15	.2	.5	.8	1.1
.30	.3	.9	1.5	2.1
.45	.5	1.4	2.3	2.2
.60	.6	1.8	3.0	4.2
.75	.8	2.3	3.8	5.3
g_Y, g_Y^{OE}, g_Y^{SE}	– growth rates of GNP of the overall economy (Y), the official economy (OE) and the shadow economy (SE) in per cent p.a.			
$\beta(g_Y^{SE} - g_Y^{OE})$	– absolute bias in percentage points.			

idea of the potential information gap under alternative values for the distortion parameters. If the bias is to exceed a significant threshold value for stabilization policy, the relative size of the shadow economy or the difference between sectoral growth rates have to be rather great. According to Kirchgässner's estimates of the underground economy in the Federal Republic of Germany (Table 1.II.), the figures for the bias in 1970/75 are clearly below, and in 1975/80 slightly over, one percentage point, although the average annual growth rates of the underground economy with values of approximately 14-18 per cent are quite high. The calculations with the Eisner data for the growth of the self-service economy in the US (Table 2.II.) reveal only modest distortions within the range of less than one percentage point, despite rather high values of β .

Depending upon the development of the shadow economy, the overall growth rate can be either overstated or understated at certain times. Nevertheless, empirical evidence suggests that diagnosis errors are within fairly narrow limits. Certainly, an estimation error of one percentage point p.a. does not stand for a benign neglect; however, to draw the conclusion that there is a severe problem of therapy – as it is proposed by the “Unobserved Incomes Hypothesis” – seems to be inappropriate, at least as far stabilization policy in the Federal Republic of Germany is concerned. The policy conducted here neither follows precise quantitative standards à la Tinbergen, nor have policy-makers adopted Keynesian concepts of anticyclical fine tuning. They usually apply simple “rules of thumb” which are applied with respect to political considerations. This holds for fiscal policy and even more for the monetary policy of the Deutsche Bundesbank. Fixing target ranges for the growth rate of its preferred monetary aggregate “Zentralbankgeldmenge” (a close surrogate to M_3) of 5-8 per cent p.a. (1980) and 4-7 per cent p.a. (1981-83) means a quantitative vagueness in comparison to which diagnostic errors related to the shadow economy are of minor importance.

Inflation Rate

Inflation diagnosis can hardly entail serious therapy problems for stabilization policy. It is true that in the shadow economy comparable goods and services are up to 50 per cent cheaper than in the official economy with its tax and regulation burdens. As prices of the shadow economy are not, or only partly, taken into account for the price index computations, the official price records overstate the overall price level. Nevertheless, the overall inflation rate will not really be

overemphasized. Referring to an inflation rate calculation according to

$$g_P = g_P^{OE} + \beta(g_P^{SE} - g_P^{OE}); \text{ where } \beta = Y^{SE} / Y$$

even an increase of the relative size of the shadow economy, β , is not a sufficient condition for a biased inflation diagnosis as compared to the difference between the overall rate g_P and the officially recorded rate g_P^{OE} . To justify the contention of an overstatement of the official economy inflation rate ($g_P < g_P^{OE}$), it would be necessary to prove that prices in the official economy increase more rapidly than those in the shadow economy ($g_P^{SE} < g_P^{OE}$).

There is, however, neither an easy theoretical nor empirical proof. This is supported by the fact that increasing taxation and regulation pressure leads to price increases in the official economy, as Feige¹⁸ claims, and reduces relative to demand the supply of goods and services in the economy due to induced emigration strategies towards the shadow economy. A counterargument is that price increases in the official economy spill over to the shadow economy by the mechanism of relative prices and substitution competition. Furthermore, Gutmann¹⁹ states that the shadow economy's supply is dominantly characterized by services and repair activities suffering from an underproportional increase of productivity growth with correspondingly high prices.

Therefore it is not surprising that empirical clues do not indicate a unanimous bias in the inflation rate as it may be derived from the Kirchgässner data. If there is no significant information distortion, stabilization policy cannot take inadequate actions.

Unemployment Rate

The therapy problem does not gain more importance by potential diagnostic errors in other indicators for stabilization policy. Certainly, it is true that an increase of the official unemployment rate observed along with a growing economy amount to an overstatement of the employment problem: laid-off craftsmen easily find work in the underground economy, dismissed women concentrate on housework again. In both cases registered unemployment rises, even though none of them has become “unemployed”. Gutmann²⁰ asserts that up to 15 per cent of registered unemployed in the

¹⁸ Edgar L. Feige, 1979, op. cit. and 1982, op. cit.

¹⁹ Peter M. Gutmann: The Subterranean Economy, Redux, Paper prepared for the Conference on the Economics of the Shadow Economy, Bielefeld, Oct. 10-14, 1983.

²⁰ Peter M. Gutmann, 1979, op. cit. and 1983, op. cit.

US are illicitly working. Consequently, the true unemployment rate in 1982 was 7.0 per cent which implies overestimation of 2.5 percentage points as compared to the official figure of 9.5 per cent. From the Phillips-curve for the Federal Republic of Germany, based on the official statistics, Langfeldt²¹ concludes that the "natural rate" of unemployment has increased from one to more than 4 per cent since the mid-1970s, postulating that in view of the increased shadow economy, official statistics overestimate the true situation.

Even though these estimations and conjectures appear to be rather plausible, the task of stabilization policy remains unaffected; namely to the extent that unemployment statistics include only those who are really searching for a job in the official sector, regardless of their respective shadow economic activities.

Stabilization policy should still focus on the officially recorded unemployment rate as long as immigration into the shadow economy is a by-product of unemployment in the official sector. People do not register themselves as unemployed in order to work (permanently) in the shadow economy. The unemployment rate reveals in fact the excess supply of labour in the official economy and thus can hardly be an indicator leading to inadequate stabilization policies.

This assessment, however, depends on the reliability of the unemployment statistics with respect to the number of people actually willing to work at the going wage rate. The information validity might differ across countries. For example, in the FRG the unemployment figures are drawn from the labour exchanges. "Unemployed" are by definition those who are looking for an employment of at least 20 hours weekly and are neither permanently ill and unable to work nor otherwise occupied ("registered" unemployed).²² All other applicants for work are part of the hidden labor force ("hidden" unemployment), neither affecting the unemployment rate nor the computation of potential GNP. On the other hand, German unemployment statistics do include even those people who take advantage of the unemployment compensation until eventually leaving the work force because they are no

longer eligible for the benefits ("voluntary" unemployed). With respect to stabilization policy these individuals should not be counted as unemployed. As a matter of fact these reflect a negligible fraction of the overall unemployment figure of the FRG. At least as far as the FRG is concerned one must not assume without qualification that the officially recorded unemployment rate is systematically overstating the need for stabilization policy with respect to its task of providing sufficient opportunities to work in the official sector.

The Shadow Economy as a Social Mollifier

It is the question whether and to what extent the existence of a sufficiently great, potentially productive and dynamic shadow economic sector is a necessary condition for successful stabilization policy in modern societies facing increased inflexibilities in the official sector. Stabilization policy aims at preserving or restoring economic stability in accord with the given system of aggregate economic goals. If there is inflation, prompting the central bank to follow a path of monetary restraint in order to re-establish price stability, monetary impulses will at first disturb the asset market equilibrium. Consequently, the immediate impact of monetary policy results in a transitory tightening of liquidity, yielding a contractive impact on growth, employment and inflation.

While the drop of the inflation rate is clearly welcomed, negative effects on growth and employment are neither intended nor desired. They represent the social cost of anti-inflation policy and seem to be more or less unavoidable; social costs in turn depend on the absorption capacity of the economy. To the extent that firms do not succeed in adjusting for the cost-push pressures associated with monetary restraint, the inflation rate will decrease reluctantly. Due to structural rigidities, a rising number of bankruptcies and mass unemployment could result. Therefore, policy runs the risk of stopping the fight against inflation because of public opinion pressure and a drop in government popularity. This will create the political momentum to switch to an expansive and inflationary full-employment policy, before price stability is achieved.

The interaction of economic and political activities has lead to a higher level of the inflation-unemployment spiral. The shadow economic sector, playing its role as an economic lubricant in shock absorption and as a social mollifier, increases the political threshold which would lead policy to leave its long-run stabilization path. Be it for regaining or preserving economic stability, the existence of a productive and flexible shadow economy has become more and more a basis for the success of stabilization policy.

²¹ Enno Langfeldt, 1983, op cit., p. 149.

²² See Para 101 Employment Promotion Act ("Arbeitsförderungsgesetz"). As opposed to the statistical procedure of the German labour office, the unemployment statistics in the USA are based on recurring household sample surveys. This contains the danger of yielding misleading results as households conceal their true employment situation, because they are afraid of possible disadvantages (e.g. losing the entitlement to food stamps). Therefore G u t m a n n , 1983, op. cit., concludes that in the USA the actual unemployment situation is systematically overstated through the reported unemployment rate.