Prices and Wages in Transitions to a Market Economy

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There are many possible transitions or paths from socialist planning to a market or mixed economy. A complaint that is sometimes heard is that economists do not know how to choose the best path. This is regarded as a failure of economics or economists; a better economics or better economists would have clearer answers.

Criticisms of this kind are based on misunderstanding of what markets do. Economists waste time and resources if they search for an explicit framework setting out the path for transition from socialism to a market economy. As von Mises pointed out long ago, there is no possibility of rational calculation where prices are fixed. For much the same reason that optimal plans are impossible under socialism, there can be no optimal plan for transition from socialism to a market economy. The reason is that the path that the economy follows and the outcomes it reaches depend on the relative prices in the economy and these prices, in turn, depend on the public's anticipations of future outcomes. The anticipations depend inter alia, on the institutions that are chosen during the transition. No planner has the information to solve this simultaneous system optimally, which is to say in accordance with the public's tastes, preferences and productivities and the institutional structure within which markets will operate.

At the opposite pole to planning, is total non-intervention. The claim in this case is that once prices are freed, "spontaneous order" generates the institutions under which the market functions. People will find their preferred arrangements by searching

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and changing the rules. This position ignores the public aspect of institutions or rules for enforcement of contracts and claims, valuing property and claims, deciding on legal tender, and other institutions which markets require to achieve optimal allocations. In the case of socialist countries, there must be rules also for disposing of state property. The diversity in the rules that have been adopted in Poland, Czechoslovakia and Hungary suggests there is substantial uncertainty about how best to establish private ownership and management of productive resources and other assets. There may also be differences about what the public tolerates and in the degree to which their acquiescence is essential for successful reform.

Once legal and political institutions, ownership arrangements and management are chosen, they affect both the transition and the outcomes that are reached. Decisions about what is privatized and how it is privatized have implications for relative prices and valuations. Should buses and airlines be privately owned? What about bus stations and airports? There are many such issues and, once made, these decisions become difficult to change. Those who benefit devote resources to keeping the status quo. Moreover, the choices influence the efficiency with which resources are used, the standard of living that the country achieves, the distribution of income, and the way the political process evolves, for example, toward or away from regulation or private ownership.

There are many issues to resolve. This paper concentrates on two – the price and wage systems. These involve the choice of exchange rate regime and the determination of relative prices. Wages or compensation pose a particular problem in economies without functioning labor markets and little experience with pricing and profit seeking. International agencies have proposed controls on wages to reduce demands. Proposals of this kind have been adopted in Poland and perhaps elsewhere. I show that these proposals are mistaken.

**Prices**

Two problems of designing the price mechanism must be faced in the transition. One is the means of controlling inflation or setting the general price level; the other is
the introduction of a rational set of relative prices that reflect relative scarcity and relative demands. To solve these problems, each country must establish institutions or procedures for control of the budget, control of money, and for ownership and competition so that market forces adjust the relative prices of goods and services.

With the exception of the eastern German states, foreign borrowing is limited during the transition by the relative prices and qualities of exports, capital inflow for specific projects in which foreigners choose to invest, and gifts, grants or loans from foreign governments and international institutions.\(^1\) Relatively large budget deficits typically absorb domestic resources (reducing any trade surplus), reduce gross saving, discourage private investment and reduce conditional lending by international agencies. A useful rule of thumb is that sustained budget deficits in these countries will be financed mainly by money creation at the central bank and not from foreign saving. Hence, monetary stability cannot be achieved without control of government spending.

Establishing a monetary system involves a choice between a fixed or fluctuating exchange rate. The former relinquishes control of the domestic money stock and price level. The latter relinquishes control of the exchange rate. Economic theory does not give an unconditional answer as to which is preferable, and it does not give a precise answer about the conditions under which a fixed or fluctuating exchange rate is preferable.

For the former socialist countries during the transition, there are some unique problems affecting the choice. Information is lacking about current positions. Future growth, inflation, demand for money and trade balance are more than usually uncertain. A policy of letting exchange rates fluctuate while trying to set money growth in relation to growth of real income at zero (or constant) inflation presupposes that

\(^1\)The eastern German states can draw on internal transfers from the older German states. Transfers finance unemployment assistance, social welfare payments, investment in infrastructure and subsidies for consumption and production. In part because the welfare state provides an alternative to labor, and migration to West Germany is open, negotiated wage increases in 1991 exceed their 1990 level by 60%. See *Monthly Report of the Deutsche Bundesbank*, June 1991, p. 8.
there are adequate measures of real and nominal output growth, prices, and inflation. In practice, this is far from true. Typically output is measured in the state industries. Private production and the output of new enterprises is not counted. Although markets grow in importance during the transition, private production and other market transactions are not recorded in official statistics. Prices of many individual goods and services have been set arbitrarily, so a transaction weighted average of prices or rates of price change is not representative of the basket of goods and services currently available and does not reflect relative scarcities and demands. For these reasons alone, it is difficult to achieve non-inflationary money growth either by a fixed or adaptive rule based on past values of prices and output or by discretionary adjustment to past or anticipated future values of these variables.

Transitional problems in controlling money do not end there. Socialist economies do not have developed banking and credit systems, and they do not offer diversified forms of wealth that individuals hold in their portfolios. Financial assets, particularly money and savings accounts, dominate wealth holding. As these countries develop and privatize wealth, the demand for money changes. Some of the changes are permanent, and some are transitory. A central bank trying to control money under these circumstances would have few reliable guidelines about the demand for money, prices and output. It seems likely, therefore, that variability of money growth would be much larger than in developed, market economies, and there would be relatively high uncertainty about future prices and inflation. Such uncertainty would be reflected in real rates of interest and in the variability of exchange rates.

Additional uncertainty would arise from budget finance. The temptation to finance part of the budget at the central bank or provide credit subsidies for favored borrowers is present in many economies. Further, the knowledge that a central bank can finance deficits or offer credit subsidies encourages the government and parts of the public to act so as to make such choices likely. Experience suggests that the temptation to deviate from a non-inflationary course is difficult to avoid. The public will share this concern, so it will be reflected in a risk premium in interest rates. Real interest rates will be higher and the capital stock lower than attainable values.
The example of France and Germany provides current evidence on this point. For five years, France has followed a policy of fixing its exchange rate to the Deutsche mark and avoiding devaluation. By 1991, French inflation was below German inflation. France’s ex-post-inflation-adjusted (real) interest rates, however, remain slightly above Germany’s rates. A plausible explanation of the premium is that it reflects the greater risk of a French devaluation. Given the postwar history of depreciation of the French franc and appreciation of the German mark, the small remaining premium may be looked at as the cost to France of not achieving credibility equal to Germany’s.

Real exchange rates appear to be more variable under fluctuating exchange rates. Mussa’s study of the comparative variability of ex post real, bilateral exchange rates in countries with fixed and fluctuating exchange rates found that the shift to fluctuating rates in the 1970s uniformly raised measures of ex post variability of real exchange rates.2 His measure of variability was from 8 to 80 times higher under fluctuating rates. Studies of multilateral real rates reduce the amount of the additional variability to a factor of 3 to 5 times.

It does not follow that all of the additional variability constitutes excess burden. None of the countries studied followed a precise monetary rule, so some of the increased variability may reflect the greater scope for short-term changes in money growth in a fluctuating rate regime. The fluctuating rate countries intervened in the exchange market, perhaps thereby increasing variability. However, some of the fluctuations in real exchange rates may substitute for other relative price changes, for example changes in nominal and real wages. If substitution of this kind is complete, variability would not be a source of excess burden. It would be surprising if this were the case in the former socialist economies where the properties of the currency would be unknown and uncertainty about policy would be large during the transition to a market economy.

One objective for the former socialist countries is integration into the world economy. If forward markets for their currencies arise, they are likely to have relatively large risk premia and wide spreads between buying and selling rates, given the uncertainty about future policies and future development. Without much history on which to base anticipations, greater weight is placed on current observations; consequently many changes are likely to be treated as permanent until new information arrives. A fixed exchange rate system avoids some of these costs of information, particularly if the fixed exchange rate is expected to remain fixed.

There is an additional advantage of a fixed exchange rate. Countries can achieve both relatively low inflation and low (zero) variability of nominal exchange rates by fixing their currency to a country with low inflation. No country acting alone can achieve both internal and external stability—stability of the domestic price level and exchange rate stability. The presence of countries with low inflation rates permits the former socialist countries to achieve a relatively stable price level at low cost while gaining the benefit of a fixed exchange rate.

Some of the uncertainty (discussed earlier) associated with a rule setting nominal money growth equal to the average growth of output could be avoided by fixing the nominal stock of base money issued by the central bank once-and-for-all. The market would adjust individual prices and the price level to the fixed stock of money. Banks and other intermediaries would produce money balances for the public using the fixed stock of base money as an input. By developing means of economizing on currency or increasing efficiency in the use of reserves, banks could expand money for a given money base, but the amount of such expansion would be limited. Hence prices may change in response to real shocks but inflation would be avoided. Information costs about current or prospective monetary policy would be similar to the costs under a fixed exchange rate. The exchange rate would fluctuate. If most of the external shocks to the economy are real, exchange rate changes buffer some of the shocks, subject to the problems of information and uncertainty discussed earlier.
A Currency Board

A rule fixing the stock of money shares an important feature of the fixed exchange rate rule. There is no need for a central bank to control money in one case or the exchange rate in the other. The central bank can close down its monetary activities and limit its role to supervision and regulation. Markets would determine the price level and exchange rate in the case of a permanently fixed stock of money and would determine the quantity of money and the price level in the fixed exchange rate regime.

Both of these arrangements would operate like the currency boards that are now in existence. Private banks would convert domestic into foreign currency or the reverse and would exchange currency for deposits. With a fixed stock of money, the nominal exchange rate would adjust to clear the market for foreign exchange. With a fixed exchange rate, the foreign exchange market would determine the stock of money. As in a currency board system, the government would collect seigniorage by issuing a local money unit, but the amount issued would be limited in one case by the rule fixing the quantity of money and in the other by the demand for domestic money at the fixed exchange rate.

The two systems would have some common features. Each would be highly credible; there would be no central bank monetary operations. Budget deficits could not be financed by money creation. Real interest rates would approach world rates.

Each system would have a common disadvantage. There would be no lender of last resort to reduce the cost of systemic shocks. If concerns about failure of a major bank induced a run to money, prices and money or exchange rates and money would have to absorb the shock. Banks or the government would have limited ability to buffer the shock by borrowing abroad. The public would experience the effects on output and income.

The fixed exchange rate system with a currency board would have greater stability of the exchange rate and comparable price stability if inflation remains low abroad. I believe either system would provide greater stability and less inflation than what has been established or is likely to come. I will return to this subject in the
Wages

In a market economy, real wage growth is set by productivity growth and nominal wage changes are set by productivity growth plus anticipated inflation. Competitive markets and labor mobility enforce these results. Departures from the equilibrium rates of real or nominal wage growth are driven out by labor mobility and competition between employers.

In Eastern Europe, market competition is a new (or renewed) phenomenon. There is little competition in labor markets between branches of state industries or between state industries and the private sector. In some countries, workers councils (or similar groups) have had a central role in wage bargaining in the past. Some of these groups have retained or augmented their role during the transition.

To offset the power of the unions or workers councils and to supplement competition, countries have introduced wage controls. For example, in Poland wage increases in the state sector are taxed if they exceed a pre-set value. In this case, wage controls are applied selectively to part of the labor market. As an alternative, the government can set wage guidelines or controls during the transition to a market economy. Controls are proposed, as were guidelines in market economies during the 1970s, as a supplement to monetary policy that lowers the cost of disinflation or inflation control. I will treat the argument for general wage controls or guidelines first, then discuss controls on specific sectors.

General Wage Controls

Earlier discussion of wage controls based the argument for controls on some version of cost-push or wage-push inflation. Unions or wage setters were alleged to cause or augment inflation by raising costs of production. With constant markups, prices rose proportionally to wages.

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This theory of inflation is not worth much attention. To explain the rise and subsequent decline in inflation in market economies, wage push has to increase then decrease. Union power must first increase, then decline as the rate of inflation declined in all the developed economies in the 1980s.

Recent arguments for wage controls appeal to so-called anchors. To stabilize the price level, some nominal value must be fixed. If nominal wages are fixed by the government, real wages change with prices and output.

In principle, the nominal wage can be used as a nominal anchor. The exchange rate and price level would then change to achieve the real values and relative prices consistent with the fixed wage rate. For example, once wages are set, prices would adjust to match real costs of production to productivity. The exchange rate would adjust to clear the current and capital accounts at the equilibrium prices and costs of production. The money stock would respond to demand at the fixed money wage and equilibrium level of output and interest rate; money would grow (or decline) to support the equilibrium set of prices and inflation rate.

Proposals for wage setting in Eastern Europe typically introduce a fixed exchange rate in addition to the fixed wage level. Systems of this kind are inconsistent. There are now two fixed nominal values, one consistent with the nominal wage and one consistent with the money stock implied by the fixed exchange rate and decisions in the rest of the world. The real value of money in wage units is fixed, and the system cannot in general reach a stable equilibrium at full employment. There is inconsistency and, therefore, indeterminacy of equilibrium.

If the fixed wage is above the equilibrium wage consistent with full employment, workers are unemployed and there is an incentive to substitute capital for labor. In the opposite case, wages are below their equilibrium value, so there is an unsatisfied excess demand for labor; workers choose more leisure or part time work than they would choose at the equilibrium wage. The price level and the real wage depend on the money stock, however, and the money stock depends on the exchange rate.

Whether prices rise, fall, or remain unchanged depends, to a first approximation, on where the wage rate and exchange rate are set.

Full employment equilibrium can be restored if the exchange rate is devalued or revalued until the exchange rate and all other values are consistent with the real wage. In principle, an adjustment of this kind can be made, although in practice there is a problem of acquiring accurate information on which to base the decision. As discussed above, it is not clear how the policymaker would know where to set the exchange rate for consistency. And, the exchange rate would have to change whenever there are changes in the terms of trade, in factor productivities, or in any other determinant of equilibrium at home and abroad.

Adjustment of the exchange rate by devaluing or revaluing solves one problem but introduces another. The system would be made mathematically consistent, but it would be subject to time inconsistency. People would learn that the exchange rate is not permanently fixed but is to be changed periodically. They would anticipate these changes and adjust prices and wages to reflect anticipated exchange rate changes. They would make errors in this process, introducing excess variability. Moreover, as Kydland and Prescott have shown, this policy would not produce the socially most desirable outcome. A better solution would be to allow the exchange rate to fluctuate if the money wage is fixed. With a freely fluctuating exchange rate the economy reaches equilibrium that is consistent and optimal for that policy rule. But, as suggested earlier, a fluctuating exchange rate may introduce an excess burden of uncertainty during the transition to a market economy.

Selective Wage Controls

Much of what has been said about general wage controls applies as well to selective wage controls with a fixed exchange rate. Equilibrium at full employment can only be assured if there is consistency between the relative prices of labor and foreign

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exchange. There is no reason to suppose this will be so.

The system of selective wage controls and fixed exchange rate has been recommended to Eastern European economies by some of the principal international organizations (and other advisors) and adopted in Poland (and perhaps elsewhere). Firms in the Polish state sector must pay a tax on wage increases above a fixed level. Since Polish prices are rising, real wages in the state sector fall. Other things equal, the fall in real wages induces a shift out of this sector. If the sector starts with excess labor relative to the equilibrium level that would prevail in a competitive market economy, the reallocation would be desirable. Whether the reallocation occurs depends also on the exchange rate which is fixed independently of the money wage. At the given exchange rate, some of the state industries may be induced to expand even if they do not earn competitive returns on capital, continue to receive subsidies, or do not pay taxes. Since the system with two fixed prices does not have a unique equilibrium, it is difficult to know how the system will evolve.

Once again, achieving full employment equilibrium may require a change in the fixed money wage or in the exchange rate to remove the inconsistency. Until the change occurs, unemployment may be higher and the costs of transition larger than in a system without wage controls.

One of the arguments for selective wage control is that there is no competition, particularly for large state sector enterprises. These enterprises lack incentives to maximize profits, so workers or their representatives may demand and receive wage increases in excess of productivity. To avoid unemployment government will be called upon to maintain subsidies to cover the losses. The additional spending would increase the budget deficit and raise money growth. This would increase inflation, induce devaluation and possibly stagnation.

Must constraints be placed on wages until state firms are sold? I do not see why wage controls, or taxes on wage increases, should be a more effective discipline or a more efficient method of reducing excess employment in the state sector than a credible commitment to a fixed exchange rate, budget balance and imports of competing goods. If the Eastern European countries fix the exchange rate and
establish a currency board, there is no mechanism for financing budget deficits by inflation. The commitment to a fixed exchange rate and monetary stability would be as credible as they can reasonably be made. Inflation could not be used to rescue workers even temporarily from the unemployment caused by their wage demands. Once workers learn this, the exchange rate will serve as the anchor. Competition from abroad would limit pricing decisions. There would be no inconsistency between wages and any other fixed nominal value with resulting unemployment or excess demand for labor.

Conclusion

Economic theory does not provide a blueprint for the transition from socialism to a market economy. Pricing, production, location and distributinal decisions under socialism are so far from market determined solutions that it is impossible to predict which industries and firms can adapt to earn competitive returns in a market economy. The only way to learn about the transition is to let the market work.

To work efficiently, the market requires institutions and structure. Private property, accounting and legal systems, and a monetary framework must be put in place. There are many choices to be made.

The paper concentrates on two choices—decisions about the monetary framework and about wage setting. The first of these involves a choice between fixed and fluctuating exchange rates, or between control of exchange rates or control of money. The second requires a decision about wage rates, particularly whether there should be restrictions on wage increases to supplement monetary or exchange rate control.

Economic theory gives a clear response to the second issue; wage control is inefficient and, in general, is inconsistent with control of money or exchange rates. If the exchange rate (money) is controlled, all prices and nominal values must adjust to the values implied by the exchange rate (money). Fixing another nominal value, the money wage or selected money wages, prevents the system from achieving equilibrium at full employment in general. The public must form anticipations about
which price will adjust and about the timing and magnitude of the adjustment. This uncertainty is avoidable and, therefore, imposes an excess burden.

The choice between fixed and fluctuating rates has no general answer from theory. I argue that, for the transition, the choice should be between a permanently fixed exchange rate and a permanently fixed level of (base) money. By fixing one of these variables at least for the transition, the government signals its strong commitment to price stability. To make the commitment credible, the monetary authority should be replaced by a currency board in the fixed exchange rate system or abolished if the money stock is fixed.

Closing the monetary authority means that government spending cannot be financed by monetary expansion. Any remaining subsidies must be paid from tax revenues or from saving. The government cannot provide complete certainty, but it can make a more credible commitment to a fixed exchange rate by closing the monetary authority. A credible commitment to a fixed exchange rate or a fixed stock of money creates firm anticipations that prices will be relatively stable. This encourages investment, including long-term investment to restructure the economy by foreigners and the domestic public. With fixed exchange rates, opening the economy to trade also imposes a set of relative prices for tradable goods. This contributes to rational allocation and efficiency during the transition. A currency board that fixes to a low inflation currency seems likely to lower the cost of transition to a market economy.