

Poland's Road to Euro: A Review of Options*

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1. Long-term economic benefits in adopting the euro

Euroization is an important part of what appears to be a new general tendency in the world economy, one towards fewer but better monies (Dornbusch, 2001).

The main arguments in favour of the European Union (EU) countries' adopting a common currency fall, I think, into three categories: (a) those related to international trade and static efficiency gains, (b) those related to stability, and (c) those related to growth. Although these arguments are well known, I should like to recall them briefly, in order to make the point that while (a) applies to all countries, (b) and (c) apply mainly to the least developed members and candidates of the EU.

Trade and efficiency: The elimination of an exchange rate risk within a common currency area (CCA) reduces the transaction cost in international trade and therefore stimulates the integration of national markets for traded goods. This in turn creates opportunities to reduce costs through economies of scale and increased competition. The efficiency gains of this kind should be enjoyed by all CCA countries, but especially those which trade a great deal with other EU countries.

Stability: The arguments in this category note that the countries whose record of stability was poor in the past stand to improve significantly the credibility of their macroeconomic policies. Credibility gains in those countries would result in lowering inflation expectations, which in turn would lower both current interest rates and the cost of keeping the inflation rate at a low level. Further implications would be a lower cost of servicing public debt and smaller speculative and destabilising capital inflows. Benefits of this kind have been already enjoyed by some countries of the EMU, notably Italy, Spain, Portugal and Greece. However, credibility gains would be particularly strong for new EMU members belonging to the group of emerging market economies (EMEs), such as Poland or Turkey. For the credibility of macroeconomic poli-

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cies in all EMEs is low, the group having suffered from the macroeconomic instabilities which in the past were concentrated in those economies.

Growth: Some EMEs, including that of Poland, also suffer from low domestic savings. In China and South-East Asian countries, the prospect of rapid growth has in the past tended to stimulate domestic savings. During the years 1960–2000, the savings rates in those countries increased from about 15–20% of GDP to levels in the range of 30–50% of GDP. But in those countries public expenditures, and hence tax burdens, have been very low by European standards. The non-state (usually private) sector was then in a position to respond to investment opportunities by increasing its own savings. In Poland, parallel tendencies were likewise observed during the 1990s: a lowering of the tax burden and an increase of the domestic savings rate, produced in both changes of some 5% of GDP. However, the domestic saving rate is still only some 20–22% of GDP. This is much lower than what is needed to support growth at a rate of 6–7%, which I estimate to be the potential rate of growth in the current decade. Judging by the experience of successful EMEs, the investment rate required to support 6–7% GDP growth over a long period of time is about 30 to 35% (Gomulka, 2000).

The Strategy for Poland (Government of Poland, 1999) was designed specifically to close the gap between this required total investment and the supplied domestic savings by increasing the latter by some 8% of GDP and by adopting policies that would maintain the inflow of foreign savings at the present level of some 5% of GDP. However, it appears that the central components of this strategy related to public expenditures (other than public investments) and domestic savings have failed. As a result, public expenditures are unlikely in the medium term to decrease (significantly) in relation to GDP, so that domestic savings are unlikely to show a (significant) increase. This would be no problem whatsoever if Poland were already a member of the EMU. For in that case Polish enterprises would have direct access to the savings pool of the entire Euroland at low interest rates and no exchange rate risk. An increase of the savings inflow to Poland by 8% of Poland's GDP would represent only about 0.2% of the Euroland's GDP. Such an increase, while large for Poland, would require practically no adjustments in the EU interest rates and the euro/dollar rate.

While the potentially large impact of euroization on the supply of savings is well understood by economists, a point little stressed so far, though of general political interest should be made with respect to the parallel impact on investment. Namely, foreign savings could and probably would be used above all by Polish-owned enterprises to supplement their profits in financing their own investments. Under the present floating exchange rate mechanism this is not the case, for the exchange rate risk associated with borrowing euros is particularly high for enterprises which supply predominantly domestic markets, and these enterprises tend to be Polish owned. Euroization would thus remove this form of credit discrimination. This in turn would mean that the utilisation of foreign savings would no longer be tied to the size of foreign direct investments.

2. What is the impact of higher investment on growth and employment?

The (stylised) facts of international growth support fully the notion that the world economy is characterised by a strong duality, as if it were composed of two totally different parts. In particular, nearly all innovative activity is concentrated in the most developed part, which is populated by only a small fraction (some 15%) of the world population, but accounts for most of the world GDP (some 60% if purchasing power parity exchange rates are used, and some 80% if market exchange rates are used). The classical growth theory, typically associated with the economists Ramsey, Harrod, Swan and Solow (Kalecki in Poland), appears to fit much better the data pertaining to that developed part, which I call the Technology Frontier Area (TFA), than to less developed countries, including EMEs. In particular, the trend rate of growth in the TFA is, as the theory predicts, virtually independent of the rate of investment. However, in the countries trailing behind the Frontier, investments in fixed and human capital are strongly associated with the technology transfer from the TFA and are therefore capable of influencing the trend rate of productivity growth, hence also the growth rate of output. The key difference between the TFA and the countries behind the Frontier is essentially that between leader and follower, or between innovator and imitator.

In order to assess the impact of euroization on growth and employment, let us assume that the relationship between fixed capital (K), labour (L), technology (T) and output (Y) takes the Cobb-Douglas form:

$$Y = F(K, TL) = AK^a(TL)^{1-a} \quad (1)$$

where A is a constant and $0 < a < 1$. The (neo) classical assumption that technology T is common to all countries is refuted by evidence. Indeed, T must be assumed to vary strongly between countries.

In the TFA, changes in T are determined largely by those countries' own inventive activity. This activity depends on past research, hence technological change is subject to a great deal of inertia. In the countries behind the Frontier, such as Poland, new technology is largely imported. The level of technology across countries is empirically known to be related to the K/L ratio. Hence, the technology function for Poland can be assumed to have the form:

$$T = a \frac{K}{L} + be^{\alpha t} \quad a, b > 0 \quad (2)$$

where the term $be^{\alpha t}$ reflects the cumulative technology inflow which has not required any physical capital. From (2) we obtain the growth rate of T , denoted below by g_T ,

$$g_T = \lambda(g_K - g_L) + (1 - \lambda)\alpha \quad (3)$$

where λ is the share in total technology stock of the technology whose transfers has required physical capital investment. The growth rate of capital g_K is determined by the investment rate s ,

$$g_K = \frac{\Delta K}{K} = \frac{sY - \delta K}{K} = \frac{s}{v} - \delta \quad (4)$$

where δ is the depreciation rate and v is the capital/output ratio. Technology transfer implies that, in the long-run, v cannot differ greatly from the v prevailing in the TFA, which we shall denote by v^* . In the medium term, v may differ from v^* , and, if the difference is large, it would be converging towards v^* .

From (1), the growth rate of output g_Y is as follows:

$$g_Y = ag_K + (1-a)(g_T + g_L) \quad (5)$$

Taking into account (3) and (4), equation (5) for g_Y becomes:

$$g_Y = a\left(\frac{s}{v} - \delta\right) + (1-a)\left[\lambda\left(\frac{s}{v} - \delta\right) - \lambda g_L + (1-\lambda)\alpha + g_L\right]$$

Rearranging we have,

$$g_Y = \beta s + \gamma g_L + c \quad (6)$$

where $\beta = \frac{1}{v}[a + \lambda(1-a)]$, $\gamma = (1-\lambda)(1-a)$ and $c = (1-a)(1-\lambda)\alpha - \delta$

In the short run both v and λ can be taken as given, though neither is necessarily constant. The growth equation (6) indicates that the investment rate and the growth rate of employment may be regarded as two independent growth determinants.

In a long-run growth equilibrium we should expect that $v = v^*$, the latter being the world common K/Y ratio, assumed constant. This, together with equation (5), implies that

$$g_Y = g_K = g_T + g_L \quad (7)$$

The two equations, (7) and (4), and (3) determine the growth rates g_K , g_Y , g_T and g_L as functions of the investment rate s .

$$g_T = \alpha \quad (8)$$

$$g_Y = g_K = \frac{s}{v^*} - \delta \quad (9)$$

$$g_L = \frac{s}{v^*} - \delta - \alpha \quad (10)$$

According to this solution, the investment rate determines not only the growth of output, but also the growth of employment.

One could, however, raise the objection that the decade 2001–2010 cannot be described as long-term, since during that period g_T may differ from α , and the K/Y ratio may differ from v^* . In order to adapt the model to the ‘medium term’ with a view to derive policy implications, let us make certain assumptions about its coefficients. Let us assume that $\lambda = 1/2$, $a = 1/3$, $\alpha = 0.05$, $\beta = 0.03$, $v = 3$. Hence $\beta = 2/9$, $\gamma = 1/3$ and $c = -4/3\%$. In this numerical example the growth equations are as follows:

$$g_Y = \frac{2}{9}s + \frac{1}{3}g_L - 1\frac{1}{3} \quad \text{by (6)} \quad (11)$$

$$g_K = \frac{1}{3}s - 3 \quad \text{by (4)} \quad (12)$$

$$g_T = \frac{1}{2}(g_K - g_L + 5) \quad \text{by (3)} \quad (13)$$

Thus, an increase in the investment rate by one percentage point would increase g_Y by 2/9%, g_K by 1/3% and g_T by 1/6 %. An increase in the employment rate by one percentage point would increase g_Y by 1/3% and reduce g_T by 1/2%. These numbers indicate that the sizeable increase in the inflow of foreign savings which would result from euroization, could have a considerable impact on the growth rates of output, capital and technology, much lesser on the growth rate of employment.

The conclusion stated above applies to both the short term and the long term in the special case in which all technological change requires fixed capital investment ($b = 0$ in (2), so $\lambda = 1$ in (3)). In this case, $Y = AK$, so that $g_Y = g_K = As - \delta$, and $g_T = g_K - g_L = As - g_L - \delta$. Hence an increase in the growth rate of employment, given the investment rate s , would have no impact on the growth rate of output, as the growth rate of labour productivity would be reduced by the same magnitude. In this so-called AK-model, an increase in the investment rate is required in order to increase both growth rates, of output and employment, if the growth rate of technological change is not to decline.

3. Medium-term concerns in selecting a eurostrategy

While the long term gains of euroization are large enough to favour the choice of a fast lane approach, in the medium term the potential risks and net costs vary substantially among the different possible strategies. Of particular concern is the impact of any chosen strategy on developments in the three areas: (1) the rate of disinflation—and hence the risk to meeting the Maastricht criteria on inflation and interest rates, (2) the current account deficit and (3) the size of foreign debt, the risk being that both the CA and the debt can become excessive. Other causes of concern are supply-side and demand-side negative shocks—that they may be excessive if changes in the zloty exchange rate are too fast and too large. I shall discuss these concerns in general terms in this section and in a somewhat greater detail in the following two sections.

3.1 Inflation and interest rates

While Poland's failure to date to reform public finances has increased the attractiveness of an early euroization strategy, it has also increased the risk that Poland will not be able to meet in the near future the Maastricht criteria regarding inflation and interest rates. There are essentially three possible policy responses to these conflicting implications:

- (A) One response is to adopt a unilateral euroization as early as feasible on purely internal practical grounds, e.g. soon after joining the EU (probably January 2004).
- (B) The second response is to adopt policies explicitly aimed at meeting the Maastricht criteria by about 2007–2008, which is probably the earliest feasible date for Poland's joining the EMU.
- (C) The third response is to delay the entry to the EMU on the grounds that the costs of meeting the entry requirements are so large that they must be spread over a longer period, e.g. 10 years.

Strategy (A) offers the benefits of an early entry, in particular—much lower interest rates, while finessing the cost obstacle by shifting the question of meeting the Maastricht criteria on inflation to a later date. I shall discuss the risks associated with this option in the next section.

Strategies (B) and (C) are variants of what I call the standard approach, one which presupposes full cooperation with the European Central Bank (ECB) and the EU authorities.

3.2 Current account and foreign debt

A high growth strategy in the circumstances of low domestic savings presupposes the acceptance of a high current account deficit. In order to lift the investment rate to a level of about 30% of GDP, the deficit would have to increase from the present level of about 5 to 7% of GDP, to a level possibly in the range of 9 to 11% of GDP. Foreign direct investment and transfers from the EU may amount to 5–6% of GDP. Therefore foreign borrowing by banks and enterprises would have to amount to some 4–6% of GDP. Given the currently low level of the country's foreign debt, an annual increase in it by about 5% of GDP would be acceptable for the several years of the transition period. If the prospect of Poland joining the EMU in about 6 years were credible, Poland's total foreign borrowing could yet increase substantially without any significant risk to macroeconomic stability. If the official international reserves of the NBP are kept comfortably above the short term debt, augmented by portfolio capital and annual debt amortisation, then the maximum safe level of total foreign debt could be some 70% of GDP, which is the double of its present level of about 35% of GDP. An additional debt of 35% of GDP would be sufficient to finance an additional CA deficit of some 5% of GDP for 7 years. The debt constraint may therefore be binding for strategy (C), but need not be binding for strategy (B).

3.3 Supply and demand side shocks

The euroization of the Polish economy would deprive it of the ability to respond flexibly to external shocks through a suitable change of the zloty exchange rate. The associated cost is however known, or at any rate believed to be relatively small. A much greater potential problem for the real economy is that, during transition to the euro, the zloty exchange rate may become highly volatile, causing significant supply-side shocks for importers, demand-side shocks for exporters, and cash flow shocks for holders of foreign debt. This exchange rate volatility would be particularly high when the CA deficit is larger than at present. Moreover, an increasing CA deficit under strategies B and C presupposes some persistent real appreciation of the zloty. Such appreciation should be also expected to inflict costs on the supply side. In theory, the cost of high volatility of the exchange rate shocks could be curbed by the ERM-2 arrangement. In practice, the $\pm 15\%$ band can be shifted under strong market pressure.

4. The unilateral euroization strategy

The idea of adopting unilaterally a major world currency, such as the US dollar, the euro or the yen, as a national currency has been proposed or revisited for several countries. This idea has been typically presented as an improvement over currency board arrangement, and as an even bigger improvement over the standard fixed peg exchange rate policy.

Bratkowski and Rostowski have modified this idea for Poland (and some other EU applicant countries, see Rostowski, 2001a, b). The modification stipulates that unilateral euroization (UE) is just a transitory policy to be followed by full membership of the EMU.

4.1 Key advantages

The UE strategy offers two closely related advantages: access to large foreign savings and substantially lower interest rates. These advantages are therefore tailor-made for a country, such as Poland, where domestic savings are, and are likely to remain, low for reasons of culture and politics, while the pool of highly profitable investment projects is large due to earlier reforms and the availability of entrepreneurial capital.

4.2 Key risks

Unfortunately, the risks associated with this strategy are also formidable. The primary risk is that, due to the impact of the Harrod-Balassa-Samuelson effect, Poland will be unable to meet the Maastricht criterion on inflation for a very long time. Sinn and Reutter (2001) calculated that this effect would be much greater in Poland than in Germany with the result that, under fixed exchange rates, inflation in Poland would be 4.2% higher. This calculation is based on the empirically supported assumption that the labour productivity growth in

Poland is 10.3% in the traded sector and 3.9% in the non-traded sector. It is also assumed that nominal wages grow at the same rate in both sectors.

It is conceivable that the EU countries may be persuaded to modify the Maastricht criterion on inflation for those countries which adopt the euro unilaterally. But the risk that they will keep the criterion in place is considerable. This risk would be priced in by money markets, and this pricing would be reflected in higher interest rates on Poland's foreign debt. If that risk is high, the potential advantages of a unilateral euroization (EU) would be much diminished, or even wiped out altogether.

Another risk is that adoption of this strategy would lower pressure on fiscal and other reforms. That risk would also be priced in by money markets, reducing further any potential advantages of the UE strategy.

Finally, until Poland joins the EMU, there would be the standard risk associated with a fixed exchange rate, namely that foreign borrowing by corporates could explode, as it did in the Czech Republic in 1995 (Dedek, 2001).

5. The standard strategy: a fast lane variant

5.1 A broad outline and timetable

This option is, I believe, still the current official strategy. Its central theme states that:

In view of large benefits which an early entry to the EMU would bring about, Poland will offer to submit its exchange rate policy to the rigours of the ERM2 soon after joining the EU (Government of Poland, 1999, p. 26).

If Poland were to join the UE on 1 January 2004, this statement proposes to join the ERM-2 sometime during 2004, perhaps on 1 January 2005, and to join the EMU two years later or soon afterwards.

This broad timetable already more or less defines a very particular disinflation path necessary to meet the Maastricht criterion. Namely, the path would begin with the inflation target adopted for 2001, 6 to 8%, and would end with the inflation rate of about 2% (required by the Maastricht Treaty for entry to the EMU), in 2006 or 2007. Assuming a gradual and smooth disinflation, the intermediate targets would need to be as follows: 5 to 7% in 2002, 4 to 6% in 2003, 3 to 5% in 2004, 2 to 4% in 2005 and 1 to 3% in 2006. This path departs somewhat, but not substantially, from the one proposed in 1997 by the Government and the NBP, and embraced later by the NBP's RPP, which envisaged an inflation rate in 2003 of below 4%.

5.2 Initial conditions and macroeconomic policies

The initial conditions of transition to the EMU are to be carefully noted, since they will have a large impact on the economic policies, the macrofinancial risks and the growth performance during the transition period. The standard euroization strategy will be helped by the currently low stock of foreign debt and the high rate of unemployment. As I noted earlier, the low stock provides room for a sizeable increase of the CA deficit from the present 5–6% of GDP. Such an increase would serve two purposes. It would provide room for some real appreciation of the zloty and a high rate of economic growth. The high unemployment rate will keep the growth of nominal wages low, and this should support disinflation. Declining inflation would permit the NBP to keep interest rates on a declining trend. This latter is needed to meet the Maastricht criterion on interest rates. Lower rates would also stimulate bank borrowing by companies. This borrowing remains low by international practice, which is another favourable initial condition of the Polish economy. Bank credits would be funded to a greater extent than at present by foreign borrowing. This borrowing would be encouraged by the expectation that, during the transition, the zloty will rather appreciate than depreciate. But any appreciation should be moderate. Kawalec and Krzak (2001) warn that the current policy of pure floating may cause excessive appreciation, which could stifle economic growth. They advocate a policy of ‘controlled appreciation’. I accept their suggestion that a rapid appreciation should be avoided. However, this aim can and must be achieved while keeping the economy on the targeted disinflation path. Hence, the balanced policies proposed in this paper: a moderate pace of disinflation, much lower real interest rates, higher CA deficit, labour market liberalisation, official reserves kept above short-term debt, the long-term debt of corporates allowed to increase more sharply.

It is interesting, though perhaps not surprising, that the current theoretical debate on exchange rate policies has revealed sharp disagreements between fixers and floaters (Reinhart 2000, Obstfeld and Rogoff, 2000), prompting Williamson (2000) to argue against any ‘corner solutions’. In fact monetary authorities and governments in most countries have tended to practice the Williamson doctrine (Calvo and Reinhart, 2000). The intended adoption of the ERM-2 by Poland would mean embracing this doctrine for a while with respect to the euro. Following the entry to the EMU, Poland will have a fixed peg for transactions within the Euroland and fully floating rates for transactions outside the area. This arrangement, though a combination of two corner solutions, will be a kind of intermediate solution.

An important feature of the initial conditions in Poland is a severe ‘reform deficit’ in the areas of public finance and the labour market. Large and increasing unemployment should help to induce a substantial, indeed radical, liberalisation of the labour code, and this in turn could help to keep low both the growth of nominal wages and the natural rate of unemployment. A reform of public finances is needed to release resources for investment and growth. This

redistribution of resources requires restructuring of public expenditures away from social transfers. If such a restructuring does not take place, which is a possible development during the transition period, the rate of unemployment will continue to be very high. Although this outcome could increase social tension, it should also help to keep the economy on the targeted disinflation path. The only necessary fiscal requirement is the Maastricht criterion of keeping the deficit below 3% of GDP. But this entry requirement can probably be met without any substantial fiscal reforms. The Maastricht stability and growth pact would require Poland to have, after joining the EMU, a balanced budget on average and a budget surplus in years of rapid growth. However, meeting this post-entry requirement would be eased by lower debt servicing costs, EU net transfer to the budget and some 6–7 years of GDP growth between now and the entry date.

5.3 Macroeconomic risks

There will be considerable risks associated with this fast lane variant of the standard euroization strategy. These risks have five ultimate causes: excessive and poorly structured public expenditures, low domestic savings, a well reformed economy capable of a fast productivity growth and high returns to investments, a high growth of the labour supply, and a large pool of the poorly educated labour force. The first two causes are interrelated (see section 2 of this paper). Attempts to remove these two causes have so far been largely unsuccessful. But if domestic savings continue to be low, then in view of the high growth potential, we have a range of possibilities between the following two extreme scenarios.

One such scenario is that which we have already begun to observe in the years 2000–2001: a moderate CA deficit, a low increase in foreign debt, extremely high real interest rates and, as a result, a costly recession in industry and construction, and a very high and still increasing unemployment. Under this scenario, the risk of a macroeconomic instability is indeed close to nil. However, the rate of unemployment could reach a socially unsustainable level, affecting very seriously some parts of the country and some segments of the population. This experience of rapid and prolonged poverty growth rather than economic growth is bound to put into the question the underlying policies, in particular the judgement of NBP decision-makers with regard to the choice of a disinflation path and the optimal level of macroeconomic risk.

The other extreme scenario is the one that I outlined above: a high CA deficit, a moderately rapid increase in foreign debt of corporates, much lower real and nominal interest rates, a rapid growth of GDP, and a stable or declining unemployment. Under such a policy, the zloty may appreciate moderately in real terms, and this appreciation along with high unemployment and labour market reforms, would help to meet the Maastricht criteria on inflation and interest rates. The risk of a macroeconomic instability would be clearly higher than at present, might well become significant, rising together with the

size of the foreign debt in relation to GDP. However, as I argued earlier in this paper, this risk need not be excessive if the projected entry date to the EMU, the years 2006–2007 is really credible. The conditions required to keep this risk acceptable are that the debt increase is smooth and takes place at a moderate rate, the debt's maturity composition is heavily skewed in favour of post-entry dates, and official reserves are kept comfortably above short-term payment obligations. The main intellectual and policy innovation of the moderately fast growth variant of this standard euroization strategy lie in the acceptance of high CA deficits already during the transition to the EMU.

Intermediate cases are those which lie between the two extreme strategies. There is little to be gained from discussing them in this paper.

6. The standard strategy: a slow lane variant

The losses associated with a delayed entry to the EMU are self-evident. But are there any substantial gains? Can the costs and the risks associated with a fast lane variant of the standard strategy be reduced significantly by postponing the entry for several years?

Let us recall that the costs and the risks of that strategy are inter-related. The former are associated first and foremost with the expected real appreciation of the zloty, while the latter are associated with a projected high CA deficit and an increasing level of foreign debt. Given the large size of the HBS effect, some real appreciation may be needed to support a disinflation policy, while in view of the low level of domestic savings, the CA deficit will be required to support a high growth policy.

These costs and risks can be lowered if strong reforms are undertaken to increase both domestic savings and the flexibility and competitiveness of domestic markets, especially the labour market. It may be argued that although the Buzek-Balcerowicz attempted reforms of this kind have failed, in the new circumstances of a very high unemployment, the need for such reforms could become more evident to political leaders and the general public. Moreover, it may well be that the implementation of such reforms requires more time for preparation and more time for implementation than the Buzek–Balcerowicz government had or was prepared to give.

However, one cannot rule out the scenario that the much needed fiscal reforms will not be undertaken during this current decade. In the medium term there might, indeed, be some regress in this area of public finances, beginning with the adverse fiscal developments in 2001. On the other hand, substantial reforms of the labour market may be embraced. Other structural reforms, including those which are socially sensitive but whose implementation is inexpensive for public finances, can also be undertaken. Does this mixed reform scenario provide any case for adopting a slow lane variant of the standard euroization strategy?

The answer depends on the magnitude of risk which it would be sensible to accept. If regress in public finances were to be considerable, then the risk of macroeconomic instability associated with an attempt to implement the fast-lane variant would increase sharply, making it at some point a sub-optimal strategy.

7. Concluding remarks

The unilateral euroization strategy, if adopted, would bring forward the substantial benefits which Poland stands to gain by adopting the euro as its national currency. However, the strategy involves a risk that the date of official entry to the EMU will be highly uncertain, possibly much delayed. Therefore this strategy could and should become a serious candidate for consideration only if the Maastricht criteria on inflation and interest rates can be renegotiated. As things stand now, the choice is, effectively, between different variants of what I call the standard strategy. The costs and risks associated with a fast lane variant of this strategy are considerable. However, the initial conditions and potential net gains are such that, I suggest, Poland should attempt to implement that variant.

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