

Is it time to finally take Dr Kalecki's rational planning medicine?

INTRODUCTION

A decade ago in Eastern Europe, and then Russia, politicians and the public were united in their commitment to end the despised central planning system and to switch to a free market economy as quickly as possible. People expected significantly increased living standards to swiftly follow. In reality even for Poland, arguably the most successful reforming country, transition has been very painful. Initially nearly all felt the pain, today the economically weak (old, sick geographically isolated etc) continue to suffer. In many Eastern European countries the average standard of living still lags behind that actually achieved in Communist times. In much of the former USSR economic meltdown accompanies failed market reform. In August 1998 Russia added financial bankruptcy to the effective moral and organisational bankruptcy of its central state. As the Russian economy lies in ruins talk turns to the restoration of central planning, many Russian politicians point to the centrally planned relative success of the Belarus economy. Central planning is back on the Russian political agenda.

Would a return to central planning be a fatal error? Western mainstream economists strongly think so (consult a standard economics textbook on the relative merits of planned and free market economies). Planning is inefficient, it will inevitably produce the wrong balance of goods. The market is supreme. If a problem arises in a market economy, such as unemployment, it is not the market's fault; markets are efficient, the problem must result from interference to the market from imperfections such as trade unions. Mainstream thought seems to be blind to examples of successful central planning. Teranishi (1994) explains the key role of central planning in Japan's post-war recovery. Brenner (1998) points out how close co-operation between state, banks and industry in Germany and Japan led to their toppling of US manufacturing supremacy in the 1960s. French post-war central planning and South Korea's centrally planned rapid industrialisation are likewise ignored. So given the effective collapse of efforts to introduce the market economy in many former Communist countries it is perhaps time to look beyond the recommendations of the pro-market economics mainstream.

Dr Michal Kalecki is a key figure in current economists', particularly post-Keynesian economists, criticisms of mainstream economic orthodoxy. His work on the nature of the market economy (published in English from the 1930s to his death in 1970) is considered by many to be as equally significant as Keynes' own more famous contribution. He is thought to have beaten Keynes to the notion of effective demand. Robinson (1966) page 337 states "Michal Kalecki's claim to priority of publication is indisputable". Dr Kalecki's ideas on central planning are less widely known. They were written in Polish for the Polish Communist Government! From 1955 to 1968 he worked as the Head of the Commission for Perspective Planning and then as Chairman of Poland's COMECON delegation. Kalecki's unimplemented Polish 1961-1975 Perspective Plan is considered to be a masterpiece in the theory of central planning. It embodies Kalecki's theory of growth under socialism. In brief, production and investment are planned to achieve a socially acceptable balance of capital accumulation (investment) and consumption. Potential production bottlenecks and crucially external trade constraints are carefully built into the planning process. The result is a workable realistic plan

aimed at both encouraging investment for future growth and consumption for current satisfaction/motivation.

Given Russian meltdown, could such a rational perspective plan rebuild the Russian economy? Indeed could such a plan have proved a rational and painless (in fact beneficial) first step to reforming even Poland, enabling subsequent transfer to the market economy to begin from a stronger base with less initial sharp recession and accompanying waste of human life? My article seeks to clearly explain Dr Kalecki's theory of growth under socialism and to fully explain his notion of perspective planning, as represented in Kalecki (1972).¹ I then consider why such rational planning failed to be implemented under Communism. Finally, after identifying the necessary political/social conditions for successful perspective planning, I ponder whether Russia, or similar collapsing former Communist countries, could actually successfully implement rational perspective planning today.

CENTRAL PLANNING IN THEORY

Past events cloud opinions over what is actually possible today. Let me illustrate this concept with a contemporary example. Currently the independent European Central Bank fears a rise in inflation more than a slump in the Eurozone. The European Central Bank's fear is that a small rise in inflation will inevitably lead to a further escalation of inflation. This fear is largely based on the behaviour of western economies in the 1970s, once inflation rose it kept on rising. The only long-run solution was to restrain demand. Such fears were absent as industrial economies boomed from 1895 to 1914, rising prices contributed to higher profits and were seen as a sign of economic health, see Hobsbawn (1987) page 37. The Keynesian revolution ensured that moderate inflation was accepted as an indicator of economic health in the post-1945 world economy. To assume inflation would behave in the same way today as it did in the 1970s is to assume that the social and political conditions of the 1970s still apply today. If social and political conditions are unchanged in Europe today the European Central Bank is wise. If not the lesson that moderate levels of inflation are preferable to deflation will have to be learned the hard way. In such a scenario actual experience of growth stagnation (or even slump) combined with stagnant prices (or even deflation) would gradually change policy makers' opinions, creating a new yesterday to dominate today's priorities.

Opinions over what is possible today thus tend to reflect what happened yesterday, but if today is not the same such opinions are misplaced. For former socialist economies what happened yesterday is clearly a disaster. Central planning left the people of the USSR and Eastern Europe with insufficient levels of consumption, environmental destruction and an irrational bias to heavy industry. It is natural for the uninformed observer to assume if central planning were to be reintroduced today the outcome would be the same. Questions of political and social structure are easily ignored, central planning must be inherently flawed no matter what the accompanying political and social structure may be. The fact that the USSR and Eastern European countries were undemocratically run for the benefit of their senior party elites (their Nomenklatura) is forgotten. By assuming central planning is inevitably flawed by yesterday's experience in the east we are implicitly assuming that

¹ I am relying on G Feiwel's summarisation of Kalecki's original Polish work, see page 23-49 of Kalecki (1972).

central planning is always associated with an undemocratic political structure. If a centrally planned economy were democratic could not the results be different? To answer this question we must forget yesterday and analyse central planning on a theoretically blank piece of paper. Once we understand what is theoretically possible we must then ask what political and social conditions are required to allow central planning to fulfil its theoretical potential. We may find that yesterday's experience of central planning is untypical and no guide to its potential success today.

The Objective Function Of A Socialist Economy

The objective function of a market/capitalist economy is profit. Capitalists do not produce consumer goods or capital goods with the objective of maximising the nation's rate of growth or level of consumption. Capitalism's central problem is essentially a realisation problem. Production is for profit, profit is not known prior to production but only after production has actually taken place, when the output is actually sold in the market. It is then that the capitalist realises his/her actual level of profit. The inevitable uncertainty of capitalist production builds in a potential for uneven growth into capitalisation. If profits when realised are higher than expected the economy is likely to boom as capitalists step up their investment in search for further high realised profits. If realised profits are insufficient to induce capitalists to invest the economy is likely to stagnate. Keynes' animal spirits rule; we have the basis of the business cycle, the most permanent historical feature of the behaviour of capitalist economies.² Instability is an inevitable feature of the capitalist system.

In sharp contrast a centrally planned economy need not boom and slump. Central planners can set prices, wages and production such as to ensure that there are no realisation problems, and no reason to depart from steady growth and a full use of society's resources. The economy can thus potentially attain and sustain, for an infinite period, equilibrium at a steady growth rate. The potential conditions for steady growth (extended reproduction) are illustrated by Marx in Volume Two of *Capital* Chapter 21, see Desai M (1987) for a clear explanation. Marx assumes two sectors/departments, one making consumer-goods, the other making capital-goods. Balanced growth depends on capitalists choosing to consume and accumulate (invest) appropriate proportions of their profit. If the right proportions are chosen, as Morishima (1973) notes, we have the fastest converging two-sector growth model in the history of economic literature. Socialists were horrified with Marx's notion that capitalism could theoretically sustain steady growth without crisis. In practice capitalism has not proved so stable. The state has stepped in to try to mitigate the severity of the economic cycle by attempting to influence capitalists' behaviour. Instability persists in, as Kalecki defines, this antagonistic capitalist system. Lack of co-ordination between antagonistic agents ensures continual instability. The implication for socialist economies is clear. Set appropriate levels of accumulation and consumption throughout the economy to ensure steady growth (unbroken extended reproduction) in the harmonious centrally planned system.

Avoidance of recession/crisis cannot represent the sole objective function of a socialist economy. A socialist economy by definition has a higher purpose, as Kalecki explains the

²Such permanent fluctuation stands in sharp contrast to the Walrasian notion (still held by the economics mainstream) of steady equilibrium and return to steady equilibrium if anything real in the economy changes.

key objective of this harmonious system should be to maximise consumption. What else could possibly be the objective function of a socialist economy other than the ideal of prosperity for all? Appropriate central planning can eliminate realisation problems, ending economic instability, leaving the socialist economy free to maximise the population's standard of living, the true objective of a socialist economy.

The Time Question, Bread Today Or Jam Tomorrow

If tomorrow the world was to end, then today's consumption would be all that mattered, there is no reason to produce any capital-goods for the future, just consumption-goods for today to maximise current consumption. If the world does not end tomorrow, or the next day, then to maintain present levels of consumption the economy must produce the necessary capital-goods to maintain the current level of output, Marx's simple reproduction, see *Capital* Volume Two Chapter 21. To consume more tomorrow we must produce more capital-goods today to facilitate a higher level of output and consumption tomorrow (extended reproduction). Future consumption thus has the opportunity cost of foregoing some consumption today. The more we hope to consume in the future the less we can hope to consume today.

Kalecki (1972) formalises the link between growth and investment. Let our unit of time be a year. **I** represents current gross productive investment. Let **m** equal the amount of investment required to produce a unit of output, **Y**. Consequently **1/m** represents the output effect of a unit of investment. **1/m** will depend on the nature of the productive process, particularly the economy's prevailing capital labour ratio (organic composition of capital). The output effect/productivity of current gross productive investment per annum is thus given by:

$$\mathbf{1/m.I} \quad (1)$$

If depreciated fixed capital were not replaced future output would fall, letter **a** denotes the effect on output of depreciation (Kalecki's parameter of amortisation). Depreciation will thus drag output down by **a.Y** per annum. Kalecki defines **u** as the parameter of productivity improvement independent of investment. Such non-investment induced productivity growth results from more efficient utilisation of existing capacities, through increased efficiency of planning, or increases in the workforce's skill level, or crucially the workforce's level of motivation. Such productivity increases will increase output by **u.Y** per annum. In total the impact of gross investment, depreciation and non-investment induced productivity growth on output per annum is given by:

$$\Delta Y = \mathbf{1/m.I} - \mathbf{a.Y} + \mathbf{u.Y} \quad (2)$$

In terms of growth rates, the growth of output, **r**, would be given by:

$$\mathbf{r} = \Delta Y/Y = \mathbf{1/m.I/Y} - \mathbf{a} + \mathbf{u} \quad (3)$$

Equation 3 is Kalecki's fundamental growth equation. This equation illustrates the central relationship between growth and investment. For the economy to grow faster, given constant **m** and **u**, **I/Y** must rise. Maintenance of steady growth does not however imply an

increase in I/Y , assuming m does not decline and a and u remain fixed. Investment and consumption will grow at the same steady rate as output grows.

Socialist economies must decide upon what growth rate to aim for, realising the implication of the planned growth rate on the immediate distribution of output between consumption and investment. Equation 3 shows that with constant m , a and u any decision to accelerate the growth rate relies on increasing I/Y , ie reducing the share of consumption in current output. As at a higher growth rate consumption and investment will also grow at a higher rate, a lower share of consumption in output today will soon represent a higher absolute level of consumption tomorrow. Patience is rewarded. The danger of increasing the growth rate too quickly is that by doing so the planners will cause an unacceptably low level of consumption in the immediate short run. Kalecki points to this problem in Kalecki (72) page 30.

Nearly two years ago I was shown a working paper on setting the share of investment in national income with the aim of maximising total consumption for the long-range plan period. Through mathematical analysis the method offered not too attractive results: it showed that for a twenty-year period productive investments should constitute about 80 percent of national income. This is not even as bizarre as it might appear; a high share of productive investments in national income allows for its high rate of growth and this so raises its level in the following years of the long-range plan that consumption not only in those years, but even for the entire period of the plan, is higher than with a lower share of investment in national income. But that which is comprehensible is not always reasonable: even if one would not be concerned with the suffering of the unfortunate population in the first years of the long-term plan, one would have to take into account that, with the assumed standard of living, this population would soon perish and thus would be unable to fulfil the plan.

To expand on Kalecki's sentiments let us consider two simulated scenarios. To provide an intuitively clear quantitative example I choose to move Kalecki's fundamental growth equation (equation 3) from continuous to discrete time. Investment goods must first be built before they can become productive. This year's growth rate depends on this year's levels of depreciation and non-investment induced productivity growth combined with last year's level of gross investment (which comes on stream this year) as a proportion of last year's year-end output.³ This year's level of consumption depends on this year's level of output minus this year's level of gross investment. Table 1, overleaf, shows the process. We must assume a base level (year 0) of output and gross investment as a proportion of output to carry into year 1 of our example. Year 1's growth rate (r) depends on the proportion of gross investment in output (I/Y) at the end of year 0 multiplied by the effectiveness of investment this year ($1/m$), minus this year's rate of depreciation (a) plus this year's level of non-investment induced productivity increases (u).

³Kalecki's fundamental growth equation may be seen to counter-intuitively suggest depreciation actually occurs and drags down this year's output. An efficient plan would ensure depreciated capital would be replaced (maintained) smoothly to ensure no disruption of production. Implicitly Kalecki's fundamental growth equation assumes part of gross investment is used to maintain existing productive capital. We could split gross investment in equation 3 into net investment and replacement investment. If replacement investment matched depreciation, growth would simply depend on net investment as a proportion of output and u . Discretely, this year's output would depend on last year's level of net investment, as a proportion of output at the end of the last year, combined with this year's level of u .

TABLE 1

YEAR	r (%)	1/m	I/Y	a	u	Y (end)	C	I
0			0.15			100.0	85.0	15.0
1	4.5	1.5	0.15	0.2	0.02	104.5	88.8	15.7
2	4.5	1.5	0.2	0.2	0.02	109.2	87.4	21.8
3	12.0	1.5	0.2	0.2	0.02	122.3	97.8	24.5
4	12.0	1.5	0.2	0.2	0.02	137.0	109.6	27.4
5	12.0	1.5	0.2	0.2	0.02	153.4	122.7	30.7

For our assumed values of **I/Y**, **1/m**, **a** and **u** the growth rate in year 1 will be 4.5%. Consumption (**C**) and investment (**I**) will both grow at 4.5% if **I/Y** is kept at 0.15 in year 1. Let **I/Y** be increased to 0.2 in year 2. Year 2's growth rate (given constant **1/m**, **a** and **u** in year 2) is determined by year 1's **I/Y**, so remains at 4.5%. As a smaller proportion of output is consumed in year 2, despite overall output growth, consumption dips. If such a tightening of belts and escalation of investment left **u**, **a** and **1/m** unchanged in period 3, growth would escalate to 12%, Year 3 consumption rebounds as output strongly forges ahead, a smaller proportion of output representing an absolutely higher level of consumption. If **I/Y** is kept at 0.2 in year 3, 4 and 5 output, consumption and investment will all grow at 12% for all three years (assuming all other parameters are unchanged).

TABLE 2

YEAR	r (%)	1/m	I/Y	a	u	Y (end)	C	I
0			0.15			10.0	85.0	15.0
1	4.5	1.5	0.15	0.2	0.02	104.5	88.8	15.7
2	4.5	1.5	0.2	0.2	0.02	109.2	87.4	21.8
3	0.0	1.5	0.2	0.2	-0.1	109.2	87.4	21.8
4	5.0	1.5	0.2	0.2	-0.05	114.7	91.7	23.0
5	12.0	1.5	0.2	0.2	0.02	128.4	102.7	25.7

Such a scenario is imaginable as long as the dip in consumption in year 3 does not harm motivation. If the leap in **I/Y** were democratically chosen this indeed may be the case, if not autocratic Stalinistic terror may still prevent a dip in motivation. Consider table 2, the economy is identical to that displayed in table 1 for the base year and year 1 (I assume, as in the first example, that **1/m** is constant at 1.5 and **a** is constant at 0.2 throughout the example). Let **I/Y** be increased to 0.2 in year 2, the result consumption in year 2 drops. Let us assume reduced consumption in year 2 undermines the population's motivation in year 3, **u** falling to negative 0.1. The result is growth stagnation in year 3, consumption is unaltered (if **I/Y**

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were pushed above 0.2 it would again decline). Assume constant consumption helps to relieve the public's loss of motivation causing u to rise to negative 0.05 in year 4. Year 4 growth will rise to 5%, while crucially, assuming I/Y stays at 0.2, consumption will also grow. If growing consumption fully restores motivation in year 5, u rebounding to 0.02, a growth rate of 12% will be finally realised (with consumption and investment growing at 12% if I/Y remains at 0.2 in year 5).

Example 2 explains how escalating I/Y can fail to produce a smooth transition to a higher growth rate. Motivational problems may create uneven growth limiting the effectiveness of a step up in investment, in the extreme the effect on growth of a rise in I/Y may be completely nullified or even reversed by a resultant fall in u .⁴ If our socialist economy were democratic such a choice of an unrealistically high self-defeating growth rate could be avoided. Clearly to maximise u a socialist economy's growth rate must be democratically chosen by its citizens, who must be fully informed of a wide range of possible growth and consumption paths.

Beyond the total level of consumption the composition of consumption is also critical to the population's well-being and their consequent level of motivation. Let us define consumption more clearly. Consumption includes direct consumption of consumer goods and services and indirect consumption of state provided services such as social services and military 'services'. Consumption also includes non-productive investment, ie the building of houses, hospitals and military bases etc. The public's most favoured composition of consumption will depend very much on the particular circumstance that the socialist economy finds itself in. In the face of clear danger the public may support higher military expenditure. The point is that without democratic support for the composition of consumption motivation and thus u will suffer, dragging down the socialist economy's growth rate. If planners attempted to lift growth back to target by increasing I/Y , instead of by changing the composition of consumption to reflect public demand, the resultant further fall in immediate 'desired' consumption is likely to further undermine motivation and the realisation of the target growth rate. Both the future path and composition of consumption need to be democratically chosen by the public to ensure maximum motivation in a socialist economy.

The Question Of Capital Intensity

In capitalist economies the production technique which maximises profit is always the best. If the choice of technique leaves some labour unemployed it is of no concern to the individual capitalist. In fact a permanent reserve army of unemployed labour is in the best interest of capitalists as a whole, to maintain the strength of their bargaining position with labour. Kalecki points out how in a socialist economy the correct choice of productive

⁴ If in table 2 u fell further than negative 0.1 in year 3, in response to year 2's dip in consumption, growth would become negative in year 3. Consequently lower year 3 consumption may lead to u falling even further in year 4, accelerating the growth slow down. Attempts to stabilise growth through increasing I/Y may only add to the motivation crisis by undermining current consumption. Unless motivation can be regained the economy may spiral downwards in motivation crisis. Failure to maintain current consumption can thus potentially totally undermine the stability/existence of the socialist economy.

technique (capital intensity) should depend on the state of labour supply. Efficient production depends on not only saving labour in production but also on saving investment. If 'efficient' levels of western capital intensity were to leave, given the available level of total investment, many workers unemployed, these techniques would be inappropriate for the socialist economy. Capital intensity should be reduced, reducing m , until labour supply is fully utilised. A given increase in investment will thus have a bigger impact on output, investment is made more productive. With I/Y constant, a falling m is sufficient in itself to accelerate the growth rate.

If labour supply is fully utilised output can only grow through increasing labour productivity, there is no surplus labour to man newly built additional factories. Such a shift from extensive growth (reproduction of factories) to intensive growth (improvement of labour productivity in existing enterprises) clearly implies a trend increase in the socialist economy's capital labour ratio. A switch to intensive growth may not entail a reduction in $1/m$. If extra investment in existing enterprises increases their output by the same amount as (or possibly more than) equal extensive investment in reproduction of enterprises, $1/m$ will remain constant (or possibly rise). If labour is insufficiently trained to operate such capital intensive techniques output will fail to rise to its full potential, $1/m$ will fall, possibly in the extreme becoming negative.⁵ Even if labour is sufficiently trained, intensive investment in existing enterprises may increase output per unit of investment by less than extensive investment in additional enterprises, but if labour supply is fully utilised, intensive investment is the only available investment option and $1/m$ will fall. As long as $1/m$ is greater than unity, investment will still increase output, but achievement of a given growth rate will require a higher I/Y to the cost of current consumption.

To explore the challenge of switching to intensive growth let us consider two possible scenarios, again based on equation 3. Table 3 shows a socialist economy, which by the end of year 2 exhausts the possibilities of extensive growth. In year 3 growth must become intensive, say as a result $1/m$ drops to 1.25.

TABLE 3

YEAR	r (%)	1/m	I/Y	a	u	Y (end)	C	I
0			0.125			100.0	87.5	12.5
1	7.0	2.0	0.125	0.2	0.02	107.0	93.6	13.4
2	7.0	2.0	0.20	0.2	0.02	114.5	91.6	22.9
3	0.0	1.25	0.20	0.2	-0.05	114.5	91.6	22.9
4	2.5	1.25	0.20	0.2	-0.025	117.4	93.9	23.5
5	7.0	1.25	0.20	0.2	0.02	125.6	100.5	25.1

⁵ The example of the Stalingrad tractor factory comes to mind, built in the first five year plan with state-of-the-art American technology. Lack of skilled workers to work in and maintain the factory ensured continuous flow production (mass production on a moving conveyor line) had to be abandoned as early as 1931, see Kochan and Abraham (1990) page 369-371.

Assume planners know this in year 2, what should their response be? If planners wish to preserve a growth rate of 7% in year 3, and assume that **a** and **u** will remain constant, they simply need to increase **I/Y** in year 2 to 0.2. Consumption consequently falls in year 2. If motivation is unaffected (**u** remains at 0.02 in year 3) then 7% growth of output and consumption will be realised in year 3. If the dip in consumption in year 2 undermines motivation in year 3 growth will fall short. Say **u** falls to negative 0.05 in year 3, output and consumption would remain unaltered in year 3.⁶ If constant consumption in year 3 partially restores motivation for year 4, **u** rising to negative 0.025, the economy will return to growth, at 2.5%, in year 4. If growing consumption in year 4 fully restores motivation in year 5, **u** rising to 0.02, output and consumption growth of 7% will finally be realised in year 5.

TABLE 4

YEAR	r (%)	1/m	I/Y	a	u	Y (end)	C	I
0			0.125			100.0	87.5	12.5
1	7.0	2.0	0.125	0.2	0.02	107.0	93.6	13.4
2	7.0	2.0	0.175	0.2	0.02	114.5	94.5	20.0
3	3.9	1.25	0.20	0.2	0.02	118.9	95.1	23.8
4	7.0	1.25	0.20	0.2	0.02	127.3	101.8	25.5
5	7.0	1.25	0.20	0.2	0.02	136.2	108.9	27.3

If planners had been patient, see table 4, increasing **I/Y** by less in year 2 (to 0.175) to preserve some growth in consumption in year 2 to maintain motivation in year 3 at 0.02, positive growth of 3.9% is achieved in year 3. In year 3 **I/Y** can be raised to 0.2 while accommodating some rise in consumption to preserve motivation in year 4. In year 4 a growth rate of 7% for output and consumption can be attained and reproduced in year 5 (assuming **I/Y** stays at 0.2). A patient planned reduction of growth in year 3, to maintain gradually rising consumption in year 2 and 3, produces a far higher cumulative growth rate for the last three years of the plan than experienced in the impatient planners' scenario represented by table 3 (significantly the level of investment in year 3, 4 and 5 of the patient planners' scenario is actually higher than that achieved in the impatient planners' scenario).

Clearly a switch to intensive growth must be carefully planned. If, given the available level of technology and the workforce's current skill profile **1/m** is likely to be low, investment in physical capital may not be the best solution. Increased expenditure on education (human capital, counted as part of consumption) to improve the workforce's skill profile may allow **1/m** for intensive investment to rise. Furthermore we must remember that the crucial driving force behind intensive productivity improvement is not mere quantity of capital but technological innovation. Innovation makes investment more productive (by saving labour, or capital or increasing output) causing **1/m** to rise. A rise in **1/m**, assuming all other parameters are constant, is sufficient to accelerate the growth rate. Innovation requires

⁶ If **u** fell further than -0.05 in year 3 output would fall in year 3, further reducing consumption in year 3 and motivation in year 4. We have the danger of an unstable spiralling decline as described in footnote 4.

investment in education and research. Investment in human capital again potentially provides a better long-run growth return than purely escalating the share of capital investment in total output. Fostering innovation requires planners to be flexible to new ideas and production processes. They crucially have to be patient. Such behaviour should not be beyond rational planners working for the long-term good of the socialist economy.

Perspective Planning

Although Kalecki's 1961-1975 Polish perspective plan was presented to the Polish government it was never acted upon. Kalecki's planning method is enshrined in this plan, see Kalecki (1972). He aimed to eliminate the actual planning problems which had already been experienced (and which were to be continued to be experienced, right up until the very end) in Eastern Europe and the USSR. To ensure a realistic growth rate Kalecki prioritised the importance of achieving socially acceptable levels of consumption in the short-run. Crucially the achievability of external balance is prioritised to reduce the possibility of plan failure through external trade difficulties. Kalecki's whole approach is, as he puts it, cautious. Let us examine Kalecki's method of perspective planning.

Stage 1. Planners must pick a target growth rate. Planners must estimate m . m will partly depend on the existing industrial structure, but as it will also depend on the future industrial structure when output is increased it will be impossible to precisely estimate. Planners must also estimate u and a (remembering their past values may not necessarily represent a good guide to their future values) to allow the necessary I/Y to be calculated in equation 3 to produce the target growth rate.⁷ With I/Y known planners can calculate the future path of consumption. Provisional total consumption must be allocated between its various components to allow the growth pattern of each element of consumption to be made clear. With consumption estimated planners must consider if short-run consumption levels are socially adequate. If they are too low then a lower growth rate should be chosen, and stage 1 repeated until an acceptable level of estimated short-run consumption is achieved.

Stage 2. Stage 1 provides planners with projections of future output, investment and consumption growth. Stage 1 also sets out the general composition of consumption between direct consumption, state services and unproductive investment. Given this information an estimation of the public's desired future pattern of consumption of directly consumed goods and services may be calculated, using past information about consumer demand and potentially the example of consumer demand in more economically advanced countries. Planners can now estimate the necessary industrial structure to actually fulfil the plan.

The necessary industrial structure includes the possibility of trade. Industries must be classified as either supply- or demand-determined industries. A supply-determined industry's potential growth is limited by unavoidable technical factors such as, for example, the supply of suitable land. For such an industry even large additional investment is incapable of significantly increasing its output above its technical factors' limiting potential. Demand-determined industries are not constrained in their potential output by such technical factors at even high projected growth rates. If a supply-determined industry's potential

⁷The target growth rate need not be constant over the planning period, as we have noted with labour fully utilised a fixed growth rate may not always be desirable.

output falls short of that required at the target growth rate it may be possible to import the difference. Output can be increased in demand-determined industries (or in supply-determined industries where potential output is higher than that required in the plan) and exported to achieve trade balance. Domestic production of import substitutes should be considered, but if it is unduly costly it should be ruled out. If trade balance can not be achieved at the target growth rate, the target growth rate is unrealistically high. Planners must return to stage 1 and try a lower growth rate. Even if trade balance can be achieved at the target growth rate, high exports may seriously restrict domestic consumption. The higher imports are the higher exports must be. Exporting more is likely to depress export prices. To increase export revenue by 20% the volume of physical exports may have to rise 50%. Such a trade off may harm domestic consumption too much to be desirable.⁸ Clearly if a socially acceptable pattern of short-run consumption is not achievable at the target growth rate, even if trade balance is achievable, planners must again return to stage 1 and try a lower target growth rate.

Trade is not simple, by relying on other countries' demand for its exports a socialist economy exposes itself to the uncertainties of its trading partners' future growth rates. Trade with other efficiently planned socialist economies would ensure better certainty of export demand. A socialist economy will only be able to realise its plan if the socialist economies it trades with also realise their plans. Trade with capitalist economies is even more uncertain, a socialist economy would share their realisation problems. An unexpected recession in a capitalist trading partner's economy may reduce a socialist economy's exports so significantly as to make its own plan unrealisable. Realisation problems are shared through trade. A high target growth rate, which offers trade balance and sufficient short-run consumption, may assume such a high level of exports that the slightest problem in capitalist trading partners' economies would cause immediate plan failure. Attempts to step up exports in the face of lower export demand, by reducing export prices, would clearly require significant increases in export volumes. The consequences for current consumption may be too severe. The best option, to maintain acceptable consumption levels, may be to slow the growth rate sufficiently to reduce import demand and thus regain trade balance. Given the historic uncertainty of trade, and the seriousness of trade balance problems, Kalecki recommends that a modest estimation of future export demand should be made.⁹ The worst should be assumed, to guide against the eventuality of plan failure through external imbalance. Such considerations may ensure that the target growth rate is too high to safely ensure trade balance, again planners would have to return to stage 1 and try a lower growth rate.

Throughout stage 2 the economy's future industrial structure becomes clearer. If planners' estimate of m changes at any stage they must return to stage 1 and calculate the necessary changes to consumption and investment to maintain their target growth rate. If an estimated rise in m leads to insufficient short-run consumption at the target growth rate,

⁸ Whether the output of consumer-goods industries or capital-goods industries is exported it makes no difference, domestic consumption must fall. The export of additional capital-goods would be at the opportunity cost of producing consumer-goods.

⁹ If export demand is stronger than expected, export prices may be increased or exports expanded. The resultant increase in export earnings can be accumulated as foreign currency reserves against future trade problems or used to import additional consumer- and capital-goods. Overfulfilling the planned export level is not a problem, it is a welcome luxury.

planners must abandon that growth rate and start stage 1 again with a lower target growth rate.

Conclusion On Perspective Planning

As Kalecki's quote on page 5 suggests, magical growth rates are only imaginable on paper and seldom realised in practice. The key to successful central planning is disbelief of the magical in preference to caution, and the achievement of socially acceptable short-run consumption levels. Falling or stagnant consumption will inevitably, in the absence of terror, undermine motivation, ensuring plans which imply such consumption patterns can never realise their promised high growth rates in practice. Likewise plans which ignore the realisation problems exporting imply are likely to be unrealisable in practice. A socialist economy still faces two fundamental realisation problems. The first is realising the consumption hopes of its own people, the second is realising an acceptable trade balance. To maximise motivation the public must support and understand its government's perspective plan. The public should be presented with a range of perspective plans, with different target growth rates and consequent patterns of consumption. If the public pick which plan to implement democratically motivation will be maximised.

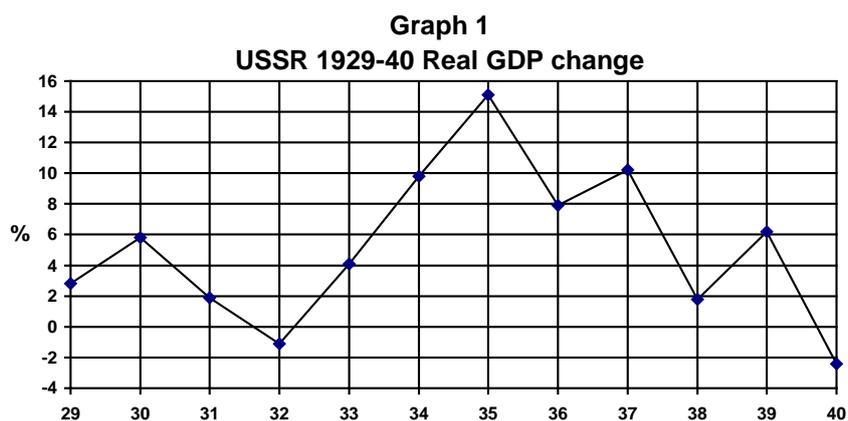
CENTRAL PLANNING IN PRACTICE

Graph 1, see page 13, shows annual real GDP changes for the USSR from the introduction of central planning in 1929 to the outbreak of the Second World War. Graph 2, see page 15, shows Soviet real GDP changes from 1946 to 1990, the last full year of the Soviet Union. Graph 3, see page 18, shows Polish real GDP changes from 1951 to 1989, the collapse of Polish Communism. My source is Maddison (1995); precise statistical sources and statistical methodology can be found in Maddison (1995) page 141 to 142. Maddison uses respected western estimates, for the post-war Soviet Union CIA estimates (which were actually believed more by the KGB in the 1970s and 1980s than official Soviet statistics). As economic statistics were so politically important to Communist countries, calculation of precise statistics is impossible, at most we can only trust that general trends are correctly identified. Before we consider economic performance in more detail let us note two distinct features of the data. Firstly growth is not at a steady rate, a theoretically avoidable cyclical pattern is clear for both countries.¹⁰ Secondly average Soviet growth declines through the 1960s, 1970s and 1980s, while Polish growth declines from the second half of the 1970s.

The Soviet Union turned to central planning in 1928/29. The first five-year plan (formerly adopted in April 1929) covered 1928 to 1933 (in fact ending early in 1932), the second covered 1933 to 1937 and the third 1938 to 1942. For the first five-year plan Gosplan initially proposed two alternative plans, a cautious plan and a bold plan. Stalin, the General

¹⁰ The Feldman-Mahalanobis model of Soviet growth, see Desai P (1990) page 7 to 10, predicts J-shaped growth rates. Initially as producer good-industries are rapidly expanded, growth slows, once the new producer-good industries come on stream growth will continually escalate. Perhaps Soviet growth from 1930 to 1935 fits this pattern, if so why does growth slip back thereafter? In the late 1940s in both the USSR and Poland production of producer-goods expanded faster than overall output growth, but growth does not continually escalate in either country in the 1960s, 1970s or 1980s.

Secretary of the Soviet Communist Party, ensured that the Soviet Communist Party adopted the bold plan. Class A industries (coal, iron, steel and machine building) were planned to increase output by 300%, class B industries (consumer-goods) were planned to increase output by 200%. From the outset Stalin set the objective of maximising growth through prioritising investment over consumption. The share of gross investment in output rose from 12.5% in 1928 to 25.9% in 1937, see Gregory and Stuart (1990) page 124. Actual plan fulfilment reinforced the bias to producer-goods. Producer-goods targets were officially exceeded by 28% in the first five-year plan and by 21% in the second five-year plan (by western estimates fulfilled by 72% and 97% respectively), while consumer-goods targets were officially 81% and 85% fulfilled (by western estimates only 46% and 68% fulfilled), see Gregory and Stuart (1990) page 109. The pattern (ideology) of faster growth of output of, and investment in, producer-goods than output of, or investment in, consumer-goods is thus firmly set by the outbreak of the Second World War.



For a backward economy faced with a more advanced hostile neighbour, committed to Eastern expansion, such a priority of investment over consumption is easily defensible. Faced with such a need to catch up the most efficient planner could not have totally avoided hardship and upheaval. In such circumstances it is indeed the function of the leadership to maximise motivation by explaining the external threat. For planning to be efficient it must have been centrally co-ordinated. Can we see Stalin's behaviour in the 1930s as a benign attempt to achieve the best possible long-term future for the USSR? I would suggest not. Political leadership was required, but politically decided production targets should not have been set independently of economic reality (or technical advice), and once set considered to be treasonable to challenge, no matter their practical shortcomings, see Nove (1977) page 149. Stalin's preference for creating new super enterprises in previously non-industrialised areas was bound to hamper the efficiency of investment. If strategically dispersion was necessary it would have been wise to cluster new enterprises as much as possible. We can hardly see agricultural collectivisation as a rational plan to increase agricultural output (it in fact reduced output until after Stalin's death).

Stalin's preferred methods of industrial and agricultural development can only be understood if we appreciate that the extension of central Communist Party control over all aspects of the economy was in fact Stalin's main objective. By 1929 Stalin had already turned the position

of General Secretary of the Communist Party into the most senior position in Soviet society. Stalin's terrorisation of the Communist Party in the 1930s ensured that central Communist Party control actually amounted to his own personal control. The Party ceased to be a source of debate and real control as Stalin preferred to directly rule through the security forces and the newly created central industrial ministries (of course manned by senior Communist Party members). Obedience to Stalin stood in the way of any rational criticism, to the detriment of the efficiency of the plan. The uneven growth observed from 1929 to 1940 is consistent with a plan whose only criteria for efficiency was the extension of Stalin's own personal control. In terms of equation 3 u (motivation and plan efficiency) and $1/m$ (the productivity of investment) were undermined by Stalin's political priorities. Clearly Stalin was no supporter of democratically backed rational central planning. As soon as the war ended Stalin reasserted the primacy of production of producer-goods over the production of much needed housing and consumer-goods. To Stalin the USSR would only be secure when it could produce 50 million tons of pig iron, 60 million tons of steel, 500 million tons of coal and 60 million tons of oil, see Kochan and Abraham (1990) page 433.

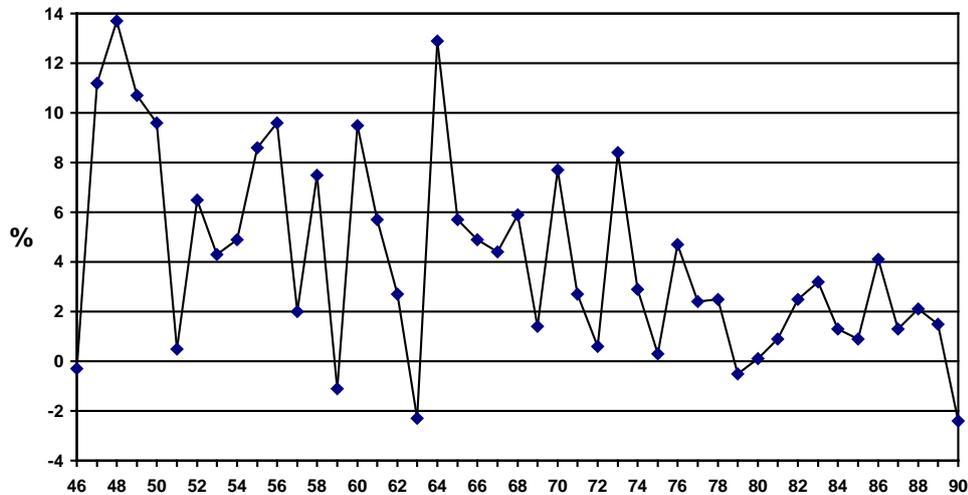
Stalin's death in 1953 finally offered the chance of a change in policy. Escaping Stalin's legacy would in fact prove impossible. The nature of Stalin's system, and the personnel in that system, acted decisively against change. To the Communist Party a switch to democracy in 1953 was unthinkable, the idea of debate within the senior Party was itself a novelty (few old Bolsheviks had survived Stalin). To rise to the top under Stalin, to join the Nomenklatura (the collective name of all holders of senior positions in Soviet society) you had to be an obedient Party member, lacking in individual talent or imagination. Such qualities threatened disobedience to your superiors and ultimately disobedience to Stalin himself. To make up for their lack of personal security (or perhaps to ensure an excuse to dismiss and execute anyone) Stalin granted the Nomenklatura strictly graded, and officially invisible, material comforts. A culture of keeping your head down and finding a patron to support and rise with became (and endured to the end of the USSR) the *modus operandi* for all Nomenklatura members. We can imagine pyramids of patrons and protégés running from the lowest ranks of the Nomenklatura to its very top.

The logic of this system of bureaucratic politics was that there must be a single overall chief, who, to gain and hold power, must be the final direct patron of the majority of the Nomenklatura. We had bureaucratic politics, under Stalin personal control, through his ability to use terror to change any number of the Nomenklatura at will. Without terror, as Stalin's descendants decided was only proper (as formally announced by Khrushchev in his 1956 secret speech), we had pure bureaucratic politics. How could we expect such a system, unreliant on public support, to put the public's interest first? The Nomenklatura did not tolerate public debate over economic policy. As we shall see General Secretaries who encouraged public debate of economic policy were soon found to be unacceptable to, and replaced by, the Nomenklatura.

Under Stalin class A industries tended to be organised in central ministries, while class B industries tended to be locally organised. Consequently the central Nomenklatura who represented class A industries were direct patrons of many more Nomenklatura than local Nomenklatura who represented more consumption-oriented class B industries. It was thus difficult for any General Secretary to favour class B industries over class A industries, given the most senior Nomenklatura's disproportionate association with class A industries. Brezhnev acknowledged the bureaucratic politics natured power structure by integrating the

heads of the security forces and the military (both responsible for many Nomenklatura) into the Politburo for the first time. Given such a political structure rational planning had little chance of success.

Graph 2
Soviet Real GDP Changes 1946-90



The Politburo could not decide on a single replacement for Stalin, fearing anyone should become too powerful. A collective leadership between Georgi Malenkov, head of the government and planning authorities, and Nikita Khrushchev, the new General Secretary of the Communist Party, emerged. Malenkov promised to increase consumer-good production. Production of consumer-durables did in fact rise annually at 17.7% from 1951-55 and by 10.4% from 1956-60, see Gregory and Stuart (1990) page 144. Khrushchev concentrated on agriculture and housing, while stressing the need for continual preference for heavy industry. Agriculture would be spectacularly improved by grand projects such as the Virgin Land Scheme. The Stalinist spirit of the Virgin Land Scheme is evident in Leonid Brezhnev's (Khrushchev's trouble-shooter in charge of the scheme) comments in Kochan and Abraham (1990) page 455.

It is not just an economic necessity, it is also a political matter. Let the whole world recognise yet again that we Communists are capable of solving major tasks in a very short period of time.

Ideology had to triumph over reality, the will of the party was paramount over rational planning. Initial agricultural success, plus support from class A industry associated Nomenklatura, helped Khrushchev to oust Malenkov from collective leadership in 1955, and to then decisively remove his opponents from the Politburo and the Central Committee in 1957. Once firmly in charge Khrushchev turned to encouraging increased consumer-good production. In 1957 to improve the planning system Khrushchev tried to shift planning responsibility from the centralised ministries to new regional ministries. As economic difficulties arose in the late 1950s and early 1960s (often as a result of his own agricultural reforms) Khrushchev continued to seek to adjust and question established patterns of industrial organisation. To the concern of the Nomenklatura from 1962-64 Khrushchev

initiated a public debate on how to reform the economy. Instead of applying decisive reforms Khrushchev organisationally fiddled, disturbing the Nomenklatura in 1963 by splitting the Party into agricultural and industrial branches. Finally in 1964 the Nomenklatura, as represented by the majority in the Politburo and the Central Committee, had had enough and removed Khrushchev in a bloodless coup. Khrushchev had threatened established Nomenklatura relations too frequently to be acceptable to those who really held power, the Nomenklatura.

Again collective leadership followed, Brezhnev as General Secretary and Alexei Kosygin as Premier. To answer and end Khrushchev's economic reform debate Kosygin put forward new economic reforms in 1965. Khrushchev's move to regional planning would be reversed, central co-ordination from Moscow would return re-strengthened, to the senior Nomenklatura's satisfaction. Kosygin also offered State Enterprise managers more independence in their decision making. Planning targets were to be reduced, State Enterprises were to be allowed to retain some of their profits to fund incentive schemes or fund additional own-decided investments. Investment decisions in general were to be more rationally planned. To properly implement such reforms implied decision making must elevate technical advice and market conditions above Nomenklatura administrative concerns. Stalin had co-ordinated central ministries by terror, in the absence of terror only the Party could provide a consensus and resolve differences between central ministries. Planning targets may have changed but State Enterprise managers and central ministries ultimately continued to follow the Party's final political decisions as to how to organise State Enterprises and allocate investment.

Isolated with the technical experts Kosygin drifted out of the collective leadership. Brezhnev, the Party man, gained sole 'Chairmanship of the USSR' by 1970. Kosygin's reforms had largely not been implemented by 1970, thereafter they were forgotten. After gaining sole leadership Brezhnev, like Khrushchev, sought to increase consumer-good production (perhaps motivated by unrest over consumption levels in Poland). Brezhnev desired reform, but reform agreed by consensus by the Nomenklatura. He stood for consensus among the Nomenklatura, never sacking groups of Politburo or Central Committee members.¹¹ Such bureaucratic consensus ruled out a significant switch of resource away from favoured industries towards consumption. Throughout Brezhnev's rule investment growth exceeded consumption growth, with investment in class B industries only representing 4 to 5% of total investment, see Schroeder (1993), page 327. Per capita annual consumption growth declined from 4.3% in the 1950s to 2.5% in the 1970s, see Schroeder (1983), page 312. From 1966 to 1980 consumption growth matched total output growth, implying favoured industries maintained their exaggerated position in the economy as overall growth slowed, see Gregory and Stuart (1990) page 147. The share of gross investment in Gross National Product steadily rose, in 1960 it stood at 17.8%, by 1970 it had risen to 21% and by 1980 it had reached 25.4%, see Desai P (1990) page 8. Kalecki's fundamental growth equation (equation 3) would predict, if all else were constant, such an increase in I/Y would continually escalate growth, but Soviet growth fell. Investment was clearly becoming less productive, from 1970 to 1987 output per unit of input (capital and labour) declined by 1% per year, see Gregory and Stuart (1990) page 147. In terms of

¹¹ As Brezhnev became ill in the late 1970s such consensus, ie consistency of relations between sections of the Nomenklatura representing different parts of Soviet Society (like heavy industry or the military), was reinforced by Brezhnev's inertia.

equation 3, $1/m$ is falling, as u stagnates in Brezhnev's unchanging system of administrative control.

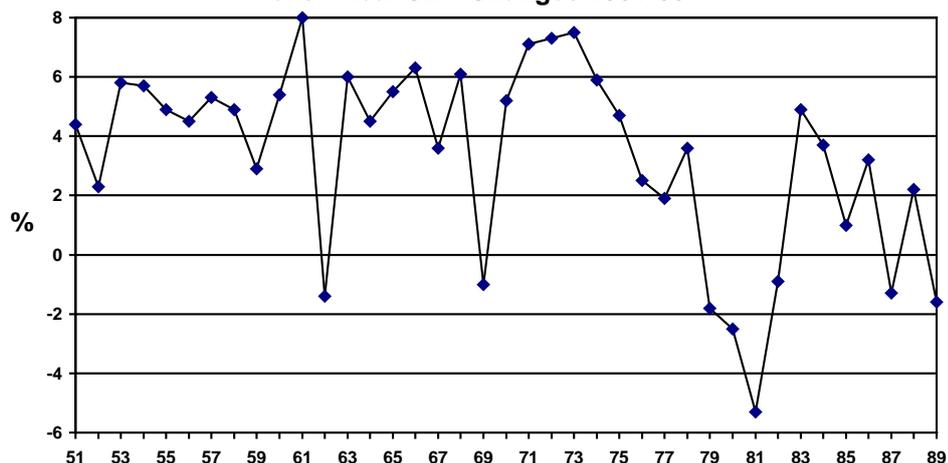
Collectively the Nomenklatura must have appreciated the system's stagnation, but the individual career problems that changes to resource allocation implied caused the Nomenklatura to collectively bury their heads in the sand. As Lavigne (1995) page 91 suggests the Nomenklatura were just 'muddling through', hoping a crisis could always be avoided, at least for the time being. Voslensky (1980) clearly explains the mentality of the Nomenklatura, and estimates their number in 1970 at 100,000 first rank Nomenklatura and 150,000 second rank Nomenklatura. They were as a rule not ideologically motivated, their main priorities were career advancement, through the elaborate patronage system, and enjoyment of all the privileges Nomenklatura membership offered. Administrative control of producer- and consumer-good allocation (not forgetting housing) directly put the Nomenklatura in an ideal position to demand illicit bribes for their administrative agreement. Corruption was commonplace. Some black market activity purely resulted from State Enterprise managers' attempts to address plan inefficiencies. They bartered between each other to clear planned input inconsistencies. Ever since Stalin had introduced central planning, wages had tended to exceed actual consumption opportunities at prevailing fixed prices. The public's surplus wages, the monetary overhang, accumulated as 'forced savings' in wait for consumption opportunities. The various shades of black markets helped to absorb surplus Roubles, but with the Rouble representing such an unreliable commander of consumption the black market preferred barter of consumable commodities and use of foreign currency (particularly the US dollar). At the top of the black market the Nomenklatura sat, controlling allocation, enriched by their culture of corruption. Such a comfortably off, morally questionable, ruling group could not be hoped to change its ways for the good of the whole of society.

The Gorbachev phenomenon marks the system's last crisis. Like Khrushchev, Gorbachev desired change. The Nomenklatura, concerned with economic stagnation and falling behind the US military, accepted the general principle of change by allowing Gorbachev to become General Secretary in 1985. However when the idea of change threatened to become a reality, undermining their bureaucratic control, the Nomenklatura hesitated, holding back agreement and implementation of reforms. To outflank the Nomenklatura, Gorbachev (like Khrushchev) appealed to the public to support his reforms. By 1991 the Nomenklatura feared Gorbachev's meddling would soon end their centralised control of the USSR, so they attempted to return to the old ways by removing Gorbachev in a bloodless coup in August 1991. In terms of equation 3 we may say Gorbachev's reforms, as distorted by the Nomenklatura's resistance, reduced plan efficiency causing u to fall. This would explain the descent into negative output growth by 1990. In 1991 as the USSR collapsed, clearly causing u to plummet, output dropped 15.1%.

Let us briefly consider Poland, see Graph 3 overleaf. Poland, like the USSR, was ruled by its own Polish Communist Party Nomenklatura, who upon the threat of Soviet invasion were ultimately answerable to Moscow. Polish post-war recovery favoured heavy industry and investment over consumption. In 1956 Polish workers went on strike and formed independent strike committees. The Polish Party promised more consumption, less investment in heavy industry and a trimming of the Polish Nomenklatura, see Crampton (1994) page 285-86. Unrest was finally alleviated by the appointment of the pro-Soviet, but apparently more nationalistic, Gomulka to the leadership of the Polish Party. Gomulka

reasserted traditional economic priorities. In December 1970 Gomulka sought to reduce consumption further by increasing food prices. Strikes and independent strike committees forced another change to the leadership of the Polish Party. Gierek promised increased consumption and borrowed heavily from western banks in the early 1970s to support domestic consumption and fund imports of western machinery. Growth initially accelerated, but western demand for Polish goods fell, while increased Soviet oil prices from 1975 hampered the petrol-chemical industry. As Kalecki would have pointed out, over-ambitious export forecasts can lead to serious external problems and consequent plan failure. Consumption suffered, planners, afraid to sufficiently increase prices or control wages, failed to prevent growing monetary overhang.

Graph 3
Polish Real GDP Changes 1951-89



In 1980, in response to meat price increases, another wave of strikes created Solidarity, a nation-wide independent free trade union. In the face of this acute challenge to their leading role the Polish Nomenklatura floundered, at first legally recognising Solidarity to the horror of the Soviet Nomenklatura. The Polish Party was finally forced, by the threat of Soviet invasion, to impose martial law in 1983. Poles appreciated that their economically and morally bankrupt system was now only maintained by the threat of Soviet force. Consequently when Gorbachev's policy of détente ended the threat of Soviet force, Polish Communism rapidly collapsed.

Conclusion on Central Planning in Practice

Sachs and Woo (1994) page 110 estimated that in 1990 in the USSR steel production per capita stood at 580 kilos, as opposed to only 365 kilos per capita in the US. Such over-industrialisation can not be the result of rational planning, it must represent a distortion of priorities. Priorities were distorted by the Nomenklatura system Stalin bequeathed the USSR and Eastern Europe. The only solution to such political inefficiencies is political revolution. Furthermore political revolution in the USSR itself, as revolt elsewhere in Eastern Europe could be put down by the USSR. The people of the USSR did not revolt. If they had followed the example of the Polish workers events could have been so different.

Early revolts in Eastern Europe, such as in Poland in 1956, Hungary in 1956, Czechoslovakia in 1968 and Poland in 1970, were not against the principle of socialism, but against inefficient socialism on the USSR's model. If a socialist revolution against the Nomenklatura had occurred in the USSR rational planning could have been given a chance to succeed. Democracy is the best method of ensuring that consumption is truly the first objective of the socialist economy.

CONCLUSION

At one level it is easy to identify the key social/political condition for successful perspective/rational planning, it is simply that the clear majority of the population should actually want it. The country's democratic structure must work sufficiently well to ensure the government's plans and actions are truly accountable to its citizens. Different political structures may equally well perform this function, varying according to countries' particular social/historical experiences. It sounds simple, but actually building a mass movement capable of convincing a clear majority of the population to support a new social system is of course not easy at all. Such movements did not emerge from the sudden collapse of Communism. Those in power in the east (whether former Communists or dissidents) embraced a western pushed pro-market view of rapid and successful transformation to the market economy.¹² The public seemed to have assumed that transfer to the market system would rapidly deliver the living standards of their, long enviously observed, western neighbours. As Andors and Summers (1998) argue the Market Maoists won! Poland, with its strong mass trade union movement, perhaps had the best chance to move to a rationally planned economy. Alternatives to the free market system were proposed,¹³ but Leszek Balcerowicz's view of rapid reform to the market system prevailed, see Balcerowicz (1994) for a typical representation of his vision of rapid reform. As Deputy Prime Minister in charge of economic reform Balcerowicz delivered a sufficiently strong initial recession to erode the confidence of the Polish trade union movement. Despite return to growth Poland remains a poor and divided country. IMF economists Rollo and Stern estimated that it would not be until the year 2010 that Polish living standards would regain their 1989 level, see Gowan (1995) page 56. The situation is worse rather than better in Russia and many other former Communist countries. Crony capitalism and economic meltdown threaten the very stability of society itself. For the vast majority in the east, to their clear surprise, today is worse than yesterday.

If we accept that rational planning could suit any unequal, capital starved, developing country a successful movement to rational planning may potentially come from anywhere in the world. Perhaps it could first happen in South America, whose people have longest endured harsh capitalism. Alternatively we might argue that the most likely first mover may be

¹² As endorsed by the majority of the western economics profession, the IMF and the all powerful international financial market.

¹³ I feel Kalecki would have considered Marek Gruchelski's work, as represented in Andors and Summers (1998) page 177-79, to be far more imaginative and socially acceptable than Balcerowicz's vision. To reverse the pro-marketeers' slump Gruchelski advocated novel supply side measures. The state would maintain control of industry, using price controls to prevent abuse of monopoly power. Workers would be redirected from unviable industries to viable industries, preserving employment through use of additional shifts and job sharing in viable industries (maximising the efficiency of Poland's limited capital stock). Workers would work one day and be available for retraining or participation in the informal economy the next day, thus providing flexibility and full employment, co-ordinated by the state, in the interest of labour.

South Africa, where a population with recent memory of social revolution may reject the economic apartheid of the market system. Perhaps it is too much to hope that the long politically oppressed people of Eastern Europe, or the former USSR, should successfully build a movement for rational planning. So far harsh capitalism on the South American model seems the most likely future for the east. For many Eastern European countries and parts of the former Soviet Union (noticeably including Russia) there is a clear danger of military rule, or return to personal dictatorship. EU membership may help some Eastern European countries to move towards a more equal core European style of capitalism (or potentially could new pro-market Eastern members actually help to break down the traditional core European model of social partnership between government, unions and business). It may take many harsh yesterdays and near misses for a successful movement to rational planning to occur anywhere in the east (if you think history may be repeating itself don't be surprised, we start and end the twentieth century with a Balkan war).

Finally we should remember that, since the advancement of free market ideology and policy in the west from 1980, US and EU growth has been historically sluggish, while environmental concerns imply the need for long-term reorganisation of production processes and distribution systems. Perhaps a rationally planned democratic socialist economy may be the only possible system capable of sustaining the environment in the long-run. If the environment were to noticeably deteriorate in the rich west, or severe slump (as proved possible in the free market world of 1929) enveloped the global economic system, Kalecki's notion of a rationally planned democratic socialist economy may prove appealing to even the most 'advanced' capitalist countries.

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July 1999

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