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Regions as Nation Busters

How to use regions to form empires – an analytical parable

Gerhard Hanappi

Introduction

This paper outlines how a very specific aspect of the debate over regional policy can be formulated in a more analytical way. In doing so, it has to elaborate this view to avoid vague notions leading to ambiguities that would make formalization impossible. Though the conclusions might therefore seem to be a bit strong, it has to be kept in mind that it is just one important aspect of the phenomenon which should be highlighted by this paper. What is this aspect?

In short the setting is as follows: A strong centre (think of Brussels) tries to form an economic, political and military "empire". To do so it has to destroy local power structures (think of small nation states) which hinder central policy and control. As I will argue, the smaller local power structures, the nation states, are characterised by internal inhomogeneities: they could be divided into more prosperous and poorer parts (think of regions). In such a situation it can be a useful strategy for the central power to form a coalition with prosperous regions to weaken the nation state. This is, in short, the idea.

The next chapter will put forward a historical interpretation of what is going on in Europe unification. It does so to support the relevance of the analytical framework presented in the sequel. In short, it is argued that the decline of US hegemony and the emergence of a tripolar world economy is the driving force for European firms and policy-makers to streamline their home base. The progress of unification thus is intimately linked to world politics, namely to the deterioration of US power. As historical parallel the decline of the British empire in the late 19th century is briefly sketched.

Chapter 2 proceeds to a game-theoretic presentation of the major agents and their policy options. First a normal form game is discussed, which could be used by the proponents of unification to show that their goal is advantageous. Then a more dynamic extensive form game describing the same situation is shown which leads to more ambiguous answers.

Since the relations between pay-offs of the games were assumed – though they were made plausible by some arguments – chapter 3 tries to develop an economic underpinning for these assumptions. The concluding chapter then in the light of the analytical results comes back to the historical options open.

1. Historical Background

The prime cause to study economic history is to arrive at a periodisation of events, an interpretation of "typical" re-occurring events, which makes forecasting of future developments possible. To get an idea where the process of European unification might lead to it is first important to recognize that it is a long-run development¹. As a consequence only long-run developments in the past qualify as matching patterns to be studied, or to put it in a simpler way: to look far in the future one has to look far in the past.

Given that it is a long-run view which has to encompass the explanation of Europe's unification the Kondratieff-cycles propagated by J.A.Schumpeter² can serve as a first approach to be examined. As I have shown elsewhere³ these 50-year cycles⁴ have to be enriched by a theory of hegemonial forms of capitalism which correlate to the dominance of a leading nation: The Netherlands dominated merchant capitalism, the British Empire dominated industrial capitalism and the USA dominate what I call the era of "integrated capitalism". The era of industrial capitalism lasted for something like 150 years, starting with the industrial revolution

1 The alternative to this assumption would be to interpret them as the short-term outcome of transitory attitudes of policy-makers, an assumption which would make any scientific forecasting impossible.

2 See [J.A.Schumpeter, 1939].

3 Compare [G.Hanappi, 1989].

4 Schumpeter estimated the duration of long swings in economic activity to be around 60 years. Their frequency seems to accelerate over time (compare [Kleinknecht A., 1987]).

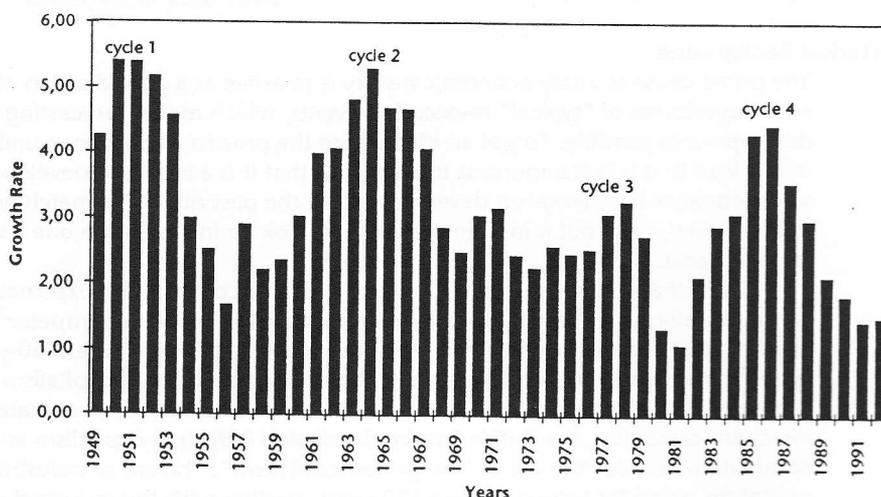
in England in the second half of the 18th century and ending with World War I. In this era three Kondratieff cycles seem to have appeared. In the contemporary era of integrated capitalism most researchers in the field identify two long cycles till now: the first one broke down with World War II, the second one reached its lower turning point in the early eighties. In the moment the third long-term upswing initiated in Europe by the breakdown of eastern European Stalinist regimes has difficulties to develop on a broader basis.

To make these statements more plausible compare figure 1 showing US real growth rates of GDP⁵. A moving average of five years has been used to smoothen the usual Juglar cycle⁶. As the figure shows there seem to have been three business cycles in the postwar Kondratieff, with slower upswings and more abrupt downswings towards its end⁷ in the year 1981. Cycle 4 in figure 1 seems to be the first cycle of a new Kondratieff though its lower turning point is remarkably low as compared to other Juglars in the early phase of a long wave. To explain the relative weakness of this new Kondratieff we have to resort to a more socioeconomic argument, namely the decrease of hegemonial power of the USA.

Traditionally Kondratieff cycles have been considered from two perspectives, a technology centered approach and a socioeconomic approach. The technological argument sees the long wave caused by a (set of) basic innovation(s) leading to changes in the socio-economic sphere. The socio-economic view has it the other way round: the new socio-economic context enables new basic innovations. While the first perspective seems to dominate the second half of Kondratieffs, in the first half the influence of the socioeconomic dynamics probably is stronger than the feedbacks from technology. As a consequence to understand the eighties I will concentrate on the socioeconomic causation structure⁸.

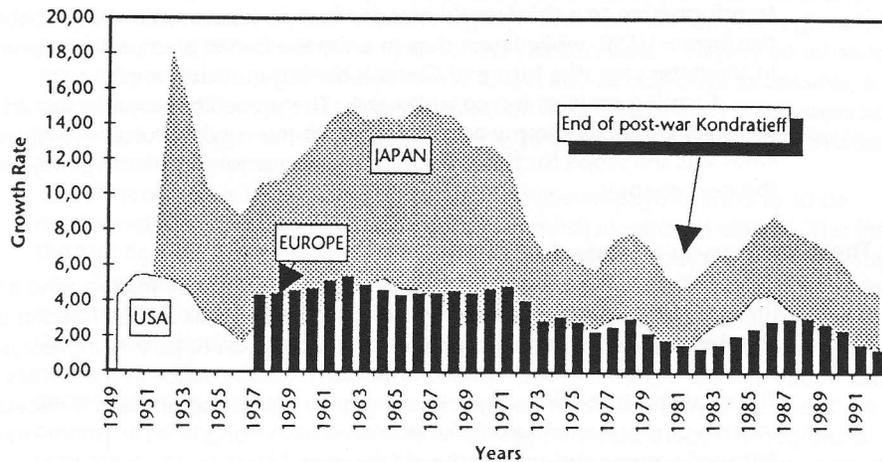
Figure 2 shows that the long swing after World War II appeared in all three leading industrial areas almost simultaneously – clearly indicating how interwoven the world economy is. Nevertheless some peculiarities have to be noted: First, the Japanese economy experienced growth rates more than twice as high as the others; second, European business cycles have been damped as compared to the USA and, third, the new long-term upswing (cycle 4 in fig.1) seems to appear asynchronous in Europe and the USA.

Figure 1
Growth of GDP in the USA
(5-years moving average of real growth rates)



- 5 Note that in our era Kondratieff cycles rather can be traced in growth rates and in inflation rates than in absolute levels, as was the case in the 19th century.
- 6 Historical time series are taken from [Maddison A., 1986].
- 7 This is a well-known phenomenon in long-wave theory (compare [Hanappi, 1989]).
- 8 For a detailed treatment of *both* perspectives see [Hanappi/Egger, 1993].

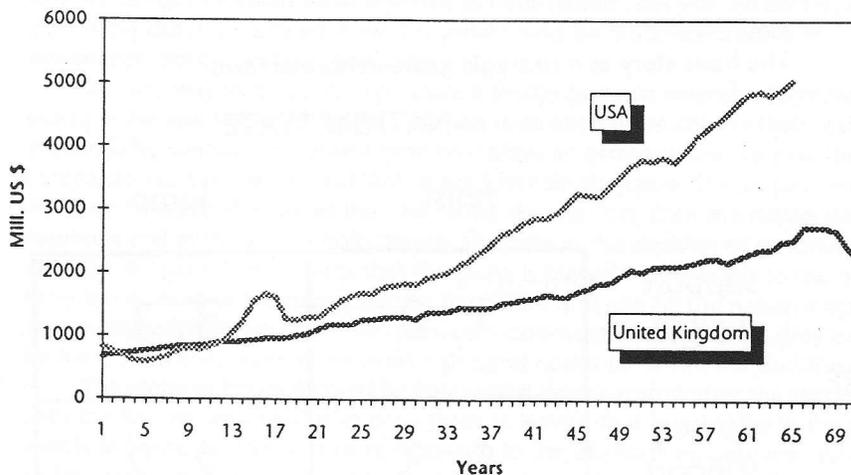
Figure 2
Growth of GDP-Comparison
 (5-years moving average of real growth)



Both competitors of the USA seem to have had some advantages during this post-war period: Japan transformed its specific mode of capital-labour relations into high growth rates, while Europe with its higher level of socioeconomic integration of all classes succeeded relative to the US in dissipating growth over time and social strata. This situation evidently has been the starting point for qualitatively increased competition between the three regions in the eighties. US hegemony seems to be on the down-swing as was British hegemony during the last Kondratieff of industrial capitalism before World War I. Consider figure 3, which tries to give an impression of the performance of the British empire as compared to US hegemony on a fictive time scale. Since output levels are used, the higher performance of integrated capitalism is quantitatively depicted. Moreover the direct comparison seems to suggest that US hegemony has at least a decade to go.

It is this general climate of increased competition which encompasses and motivates European unification⁹. The vanishing domination of a single player opens up the possibility for a new world power to emerge. At the current stage of this process it is not clear if the new super-power will be Japan or Europe – or, due to its military force, the USA again. Neither is it clear if its birth will be possible without a major war, which goes beyond the already ongoing trade wars¹⁰.

Figure 3
Comparison: United Kingdom & USA
 (GDP real, base 1987)



⁹ Harrop dates the new initiatives of the EC to appear in the mid-eighties [J. Harrop, 1989, p.191].
¹⁰ For an interesting article coming to similar conclusions is [Arrighi G., 1993].

As a last topic related to the new Kondratieff the necessity of an underdeveloped, politically subordinated area has to be mentioned. Each region is trying to constitute what the USA already has with its Latin America: a possible reservoir for cheap labour, resort for highly profitable but "unsocial" industrial centers. This transformation to a third world area for Europe seems to be the probable future for the former USSR, while Japan tries to unify the Pacific area under its predominance. In the latter case, the future of China is the big question mark.

Forming empires is a complex task. The preceding remarks should have given a certain plausibility to my assumption, that this is what currently happens – and what sets the scope for the tiny argument concerning regional policy presented in the next chapter.

2. The Basic Story as a Strategic Game

Assume that there is a group of firms and national policy-makers who are aware of the increasing international competition between areas as described in the previous chapter. Evidently these entities will form a coalition to further a process of streamlining of their own area to improve its performance in the battles to come. This coalition is the first player in our game. Interesting enough it necessarily consists of representatives of the economically strong, that is, policy-makers of "strong" nations and transnational European firms.

The second player consists of those national policy-makers, who are not so sure that unification will increase their power. It is not easy to draw a clear borderline between members of coalition 1 forming player 1 and members of coalition 2 forming player 2. This is so, because it crucially depends on the expectations of an entity, be it a firm or a policy-maker¹¹, whether it considers itself as a member of this or of that coalition. Since expectations might change over time so might members change their coalition. Note that this does not alter the validity of the classification as long as payoffs are not influenced too strongly by the relative number of members of each coalition. Nevertheless it should be kept in mind that, as the final outcome becomes clearer usually strong swaps towards one player will appear and will affect payoffs.

As a consequence of my distinction, political bodies of large nations will tend to be in coalition 1 while those of smaller nations at the periphery will in general tend to player 2. Only the highest strata of the political class of the latter will be attracted by the centre offering them important administrative functions. This is why in the following I will label player 1 as "centre" and player 2 as (small) "nation state".

Turning to the third player one could summarize all coalitions below the level of the nation state but strong enough to be recognized by the latter as one of its constituting forces as "regions". Though this definition evidently is wide enough to include players which cannot be assigned to closed geographical areas forming a true subset of the national territory¹², for the sake of familiar imaginations I will pretend to talk about geographical regions only.

Figure 4
The basic story as a strategic game in normal form

		NATION STATE	
		resist	jump
CENTRE	support regions	1, 0	3, 1
	do not support regions	0, 3	2, 2

11 A "policy-maker" need not be an individual person but can also be a council, a commission and the like.
12 The arguments presented therefore are valid for non-geographical "regions" too.

As for the actions available for the players let us restrict ourselves to very rigid and therefore manageable assumptions too. Assume that the game played consists of two choices made simultaneously: The centre has to decide if it wants to go into a coalition with player 3, the "regions" of the "nation state", or not. These two possible actions are labelled "support regions" and "do not support regions". On the other hand two options are open for the "nation state", namely either to follow the policy to melt into the unified centre as fast and as complete as possible, a strategy named "jump", or to resist unification as long and in as many areas as possible, a strategy named "resist". Figure 4 gives a normal form representation of this game and its proposed payoffs.

First of all it is important to state that the shown payoffs are only to be considered as ordinal rankings of outcomes and not as cardinal utilities. The first of the two figures always refers to the "centre", the second one to the "nation state".

The ranking for the centre could be made plausible as follows: If the nation state resists (left column) it will be more useful to support regions directly to further the inner contradictions of the nation state (upper left hand cell: payoff 1) than to wait and see (lower left hand cell: payoff 0). Any situation where the nation state decides to "jump" (right column) is better than resistance (payoffs 2 and 3 are better than 0 and 1). But even in this advantageous case support of regions is preferable (upper right hand cell: payoff 3) since a future economic structure of the unified area will be able to draw on it.

Now consider the payoff for the nation state: Assume first that regions are supported by the centre. If this is the case interior trouble for the nation state can be expected. This trouble will prevail as long as resistance against unification persists. In other words, the pain could be shortened if the nation state decides to "jump" (Upper right hand cell: payoff 1) instead of resisting (Upper right hand cell: payoff 0). Any situation where the centre does not intervene in internal affairs (lower row: payoffs 2 and 3) is better. If this is the case, resistance (lower left hand cell: payoff 3) is preferable to a "jump" (lower right hand cell: payoff 2), simply since it prolongues the privileges of the "nation state".

To solve this simple game note first that the centre has a dominant strategy: Whatever the nation state decides, the centre will support regions. Since the nation state is aware of this fact, it will choose to "jump" to arrive at payoff 1 rather than at payoff 0. Thus the upper right hand cell is the solution, more precisely the Nash equilibrium, of this game¹³.

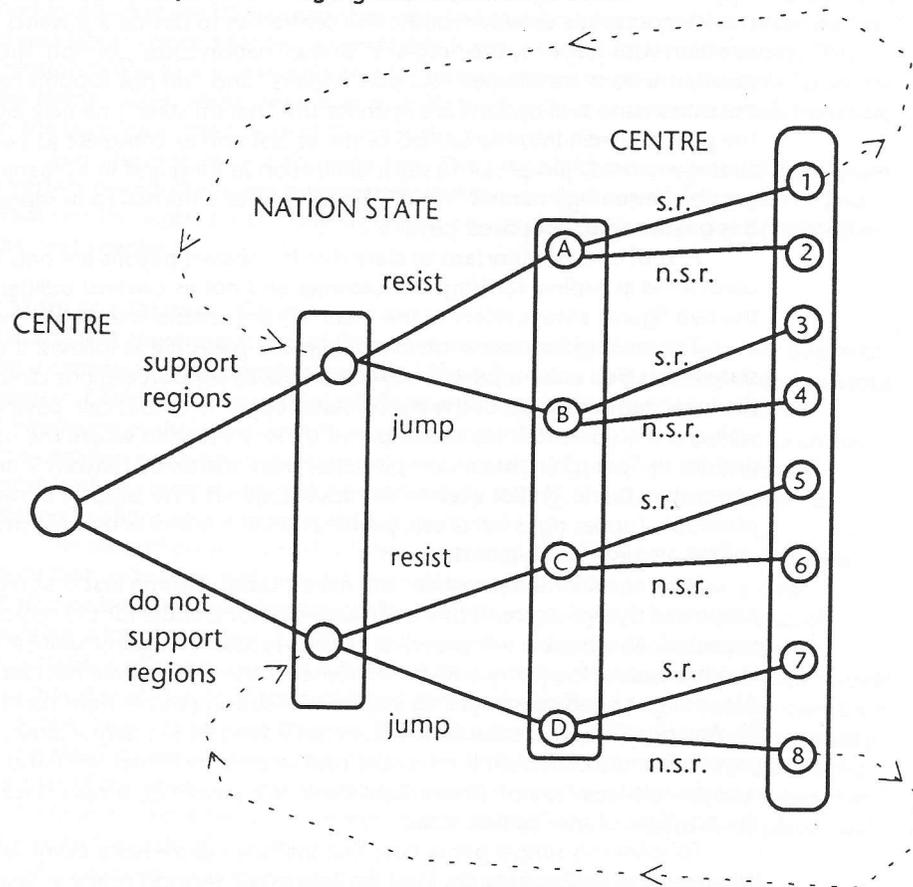
Proposing that figure 4 grasps the important aspect of the real state of affairs in the process of unification of Europe means to propose for player 2 to "jump". Seen as an ideology, this model would be an appropriate means of information policy of the centre to transport the message: "resistance is useless" (and even against the nation states own interest). In a sense, proposing a model is proposing a specific policy recommendation, or, putting it the other way round, producing models is just part of a policy of an agent. Making others believe that certain models are correct influences their behaviour in a way advantageous for oneself. Now since figure 4 could be interpreted as information policy of the centre, an interesting question is to ask how this game could be modified to serve as information policy for the nation state.

An easy way to do so, is to produce a similar game in extensive form, as for example the one shown in figure 5. Nation state and centre choose their actions sequentially, contrary to figure 4 time now plays an essential role. To ease the comparison sets of players and their actions remain the same. The sequence of activities introduced assumes that the centre decides first, then the nation state responds and in the sequel both players alternate in the decision to continue their strategy. In figure 5 this means that the game is played from the left to the right. Only three draws of the game, two by the centre and one by the nation state, are shown explicitly in figure 5. The further development of the game is only indicated by the dotted lines feeding the most righthand nodes back into the decision tree.

The game of figure 4 could be interpreted as a snapshot after the second draw with the four nodes available at draw three as leaves, that is as entries in the payoff matrix in figure 4. Node B thus corresponds to the old Nash equilibrium. What has to be explained is, why this property of B should have changed. The "natural" way to do so is to take a look at the payoffs of this extensive form game.

13 Introducing "regions" as player 3 would not alter this equilibrium, if richer regions are more influential in the nation state than poorer regions, since the former always would prefer support from the centre to no support.

Figure 5
The basic story as a strategic game in extensive form



Remember that a *strategy* in extensive form games is a *sequence* of choices between the first node and the final leave. The two types of actions for each player we previously called strategies now are named *behavioural strategies*. A strategy thus consists of an ordered set of behavioural strategies available. To reach a final leave at which a payoff can be assigned evidently implies the specification of a time horizon. To put it more drastic, the continuously occurring benefits and cost of the interaction between behavioural strategies of the involved parties have to be added up till the point of evaluation. Possibly the short-run equilibrium in point B will prove to be inferior to other strategies in the long-run. A brief sketch of such an argument could look as follows.

If resistance against unification can be continued for a sufficient time, benefits granted by the centre for "joining at last" might increase. In particular, as argued in the previous chapter, the accelerating downswing of the US hegemony and the emergent vacuum in world leadership could force the centre to pay a higher price (in terms of privileges for late-comers) for unification. On the other hand as soon as the "jump" has been made, it is not clear that the support for regions will be continued, at least not at the same scale: If the nation is busted the role of its regions will have to be evaluated anew. Again the longer run consideration probably will give less attractive payoffs for strategies going via point B¹⁴.

The last argument gives some insight on the role of the "silent" player 3, the regions. If temporal aspects are formulated explicitly, as is the case in extensive form games, player 3, the "rich region", will have to develop expectations on how long and in which form a coalition with the centre will last. The analogue is true for "poor regions" and possible coalitions with the nation state. The importance of regions and their relative power within the nation state as well as their ability to forecast future evolutions, all this is enhanced by the introduction of an explicit time frame.

Seen as an ideological model the extensive form game of figure 5 has to present data on payoffs at a specified point in time. Given this time horizon an optimal strategy for the game of timing can be propagated as policy

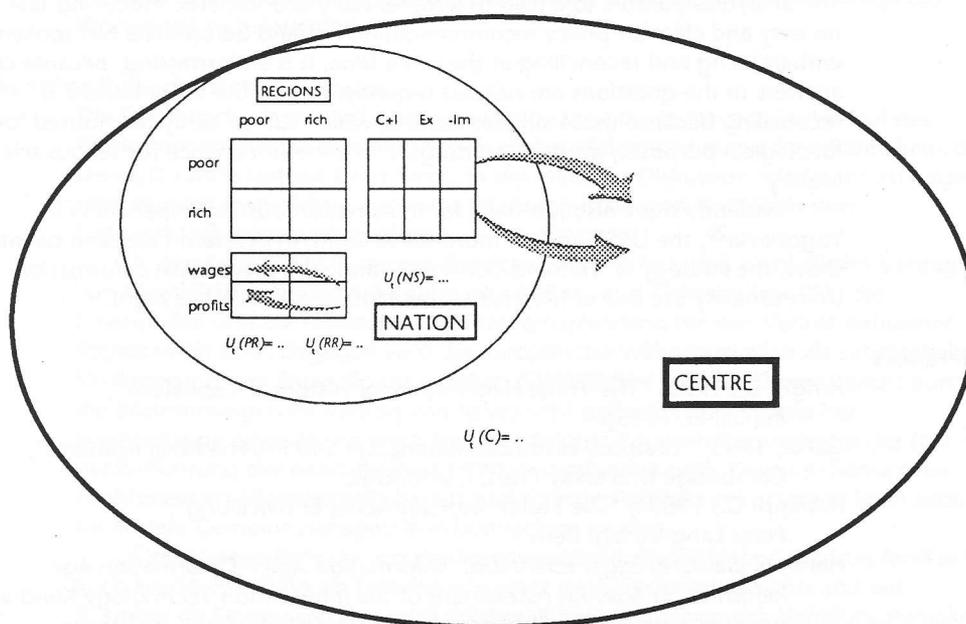
14 Note that the game evidently ends as soon as the jump is made, it is what is called a *game of timing*, and different strategies have different length. Evaluations of payoffs nevertheless have to refer to the same point in time.

recommendation. Contrary to the normal form game such an optimal strategy might well consist of a long period of resistance against unification. The next chapter will try to outline how the economic underpinnings to support such an argument could look like.

3. Economic Underpinnings

The basic ingredients for an economic model to cover questions like the ones posed in the previous chapter must allow for a sectoral (i.e. "regional") treatment of an open economy. Moreover behavioural equations must exhibit a well-specified, at least partially non-linear¹⁵ dynamic. What immediately comes into mind, of course, is a dynamic input-output-model of an open economy. The specification of such a model clearly goes far beyond the scope of this paper. All that can be done in the current context is to discuss some of the properties of such a model. Consider figure 6:

Figure 6
Some stylized economic conditions for nation busting



The model must cover all three players, in other words three levels of aggregation: Europe (player: the centre), a "weak" national economy (player: the nation state) and at least two sectors of the national economy, a rich and a poor one (player: the region). Each of these layers must be linked to the two others.

The regions can be linked to the nation state by a standard dynamic I-O-framework, this seems to be the easiest part. Of course, the specification of quantity flows has to be supplemented by financial streams including subsidies and taxes of regions. The link from rich regions to the centre has been given a specific functional form: How can the centre subsidize a rich region – and how can a rich region disturb the nation state in return for that. Finally the force of poor regions has to be formalized too. What are the limits for their subsidies from the nation state, where does this money come from – and how can they strengthen the nation state in return for that.

Additional to the links already mentioned at the level of the nation state the classical goals of economic policy – employment, growth, price stability, budget deficit and balance of payment – have to be taken into consideration¹⁶. Constraints derived from this set of goals have to be met. Since the links to the regions have already been specified, what remains are the links to the centre. Again standard macro-models of an open economy can be used. Trade streams and financial streams to the economic environment have to be brought into a functional form. The most challenging task is to formulate expectations for the time after the "jump". How will a future export function of a set of regions, which previously had the header "Austria", look like?

¹⁵ Remember the non-linearity of in the utility of resisting for the nation state in the extensive form game.

¹⁶ National government usually suffers from bad performance of these variables – at least in times of elections.

Finally the behaviour of the centre has to be specified. In particular the relations between this centre (Europe) and other centres, which are exogeneous to the model, nevertheless have to be made explicit. Bearing in mind what has been said in chapter 1, it might well be that this external development drives the whole model. A formal way to clarify the behaviour of the center is to postulate its utility function¹⁷. In this function actions of other centres can enter as arguments expressing in that way how the model is driven.

Dynamic utility functions can be used for the nation state and the regions too (compare the U(.) functions in figure 6), but, contrary to the standard use of such functions in main-stream neoclassical models, the complexity of the approach makes optimization rather impossible. Instead of that, utility functions could be used to express the boundedness of the rationality of players¹⁸, to operationalize their simplified world views in a simulation model. It is such a simulation model, which would be most valuable as a supporting device for further discussion of the issue, but, as should be clear by now, to produce such a model is not a trivial task.

Conclusion

The analytical parable told lead to a rather hairy econometric modelling task with no easy and clearcut policy recommendation at hand before data has spoken. This is embarrassing and reconciling at the same time. It is embarrassing, because concrete answers to the questions are needed urgently. But on the other hand it is reconciling because those simpler models, which can so easily be misused for ideological purposes, are surely wrong¹⁹. So there is a chance for serious scientific inquiry.

Evidently there also is a need for it. As nation busting experiences in Yugoslavia²⁰, the USSR and, in more subtle form, in Western European countries show, the strategy is "hot and burning" – and so is ideological deformation. Unfortunately the owl of Minerva seems to have cancelled its flight.

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- 17 If political centralism fosters growth, there would be a direct link between the firms in player 1 and its utility function. Recent literature nevertheless raises some doubts on this link [Przeworski A./Limongi F., 1993].
- 18 Compare Herbert Simons pivotal contribution to the modelling of rational decisions [H.Simon, 1982].
- 19 Even wrong models can, as a random event, of course lead to qualitative correct answers.
- 20 Support for Slovenia before the breakdown of Yugoslavia sharply contrasts the current aid. A recent historical experience paralleling the argument of the extensive form game in chapter 2.