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INSTITUTIONAL COMPETITION AMONG JURISDICTIONS:
An Evolutionary Approach

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The purpose of this paper is to outline an evolutionary approach to the process of competition among institutions. We shall focus, in particular, on two issues: first, the role of the competitive process as a knowledge-creating process; and, second, the issue of what inferences, if any, can be drawn from the nature of this process regarding the desirability of its outcomes. In discussing both issues we will draw a parallel between ordinary market competition and competition in the realm of institutions. Some clarifying comments in order to narrow down what we mean by "evolutionary approach" and "institutional competition" precede the analysis.

JEL classification: H10, H70, K00.

I. Alternative Perspectives on Competition

Evolution and competition are closely connected concepts. The notion of competition is as central to evolutionary biology as it is to economics, and in both fields it is directly linked to the notion of scarcity.[1] Yet, the theoretical perspectives that the two disciplines bring to bear on their common subject differ significantly.

In economics the principal interest has been in determining the equilibria that are supposed to result from the competitive process. Furthermore, it is assumed that these equilibria can be derived from the relevant data of any given situation, and that therefore a detailed study of the workings of the competitive process itself is not a necessary part of such equilibrium analysis. By contrast, the principal interest of evolutionary biology is exactly in the process of competition itself. More precisely, its interest is in examining how this process affects the distribution of characteristics in a "population" over time, a perspective that is called "population

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1 Exemplifying references for economics are hardly needed here. For references from evolutionary biology see R. McIntosh 1992. As E. Mayr (1982: 484) notes, the Darwinian "struggle for existence . . . rarely takes the form of actual combat. Ordinarily it is simply competition for resources in limited supply."

thinking." There is no presumption that the process can be best understood in terms of predeterminable equilibria. Instead, the emphasis is on the continuous endogenous generation of novelty within populations.

Population thinking establishes a connection between competition and adaptation. It argues

> that if there is a population of entities with multiplication, variation and heredity, and if some of the variations alter the probability of multiplying, then the population . . . will evolve so that the entities come to have adaptations (Smith 1987: 120).

The entities of which populations consist are unique individuals, and it is the very emphasis on their uniqueness and diversity that characterises population thinking.[2] The focus of population thinking is on intra-population competition, i.e., on competition among the individual entities making up a population. And its interest is in examining how differences between individuals' capacities to secure scarce resources affect their prospects of being represented by their likes in future generations.

When we speak of an "evolutionary approach" to competition we mean an approach that employs population thinking.[3] And our main purpose in this paper is to explore the insights that can be gained by applying population thinking to the study of competition among institutions. The essential ideas that we shall borrow from the biological model are the following:

> (1) there is a population of individual entities who compete with each other for scarce resources and rewards;
>
> (2) the individual entities differ in their traits and in the strategies that they employ, and these differences matter for their relative success in securing resources and rewards;

2 E. Mayr (1982: 46f.) contrasts population thinking with "essentialism," a perspective that abstracts from individual variations and stresses the "typical" or "average" characteristics of classes of individuals. "What is population thinking and how does it differ from essentialism? Population thinkers stress the uniqueness of everything in the organic world. What is important for them is the individual, not the type. . . . There is no 'typical' individual, and mean values are abstractions . . . . This uniqueness of biological individuals means that we must approach groups of biological entities in a very different spirit from the way we deal with groups of identical inorganic entities. This is the basic meaning of population thinking. The differences between biological individuals are real, while the mean values which we may calculate in the comparison of groups of individuals (species, for example) are man-made inferences."

3 Note that not all of the unorthodox approaches in economics that are labelled "evolutionary" are either based on, or compatible with, population thinking (on this issue see Witt 1991, 1992). For an evolutionary approach in economics that explicitly adopts population thinking see e.g. Metcalfe 1989.

(3) their differential success translates into different probabilities for the respective traits or strategies to be represented, or practiced, in future populations;

(4) new variation is continuously generated within the population and induces change in the distribution of traits or strategies within the population.

It is the competition-induced change in the composition of a population over time that is meant by the term "evolution."[4]

II. Cultural Evolution Through Institutional Competition

The term "institution" is so generously employed in the social sciences that one can hardly find a definition that would cover all its various uses, even though they all pertain, in one way or another, to social rules. Something like "configuration of interconnected rules" comes perhaps closest to an encompassing definition. Yet, this leaves still considerable room for ambiguity, a major instance of which is pointed out, for instance, by sociologist Talcott Parsons (1975: 97), when he observes that we speak of the institutions of property and contract, but also speak of organizations or collectivities (universities, states, etc.) as institutions, despite the apparent difference between the two kinds of phenomena.[5] As Parsons illustrates the difference, we can, for instance, meaningfully speak of "membership in an institution" when we think of organizations or collectivities as institutions, but not when we use the term in the other sense. "One simply cannot speak of being a member of the institution of property. Institutions in the latter sense ... are complexes of normative rules and principles which ... serve to regulate social action and relationships" (Parsons: *ibid.*).

We shall use the term institution here in its wide definition, i.e., as "configuration of interconnected rules." Yet, in order to avoid the above-noted ambiguity, we add an explicit distinction between two kinds of rule-configurations, namely *configurations of general rules of conduct* and *configurations of organizational rules,* a distinction that parallels Friedrich Hayek's well-known contrast between two kinds of social order, *spontaneous order* and *organized or corporate order,* and between the two different

4 Allen and McGlade (1987: 729) phrase the "question of evolution" as, "How does the 'character' of a population change over time in response to the 'rewards and dangers' of particular strategies?"

5 The significance of this particular ambiguity in the use of the term "institution" is discussed in some detail in Vanberg 1983.

kinds of rules that underlie these orders, *rules of general conduct* and *organizational rules.* By configurations of general rules of conduct we mean institutions of spontaneous order like, for instance, property and contract. By configurations of organizational rules we mean the kind of institutions that constitute organized or corporate orders like state and government or business corporations. We suggest that an institution of spontaneous order like, for instance, property can be said to exist where individuals in their dealings with each other respect the various rules of conduct that regulate the uses of, and transactions associated with, property. By contrast, an institution, like a business corporation, can be said to exist, where, among a group of individuals, the rules are followed, that constitute the organisation in question. In both settings, though, we deal with social arrangements that involve a plurality of actors who follow rules and whose rule-following reinforces the rule-following of others, and vice versa.

By analogy to production technologies, institutions can be thought of as social technologies coordinating interaction and cooperation among groups of persons, an analogy that Hayek has emphasized by likening rules to "tools."[6] As different production technologies can be more or less effective in generating valued output, different institutions can be more or less effective in allowing the groups that adopt them to generate social surplus, i.e., valued output in excess of what the individual participants could realize separately. From such a perspective, the individuals or groups of individuals are viewed as the "users" or "carriers" of rules. They are viewed as the entities that compete for resources or rewards, and the rules or rule-configurations that they adopt are seen as instruments by which they compete. The populations that we are interested in are, then, populations of individuals or groups, who are more or less different from each other in terms of the rules that govern their behavior or operation. And what we actually mean when we speak of "competition among rules" is the competition between individuals and groups that is carried out by means of rules and institutions. We seek to understand how the distribution of a population, of individuals or groups, along the rule-dimension is

6 Hayek (1976: 21) speaks of rules as "general purpose tools" that are "adapted to the solution of recurring problem situations" and he argues: "Like a knife or a hammer they have been shaped not with a particular purpose in view but because ... they have proved serviceable in a great variety of situations .... The knowledge which has given them their shape is ... knowledge of the recurrence of certain problem situations or tasks."—For a discussion on Hayek's use of the "rules as tools"-analogy see Vanberg (1992: 109f.; 1994: 186ff.).

affected by the relative success that different rules help their respective users to achieve.

Accordingly, the main ingredients of the population-approach that we want to apply here to the study of institutional dynamics can be summarized as follows:

(1) We view institutions or rule-configurations as traits or attributes of social groups.

(2) Groups are viewed as the entities that compete for resources or rewards.

(3) The relevant "populations" are composed of such groups.

(4) The groups of which a population consists differ in terms of their rule-configurations.

(5) There is constantly new variation introduced by deliberate and non-deliberate experimenting with alternative rules and practices.

(6) Differences in rule-configurations have an impact on the groups' relative success in securing resources.

(7) Differences in relative success affect the probabilities for groups to have their likes represented in future populations.

(8) This induces a change, over time, in the composition of the relevant population along the rule-dimension.

The above perspective can be applied to various kinds of populations and to various kinds of rule-configurations. Our analysis here will primarily focus on a particular kind of group, namely polities or jurisdictions. A principal characteristic of these entities is their territorial nature, i.e., the fact that residence in a particular territory is the essential criterion that decides whether one is subject to a polity's rules or not.[7] We want to examine the process of competition among polities or jurisdictions insofar as it pertains to the institutions that they use in their efforts to gain resources. More specifically, we want to argue that this competitive process works as a knowledge-creating process, in the same sense in which ordinary market competition works, in Hayek's terms, as a "discovery procedure."

III. Market Competition as a Knowledge-Creating Evolutionary Process

The notion that competition in "ordinary" markets, i.e., markets for goods and services, can be understood as an evolutionary process in which new

7 In order to keep things simple we disregard here the issue of potential differences between citizens and resident non-citizens, as well as issues that concern the status of non-resident citizens.

knowledge is created and spread, has its main roots both in Schumpeter's notion of cyclical processes of innovation and imitation as the driving-force of economic development (Schumpeter 1934, 1942), and in Hayekian ideas of competition as a discovery procedure (Hayek 1948, 1978). Based upon their contributions several strands of thought have been developed[8] that focus on the idea that the significance of competition lies not so much in the fact, emphasized by traditional price theory, that it pushes prices down to marginal costs but, instead, in the role it plays in creating and spreading knowledge about what consumers want, and how their preferences can be satisfied in a better or less costly way.[9]

The focus of this approach is on the knowledge problem that economic agents face. They are not assumed to command "perfect knowledge." The assumption rather is that producers of goods and services cannot know in advance what current consumer preferences are, nor which products, which product qualities, or which design will satisfy consumers best, or which technologies, which inputs, and what organizational structures are best in producing these products. All these variables that in neoclassical microeconomics are treated as "given" data known by the agents, are in fact not known by them. Economic agents or, in our example, producers can base their actions only on conjectures about these things, conjectures that may be correct or mistaken. Their subjective knowledge of the relevant data is always fallible and therefore can be improved. This knowledge problem, which has been addressed, in particular, by Hayek,[10] is aggravated by the rapid change of today's economic world which constantly "turns former knowledge into present ignorance" (Lachmann 1977: 140).

From the above perspective, competition can be seen as a trial and error-process, in which firms compete in trying out new products and new marketing techniques, new technologies and new inputs, new forms of

8 One of these approaches consists of the German concepts of dynamic competition and evolutionary market processes (Arndt 1952; Heuss 1965; Hoppmann 1988; Röpke 1977, 1990; Fehl 1986; for an overview see Kerber 1994), which originally have been based primarily upon Schumpeterian thinking and which later have also been influenced by Hayek. Austrian economists, particularly Kirzner (1992), have explicitly adopted the Hayekian notion of competition in their studies of market processes. Schumpeterian approaches to innovation and economic development have also influenced the evolutionary approach of Nelson and Winter (1982), and much of the vast theoretical and empirical literature about innovation and technical change (e.g., Dosi et al. 1988). For an overview including the new discipline of evolutionary economics, see Witt (1987a, 1992).

9 A more detailed exposition of the following argument can be found in Kerber (1992b).

10 See e.g., Hayek (1948: 101 in particular) and Hayek (1979: 66ff.).

organization and ways of financing, etc. All these innovations can be understood as manifestations of conjectures or hypotheses of firms or, rather, entrepreneurs about what current consumer preferences are and how they can be best satisfied. By expressing with their buying decisions which goods and services they prefer, consumers confirm or refute these hypotheses. They are the ultimate judges in this contest, and hence can be understood as the "reality," against which these hypotheses are tested. Since the agents in this process are seen as creative, entirely new hypotheses can be generated which, by definition, cannot be anticipated. Consequently, evolutionary market processes have to be seen as open processes without predefined ends.[11]

In many respects, such an evolutionary concept of competition as a process of trial and error, of conjecture and refutation, has important parallels to the process of scientific discovery.[12] Trying out new hypotheses referring to new products, marketing instruments, or technologies, and testing them in the market is similar to the testing of new hypotheses by scientists. As Ludwig Lachmann (1977: 90) puts it:

> The business man who forms an expectation is doing precisely what a scientist does when he formulates a working hypothesis. Both, business expectation and scientific hypothesis serve the same purpose; both reflect an attempt at cognition and orientation in an imperfectly known world, both embody imperfect knowledge to be tested and improved by later experience.[13]

Crucial for the dynamics of these evolutionary competitive processes in ordinary markets are the built-in incentives for experimentation and exploration. Those agents who offer the relatively best hypotheses gain a competitive advantage and hence advance in comparison with their competitors.

11 For the creative character and the resulting open-endedness of the process see e.g., Shackle (1972), and Buchanan and Vanberg (1991). Allen (1990: 16) notes about the generalized evolutionary perspective: "The fluctuations, mutations and apparently random movements which are naturally present in real complex systems, constitute a sort of 'imaginative' and creative force which explores around whatever exists at present. Selection, or rather the mechanisms which constitute its dynamics, operate on these initiatives which will either regress, or on the contrary will sweep the system off to some new state of organization."

12 Hayek (1979: 68) notes, "Competition is thus like experimenting in science, first and foremost a discovery procedure."

13 According to Hayek (1978: 181) "[t]he difference between economic competition and the successful procedures of science consists in the fact that the former is a method of discovering particular facts relevant to the achievement of specific, temporary purposes,

This lead implies a temporary monopolistic position and the opportunity to realise supranormal profits. While these profits from successful innovations can be seen as the necessary incentives for making the effort and taking the risk of trying out new hypotheses, the less successful competitors—by losing market shares—are automatically put under pressure to improve their achievements, either by imitating successful firms, and hence taking advantage of the knowledge of the leaders and spreading it, or by innovating themselves. Their following-up or even outstripping the initially advanced firms eliminates the temporary market power of the latter and puts them under competitive pressure.[14] Hence this competitive process can be described as a perennial, dynamic process of advancing and pursuing, of gaining and eliminating market power and profits.[15]

An important determinant of the extent of knowledge which is being created in these competitive processes is the heterogeneity of the competitors. The more heterogeneous the firms and hence their products or—for that matter—hypotheses are, the more knowledge is likely to be generated. Since consumers can select from a broader set of hypotheses, the probability for them to find solutions to their problems that are superior to previous ones increases. Consequently, heterogeneity of firms and diversity of their conjectures are not shortcomings of the market process, as the concept of market imperfections suggests, but an essential positive resource. Evolutionary competitive processes generate more knowledge, if a larger variety of hypotheses are advanced and tried out. Or as Jochen Röpke (1977, 1990) put it, innovations—increasing the variety of behavior—are crucial for the problem-solving capacity of market systems, and hence for its stability and survival in an uncertain and changing environment where unanticipated shocks are a constant possibility.[16]

Looked at from the perspective of population thinking, the evolutionary approach to competition concentrates on the process in which the composition of a population of firms changes over time as a result of the interaction

while science aims at the discovery of what are sometimes called 'general facts', which are regularities of events."

14 To this notion of dynamic competitive processes, the power-limiting effect of competition lies in the temporariness and not in the non-existence of market power.

15 This dynamic analysis of the competitive process has especially been elaborated in the German approach of "dynamic competition" (see above fn.8). For the potential negative effects on the wealth of competitors, which follow from the introducing of new innovations by others, see Witt (1987b: 182ff.), Streit and Wegner (1992: 142ff.), and Kerber (1993: 443ff.).

16 The importance of the heterogeneity of firms has been especially emphasized by Heuss (1965: 145ff.), and Fehl (1986).

of competitive and innovative forces. Different from the process of natural selection, in the evolution of a population of firms human choice plays a critical role regarding the generation of new variation as well as the selection among, and retention of, variants. Yet the general scheme of "variation, selection, and retention" (Campbell 1965: 26ff.) applies here as well. Firms are not identical, they vary in terms of the characteristics of the goods and services they offer, their advertising, technology, organizational structure, and many other things. The constant emergence of new variation (innovations) in their performance-characteristics is a crucial ingredient to the evolutionary process. The selection environment, which encompasses all determinants that influence the survival of firms in the market, defines what "better performance," "fitness," or "adaptedness," mean in this evolutionary process. Profits and losses are the mechanisms that lead to the spreading or elimination of the hypotheses, to the elimination of poorly performing variants and the "preservation, duplication, or propagation of the positively selected variants" (Campbell 1965: 27). Hence by these variation-selection-retention processes knowledge is being produced and spread,[17] and these processes must be regarded as an unintended product of the efforts of many agents, i.e., as the outcome of a spontaneous process in the Hayekian sense.

IV. Institutional Competition Among Jurisdictions as a Knowledge-Creating Process

"Institutional competition" refers to a competition among "carrier-" or "user-units" with institutions as the medium of competition. It is via the effect that rules and institutions have on the success of their users, success in terms of the users' capability to solve the problems they face in their environment, that rules and institutions survive and multiply, i.e., are being used more widely. What we are interested in here is the issue of how institutional competition affects the population of user-units. Or, more

17 As Hayek (1978: 236) has noted, the competitive market process "provides incentives for constant discovery of new facts which improve adaptation to the everchanging circumstances of the world in which we live." See also Popper's claim of a universal Darwinian concept of the growth of knowledge, based upon the principle of trial and error elimination (Popper 1972: 255). In the evolutionary approach of Nelson and Winter (1982) such a variation-selection reasoning has been combined with Schumpeterian dynamics to provide for a more adequate explanation of economic development than the traditional neoclassical growth theory which always had difficulties to explain technical progress. For a combination of this literature with evolutionary epistemology see Metcalfe and Boden (1992).

specifically, we want to examine how differences in institutional structure among user-units translate into differential success in competition, and how the latter affects the representation of institutional types in future populations.

Institutional competition is going on in multiple ways and within various kinds of populations of carriers or users, such as religious communities, business firms, sports clubs, or political entities like local governments or states. Which entities constitute the relevant population is an analytical issue, it depends on the explanatory problem that is to be addressed. The competition among firms in ordinary markets, for instance, includes an institutional dimension in the sense that firms' organizational structure, their internal rule-configuration, is one of the variables in terms of which they compete. And to the extent that differences in their rule-structure affect firms' market success, one should expect this to be reflected in the distribution of future populations of firms along the institutional dimension.[18]

As noted above, we want to focus here on competition among polities or jurisdictions, i.e., social entities that can be characterised, in analytical terms, as territorial clubs. Approaching such competition among jurisdictions from a population perspective, we need to ask what the relevant populations are and through what kinds of feedback mechanisms differences in institutional attributes can be expected to translate into changes in the composition of populations over time. There exist various levels of jurisdictions and, accordingly, various levels of competition, from local communities to nation-states and beyond. Which set of jurisdictions constitutes the relevant population will, as noted before, depend on the nature of the explanatory issue at hand. As for the feedback mechanisms there seem to be essentially two kinds, that we propose to label as "political selection" and "market-type selection" (Vanberg and Buchanan 1991). By political selection we mean the choice among potential alternative institutional regimes through collective political decision procedures like, in particular, legislation. By market-type selection we mean the choice of individuals—or of non-territorial clubs like, for instance, firms—to locate in a particular jurisdiction or to move from one jurisdiction to another. These two selection processes are not mutually exclusive alternatives but typically operate simultaneously. Indeed, the way in which market-type

18 The evolutionary approach of Nelson and Winter (1982), in which firms are conceived as consisting of "routines" in the sense of repetitive patterns of activity, comes close to this notion.

selection impacts on political selection is important for the population-effects of institutional competition.

Furthermore, both processes are about human selection as opposed to natural selection, i.e., they do not operate directly through "objective" success, but through human perception of success, even though we can assume that learning will impose a limit on the extent to which the two can diverge.[19] The potential difference between human perception and factual performance of institutions means that there is not only an interaction between the two feedback mechanisms distinguished above, i.e., political selection and market-like selection, but also an interaction between the feedback via "objective" consequences of rules and institutions for the problem-solving capacity of their carriers or users, and the feedback that works through perceived success, where "perception" implies the possibility of error. The interaction of these various feedback mechanisms is bound to generate considerable complexity and should let us expect that we will hardly find simple regularities in the evolution of institutions that hold widely across time and across social environments.

The issue that we are interested in is how competition among jurisdictions affects the distribution of institutional properties within a relevant population of jurisdictions over time. That competition among jurisdictions can serve functions similar to those that we use to attribute to ordinary market competition is a theme that, at least since Tiebout's (1956) classic article, has found considerable attention, in particular in the theory of fiscal federalism. Yet, much of this discussion remained within a standard equilibrium framework, concerned with such issues as the matching of policies with "given" citizens' preferences, and left unexplored the issue that is our principal concern here, namely the role of competition as a knowledge-creating discovery procedure.[20]

19 As Allen (1990: 20) notes on this issue: "In human systems, at the microscopic level, decisions reflect the different expectations of individuals, based on their past experience. The interaction of these decisions actually creates the future, and in so doing fails to fulfill the expectations of many of the actors.... Evolution in human systems is therefore a continual, imperfect learning process, spurred by the difference between expectation and experience, but rarely providing enough information for a complete understanding."

20 Discussing "competition between local governments" explicitly as a "discovery procedure" Vihanto (1992: 434) notes as a defect of the traditional analysis that it regards competition as "a procedure by which the competitors can be induced to act so as to produce foreseeable outcomes that are known to be efficient or inefficient on the basis of current information," and that it ignores that "many of the outcomes of competition cannot be known" in advance. For another Hayekian approach to competition among jurisdictions

The knowledge problem that we discussed earlier with regard to entrepreneurs in ordinary markets applies with full force to political entrepreneurs as well, where under the label of "political entrepreneur" we subsume all agents who are in a position to shape the institutional attributes of jurisdictions, i.e., in particular, governments and legislators. What we said about the former can, by analogy, be extended to the latter. They also do not know, and cannot know, in advance most of the things that an equilibrium framework treats as given data. They cannot know in advance what kinds of institutional provisions are best suited to solve diagnosed problems, nor can they know in advance what citizens will tomorrow consider relevant problems. Like entrepreneurs in ordinary markets, they have to act on conjectures that may turn out to be right or wrong. And the process of competition among jurisdictions can be seen, in analogy to market competition, as a process of experimenting, exploration, and discovery, in which alternative institutional arrangements or social technologies are tried out in an arena in which new arrangements and institutional inventions can constantly appear on stage, challenging established solutions.

In analogy to market competition, jurisdictions that introduce new superior institutions or abolish old ones, that outlived their usefulness, can—by winning a competitive advantage—advance in their respective competition among cities, regions, or nations. This improvement in the interregional competitiveness of jurisdictions will attract the influx of factors of production (labor and capital). The advantages of this influx for the jurisdiction correspond to the profits of leading firms in market competition. Jurisdictions that have a relatively inferior institutional structure will fall back, losing labor and capital (investments) to the leading ones. These effects will put the jurisdictions under competitive pressure to improve their attractiveness, e.g., by imitating the institutional innovations of the leading countries. Hence there are incentives for successful institutional innovations of jurisdictions to be tried out and spread by imitation.[21] Before elaborating on the knowledge-creating effect of this process in more detail,

see Fehl (1990) who analyzes the transmission processes for successful institutions between jurisdicitons in more detail.

21 For a Schumpeterian analysis of international competition, in which the competition among countries is seen as a rivalry process, consisting of "moving ahead and falling back", of "leaders" and "followers" and their mutual interaction, see e.g., Abramovitz 1988. For an argument along somewhat similar lines, see Porter (1990) who applies his concept of "competitive advantage" to the competition among nations. But in contrast to our approach Porter does not stress the institutional dimension of international competition.

we want to point to some particular problems regarding its working properties.

One significant difference between ordinary market competition and competition between jurisdictions that does not allow for the latter the degree of flexibility that we find in market competition has to do with the previously mentioned fact that jurisdictions are territorial clubs. When a dissatisfied customer of a seller in the market decides to take his business elsewhere, the costs or inconvenience of doing so are normally relatively modest. When residents are dissatisfied with "their" government, they can escape that government only by moving into a different jurisdiction, a transaction that is in general significantly more costly than changing sellers in market exchange. There are potentially considerable exit costs involved, in particular in the form of "sunk capital" that has to be given up or is devalued significantly by the change in residential location. This includes as a major component accumulated knowledge, skills and expertise that are adapted to the particular environment, but have comparatively little value in alternative environments.

The problem of exit costs certainly means that inter-jurisdictional migration will, in general, be less effective in making political entrepreneurs responsive to citizens' preferences than mobility in ordinary markets is in making producers responsive to consumer preferences. This does, however, not mean that it is not an important instrument in inducing responsiveness. Several facts have to be considered here. One important fact is that in competition among governments or jurisdictions marginal residents, i.e., residents to whom the opportunity costs of moving to a different jurisdiction are low, can play the same decisive role that marginal consumers play in ordinary market competition. Another fact is that persons may be able to move their resources, in particular capital, much more easily, i.e., at lesser costs, between jurisdictions than they themselves could migrate, thus penalizing or rewarding governments by the withdrawal or investment of taxable funds.[22]

A further problem for the proper working of the process of competition among jurisdictions are the positive and negative incentives for those who decide on the institutional structure of jurisdictions. Since jurisdictions have no single owner who can claim the residual, but have to be seen as clubs consisting of many members with a collective decision procedure,

22 For an explicit analysis of the effects of competition among governments for capital, see Sinn (1992).

it seems that the incentive mechanism, which provides for feedback by assigning profits and losses according to the relative position in the competition among jurisdictions may work considerably less efficiently than in ordinary markets, in which the capital owners have both the ultimate authority to make decisions and are the residual claimants. By contrast, the advantages and disadvantages of advancing or falling back in competition among jurisdictions may be both widely dissipated and presumably unevenly distributed among citizens.[23] Compared to the clear-cut role of entrepreneurs in ordinary markets, the incentives for political entrepreneurs to search for institutional innovations in order to improve the competitiveness of their jurisdiction may be rather weak.

Yet, even if the competition processes among institutions may not be as effective as those in ordinary markets two essential facts remain: First, competition among jurisdictions provides for the possibility of alternative institutional arrangements to be tried out. Second, it provides incentives for political entrepreneurs to offer attractive institutional environments for citizens/taxpayers and mobile resources. We can observe that such institutional competition among jurisdictions takes place. New institutional arrangements have been created and tried out by some jurisdictions, and after positive experiences they were imitated by others. For example, in the eighties, deregulation, liberalization, and privatization have been strategies of jurisdictions to improve their competitiveness in the international competition for investments and new jobs.

As in competition in ordinary markets, the heterogeneity of institutions in different jurisdictions has to be seen as positive for the process of finding better institutions.[24] With respect to the multi-layered, hierarchical structure of jurisdictions, the knowledge-creating effect of institutional competition among jurisdictions supports further decentralization, since the assigning of tasks to lower levels in the hierarchical structure of jurisdictions allows for additional competition and experimentation.[25]

23 Since e.g., the prices for real estate react especially sensitively on any inflow or outflow of labor and capital, the owners of real estates may be much more affected by changes in the competitiveness of their jurisdiction than other members.

24 Campbell (1965:28): "The more numerous and the greater the heterogeneity among variations, the richer the opportunities for an advantageous innovation."

25 Vihanto (1992: 415) emphasises that it is "the nature of competition as an open-ended process of discovery" that provides an essential "argument for a decentralized government."

V. Market Competition as Constitutionally Constrained Competition

Competition can be carried out in many different ways and with a broad variety of strategies. Burning down the factories of one's competitors, bribing their employees for disclosing business secrets, or spreading false rumours about poisonous ingredients in their products, may be just as effective strategies in seeking business success as creating a new product, improving one's service, or launching an impressive advertising campaign. There are many potential strategies that competitors could consider, and it is the function of the "rules of the game" to draw a dividing line between strategies that are permissible and those that are not. Market competition is competition within rules, it is (constitutionally) constrained competition (Vanberg 1993).

What is the effect of rules on the evolutionary competitive process? Since the rules determine which strategies are allowed and which prohibited, they, in effect, direct the search efforts of the competitors for innovations into certain directions, and discourage search in other directions. If, for instance, rules prohibiting industrial espionage, or trademark piracy are effectively enforced agents will not expect a positive pay-off from efforts to improve their knowledge and capabilities using these means. As a further consequence, firms need not search for ways to defend themselves from these activities. That is, the rules—by assigning positive and negative incentives to different strategies—influence the direction of innovative efforts, and hence the direction of the knowledge-creating and -spreading process (Kerber 1992a, 1993). Or, as Witt (1987b) has observed, rules "channel innovativeness."

In terms of the variation-selection-retention framework we can interpret firms as variants and the rules defining the terms of the competition as a relevant part of the selection environment. Different rules constitute different selection constraints; which performance-characteristics of firms account for success or failure in market competition depends on the particular rules of the game. If, for instance, property rights are not sufficiently protected—either by lack of appropriate rules or by failure of enforcing them—incentives exist to violate the property of competitors, and, consequently, the necessity arises of defending one's own property against intrusion. In such an environment, it is not enough to produce better products to succeed, it is also necessary to develop knowledge about how to defend one's business against predatory action. A firm without such skills would not be sufficiently adapted to this problem environment. Since

the rules are part of the selection criteria of market competition games, different sets of rules will lead to the survival of different kinds of firms with different knowledge and capabilities. They lead to the survival of different products, services, and technologies in the market. And they determine which kind of knowledge will be selected or suppressed in market competition.

The recognition that the rules of the game determine which firms will tend to be successful in market competition should alert us to the fact that there are clearly assumptions about "appropriate rules" implied when we ascribe efficiency attributes to markets. The population of firms operating in an economy will always adapt to the existing problem-environment, i.e., there will be a shift in the distribution of the population in favor of superior problem-solving capacity in that specific environment. In this sense, it is always true that the "successful,"—successful relative to the respective problem-environment—will survive. Whether what survives is "desirable" in terms of some separately defined normative criterion is, of course, a totally different matter.[26]

An independent normative criterion, for instance in terms of what the persons involved consider desirable, has to be clearly specified. When such an independent criterion is applied, it will depend on the nature of the selection environment whether that which de facto survives is desirable in terms of that criterion. If we regard the preferences and values of the persons involved as the relevant normative standard, the desirability of evolutionary competitive processes will depend on whether the selection environment allows for responsiveness to these interests and values. When we describe market competition as "efficient," we, in effect, mean that it is a competitive process constrained by rules that encourage responsiveness to consumer interests. This is what the concept of "consumer sovereignty" implies. Stated in terms of the variation-selection-retention framework, a normative standard like consumer-sovereignty defines what the relevant selection criteria in the evolutionary competitive process *should* be, and, consequently, in what direction firms should search for new and better knowledge.

Another way of approaching the problem under discussion is in terms of the distinction between conditional and unconditional conjectures about the workings of evolutionary processes (Vanberg 1994). Unconditional

26 The idea that the prevailing set of rules influences the selection criteria of the market, and hence that the "superiority" of products and firms is always relative to these rules, was put forward by J. Röpke (1977: 275).

evolutionary conjectures are hypotheses about evolution that do not specify the selective forces under which the process occurs. Without any such specification we can still say that what survives must be successful in coping with the problem-environment. But, not knowing what selective forces will operate, we cannot make any specific predictions about what will survive successfully, and which attributes the successful variant is likely to exhibit. And without knowing this we surely cannot say whether what survives will be desirable in terms of any specified normative criterion. By contrast, conditional evolutionary conjectures are statements about the workings of evolutionary processes under specified environmental constraints. Where relevant selective conditions in evolutionary processes can be identified, conjectures can be made about what is likely to be successful, and hence to survive, given those specified constraints. Since such conditional evolutionary hypotheses provide information about the likely attributes of what survives, they also allow for a meaningful discussion of whether these evolutionary processes lead to beneficial results in terms of the selected normative criterion.

The above considerations reinforce our earlier argument on market competition as constitutionally constrained competition. The claim that markets serve consumer interests is a conditional claim about the working of competition within appropriate rules. It is the assumption that certain rules are in place that allows us to draw conclusions regarding, for instance, the general direction into which the search efforts of the agents are guided, or regarding the feedback mechanisms that, via the assignment of profits and losses, determine the dynamics of the process.[27] In every environment we can expect humans to experiment around what exists, and to explore new and potentially better solutions to the problems they face.[28] In this sense, any social process is, in a sense, an explorative process. What is critical for the general direction into which man's explorative efforts are directed is the nature of the problem environment, and, in particular, those parts of the problem-environment that can be affected by human action, notably the rules of the game. The problem-environment determines which

27 Without specification of the selective conditions any variation-selection argumentation remains empty, an insight that can already be drawn from Alchian (1950), and Penrose (1952: 809ff.).

28 As the eighteenth century Scottish moral philosopher A. Ferguson (1980: 6) put it, Man "is destined, from the first age of his being, to invent and contrive . . . .He would be always improving on his subject, and he carries this intention whereever he moves, through the streets of the populous city, or the wild of the forest."

strategies will be rewarded by success and will, therefore, be encouraged, and which strategies will be discouraged. This is as true for market processes as it is for any other process. If markets are to serve consumer interests, they need to be framed by rules that make better service to consumers the principle avenue to success rather than, for instance, lobbying efforts for protective legislation.

Liberal advocates like Hayek have always emphasized that, in order to work beneficially, competition is to be "restrained by appropriate rules of law."[29] Also the German Ordo-liberals (Freiburg school) have emphasized that a system of rules is necessary to check both private and political power. This institutional framework, called "competitive order" or "Wettbewerbsordnung" and conceived as a "rule of law," has the task to maintain the proper functioning of the competitive proess, i.e., to safeguard competition against restraints and the use of "unfair means." The basic idea of the Ordoliberal concept of competition is that competition should take place within rules that assure "that the only road to business success is through the narrow gate of better performance in service of the consumer."[30] Their concept of "Leistungswettbewerb" can be seen as a heuristic term designed to help the search for appropriate rules ("competitive order"), rules that channel the innovative efforts of entrepreneurs in ordinary market competition in the direction of a better fulfillment of consumer preferences.

VI. Institutional Competition: Evolution Within Constraints

The same arguments that have been made above about market competition as constitutionally constrained competition apply to institutional competition as well. Competition among jurisdictions can, in principle, be carried out in manyfold ways and with a wide variety of strategies or instruments. They can compete with each other by making their institutions more

29 Hayek (1978: 125; 1988: 19); or as Edwards (1949: 2f.) has characterized the issue, "Competition necessarily takes place within the limits of certain rules of the game established by law and custom. These rules provide a setting within which commercial intercourse is carried on. . . . In general, . . . , rules of the game are designed to direct competitive behavior into desirable channels without reducing the intensity of competition. . . . When the rules are too lax, the competitive game is played by undesirable means and produces undesirable results. When they are too tight, desirable activities are forbidden and experiment becomes difficult".

30 Röpke (1960: 31); for brief summaries of the Ordo-liberal concept of "Wettbewerbsordnung" see Möschel (1989), and Vanberg (1991).

attractive to citizens and investors, by providing a more hospitable environment in terms of such things as regulatory provisions, the educational system, environmental and cultural attractiveness. But they can also compete by protectionist policies and export subsidies, the use of military force, by terrorist acts, by restricting their citizens' mobility, by confiscating property, and an array of other measures. Which kinds of institutions allow a government or jurisdiction to compete successfully will surely depend on the nature of the relevant competitive constraints.

When we look at institutional competition as an evolutionary process, we can, again, predict that there will be a survival of the successful. But, as in the previously discussed context, this does not tell us very much as long as we have no knowledge about the terms of competition, and about the nature of the selective forces that operate in the relevant environment. It tells us that whatever will make jurisdictions more successful in coping with their problem-environment will further their survival and enhance the prospects that their likes will be better represented in future populations of jurisdictions. But it does not tell us what properties successful jurisdictions will tend to have, nor can it tell us whether what survives will be desirable in terms of whatever normative criterion we want to apply. As an unconditional evolutionary conjecture, i.e., a conjecture that does not specify the selective constraints and hence the particular nature of the competitive process, such a prediction is without empirical and normative content.

A meaningful discussion on whether the outcomes of a process of institutional competition are desirable, is possible only to the extent that two questions can be answered. Namely, first, what kinds of properties are likely to promote success and will, therefore, tend to be attributes of what survives. And, second, what is considered desirable. In order to answer the first question we need to know what the selective constraints and the terms of competition are. Only then can we specify what the likely characteristics of survivors will be, and only then can we meaningfully begin to ask whether jurisdictions with such characteristics are desirable. In order to answer the second question, we obviously need to specify a normative criterion that allows us to decide what, in terms of this criterion, is or is not desirable.

For market competition we adopted the individualist-liberal criterion of consumer sovereignty that sees the desirability of the competitive order of markets in its effectiveness in making producers and suppliers responsive to consumer interests. For institutional competition we suggest an analogous

criterion that may be called "citizens sovereignty," a criterion that takes the preferences of the constituents of, or residents in, a jurisdiction as the relevant measuring rod against which the desirability of its institutional features has to be measured. According to the criterion of consumer sovereignty markets can be said to work the better, the more fully they serve consumer interests. The institutions that define the competitive order of markets can, accordingly, be said to be desirable to the extent that they enhance producers' responsiveness to consumer interests. And to "improve markets" means to improve the rules of the "market competition game" with regard to the criterion of consumer sovereignty.

By analogy, we can now also introduce the idea of a set of rules or a competitive order for the competition among governments or jurisdictions. And it can be said that these rules work the better, the more fully they induce the jurisdictions to direct their innovative competitive efforts to the serving of the interests of the citizens. Hence the institutions that define the "Wettbewerbsordnung" of institutional competition can be said to be desirable to the extent that they induce responsiveness to citizens' preferences. And to "improve" such a competitive order means to improve the rules for institutional competition so as to channel the innovative efforts of the political entrepreneurs in the direction of a greater fulfillment of citizens' sovereignty.

As already implied in the above argument, a significant part of the framing conditions that constitute the problem-environment in which institutional competition takes place are the rules of the game, the rules that define which strategies jurisdictions may use in their strive for control over valued resources, and which are not permissable. Different rules will guide their explorative efforts into different channels, and, surely, not all of these efforts will be laudable in terms of our stated criterion. That is, as with market competition, we have to think of institutional competition too as constitutionally constrained competition, as competition that occurs within the constraints of well-defined, appropriate rules of the game. In markets, these constraints restrict the strategies that market participants may use in their competitive efforts. In the political realm they restrict the strategies that governments are allowed to use in their competition for taxpayers and taxable resources.

VII. Competitive Order and "Ordnungspolitik"

If the working properties of competitive evolutionary processes in the social realm are to a significant extent a function of the rules under which

they operate, and if we can determine which kinds of rules are more likely than others to make these processes work in a way desirable to the persons involved, then, it would seem, efforts to install and maintain a suitable rule-framework should be one of the principal means by which we can hope to improve our social condition. For markets this case has been forcefully argued by German Ordo-liberals with their plea for "Ordnungspolitik," by which they mean an economic policy that sees its principal role in the continuous monitoring, enforcing and improving of the framework of rules (Wettbewerbsordnung). The perspective on institutional competition that we have outlined here suggests that for competition among jurisdictions there should be an equivalent to the "Ordnungspolitik"-approach that the Ordo-liberals advocated for ordinary markets. If the working properties of institutional competition are significantly shaped by the rules of the game, and if we can identify the kinds of rules that are more likely than others to put the competitive efforts of governments in the service of their citizens' interests, then to establish a suitable framework of rules, a suitable competitive order (Wettbewerbsordnung), should be a principal instrument for achieving a better political order. Within the existing multi-layered structure of more or less inclusive polities (e.g., local, state, and national governments) such an Ordnungspolitik for competition among governments or jurisdiction would have to be applied, of course, to the various levels at which a competitive order could be meaningfully defined. Within a state, for instance, the concern of an "institutional Ordnungspolitik" would be with the rules that pertain to the competition of local governments, while within a federation, for instance, its principal concern would be with the rules for competition among the states, and with rules that define the relation among various levels of government.

The general task of Ordnungspolitik in all its potential varieties is to steer the competitive process in a desirable direction in the sense of consumer sovereignty or citizens sovereignty. Or, stated in terms of the population paradigm, its task is to assure that selective forces operate on the relevant population (of e.g., firms or jurisdictions) in such a way as to shift the distribution of properties of the competing entities (firm, jurisdictions) in the direction of increased "fit" with consumer or citizens preferences.[31] Or, stated in still another way, the task of Ordnungspolitik is to encourage "Leistungswettbewerb" in ordinary markets as well as in

31 The "social selection" that we are interested in affects the distribution of properties in a population not primarily through "death" and "birth" of competing entities, but through existing entities changing their properties.

politics, i.e., a kind of competition that approaches the ideals of consumer sovereignty and citizens sovereignty.

To be sure, to say that the task of Ordnungspolitik is to encourage "Leistungswettbewerb" does not mean that we would have a ready-made answer to the question of what constitutes an appropriate or desirable competitive order, neither for market competition nor for institutional competition. The concept of "Leistungswettbewerb" is an analytical concept, the general theoretical meaning of which we can specify with some clarity, the actual implementation of which is, however, a continuous task that must be solved in view of factual contingencies that we cannot all know in advance, nor determine once and for all. Like its correlatory terms, consumer sovereignty and citizens sovereignty, the concept of Leistungswettbewerb is a general guideline rather than a specific blue-print for economic policy. To work out what this guideline suggests with regard to specific problem-situations is a permanent task for Ordnungspolitik in a changing world, a task that will largely be a matter of learning from experience, by trial and error.

For market-oriented Ordnungspolitik there have been considerable efforts to specify what "Leistungswettbewerb" may mean in particular contexts. The basic idea is that firms should advance in competition by better performance, and not by impeding their competitors, but it is not always easy to distinguish between these two kinds of competitive behavior. How Ordnungspolitik may advance "Leistungswettbewerb" in the realm of competition among jurisdictions is a much less explored issue, though public choice and constitutional economics, as well as other branches of the "new institutional economics," have provided useful insights. Without going into details there are a few aspects of this issue that seem to us of particular significance and that we want to mention, at least briefly.

The principal selective force in the process of institutional competition that we envision here, are the locational choices of entities—citizens or taxpayers, firms, investors, etc.—that can move taxable resources in and out of jurisdictions. Their choices constitute the essential feedback link between the institutional characteristics of jurisdictions and their success in attracting valued resources. The more responsive these locational choices are to changes in, and differences among, the institutional properties of jurisdictions, the closer the feedback link will be. Rules securing the mobility of persons or resources between jurisdictions are, therefore, a principal component of a "Wettbewerbsordnung" for institutional competition. Similar considerations may apply to the issue of collective exit and

entry, i.e., the possibility for subunits to secede from a polity of which they are part, and to operate as an independent unit or to associate with other polities. Appropriate rules for such jurisdictional mobility may also help to promote responsive government.

Another problem that a "Wettbewerbsordnung" for institutional competition would need to address can be viewed as an equivalent to what, in the context of ordinary markets, is the concern of antitrust policy. If there is to be genuine competition among jurisdictions, the "Wettbewerbsordnung" has to effectively limit the scope for cartel-like ex ante coordination among governments. No less than firms in ordinary markets, governments have incentives to seek to escape competitive constraints by concerted action. And there is a significant repertoire of arguments that allow governments to mask as legitimate concerns what, in effect, are only means to reduce competition, such as, for instance, the many varieties in which "externality" arguments can be used, sometimes legitimately but often not, to justify arrangements—like, e.g., "revenue sharing" or "intergovernmental transfers" (Vihanto 1992: 430ff.; Dye 1990: 114f.)—that limit the possibility of, and the incentives for, independent competitive efforts.[32]

In analogy to antitrust policy for ordinary markets, it is tempting to think about the idea of restricting the "concentration" of jurisdictions, e.g., by a "merger control" or by "breaking up" large jurisdictions into smaller ones, in order to stimulate institutional competition. In that context, it is interesting to ask, whether jurisdictions can have "market power" which is not being controlled by competition from other jurisdictions. In ordinary market competition, the freedom of new firms to enter the market is important in limiting the market power of incumbent firms. But in competition among jurisdictions market entry is in some sense very difficult or impossible, because jurisdictions are territorial clubs, and there is no more free territory on the globe. Hence new jurisdictions can only emerge by seceding from old ones. Therefore the above mentioned right to secede might also be a crucial one for maintaining competition among jurisdictions.

How these problems, and many others, can be best accounted for in a "Wettbewerbsordnung" for institutional competition is, as suggested above, an issue for which we do not have ready-made and definite answers, but one that requires continuous attention and further research. What is

32 Hence the efforts to a greater harmonization of laws and regulations within the European Union can also be seen as a step to a further cartelization of the member-states.

important, is the recognition that to define a framework of rules for competition among jurisdictions is an essential part of the role that the constitutions of polities and federations, as well as international law, have to play. From this perspective, the significance of federalism, for instance, has to be seen in its role for providing a framework for competition, or a "Wettbewerbsordnung," among its member-states. And the role of an entity like the United Nations could similarly be seen to comprise the function of defining rules for the competition among nations.[33]

Conclusion

Our purpose with this paper was twofold. We wanted to show that, similar to market competition, institutional competition ought to be viewed as a knowledge-creating discovery process. And we wanted to argue that, again like market competition, institutional competition can be expected to work to the benefit of the persons involved only if it is constrained by appropriate rules. Institutions as rule-configurations can be viewed as social tools or social technologies that help to solve problems that persons face in their dealings with each other. As with problem-solving devices in other areas, we can never know in advance what the best technology is to solve problems in human interaction and cooperation. Here, as there, we have to rely on experimenting, experience and learning, and our interest should be in utilizing the explorative potential of a competitive, evolutionary process. Since the selective constraints under which such a process operates are critical for the direction into which explorative efforts are guided, we need to subject institutional competition to appropriate rules if we want to assure responsiveness to the interests of the persons involved.

The combination of competitive evolutionary forces, and of institutional design, is what the concept of "Ordnungspolitik" is all about. To generalize this notion from market competition to the realm of institutional competition, i.e., of competition among jurisdictions, is not more than a logical extension of the research program of the Freiburg school.

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33 But cases like the former Yugoslavia have shown the limits of the existing institution to effectively enforce such rules.

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