

A Game Theoretical Analysis of the Hungarian Civil Service System

By

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Paper presented at the NISPACEE Conference, Bucharest, 9 – 12 April, 2003

I thank Martin Enevoldsen for his valuable guidance when I wrote the first draft of this paper.

The DEMSTAR Program is financed by a grant from the Danish Social Sciences Research Council.

1.0 Introduction

EU-membership requires that the legal framework of the *Acquis Communautaire* is adopted and that judicial and administrative capacity to implement it is developed. Despite attempts to adopt certain legal measures to ensure a well-functioning, professional and politically neutral civil service, even Hungary, one of the most successful applicant states, has only succeeded to a limited degree. This paper analyzes the Hungarian civil-service system and explains why it remains characterized by a relatively high degree of politicization despite the formal aim to establish a genuine merit-based system.

2.0 Theory and Methodology

2.1 *Span of analysis*

this paper does not address all aspects of the Hungarian civil-service system. I focus on the high degree of politicization and the official aim of establishing a genuine merit-based civil-service system, as politicization of the civil-service system is one of the most important barriers for developing a neutral, efficient and professionalized civil service staff. I have confined my analysis to Hungary, as the limits of this paper do not allow for a comparative analysis without losing its depth. I have chosen Hungary as it is one of the future EU-members that has adapted the EU-legislation in a wide area relatively fast and successfully and is positively looked upon in the European Commission evaluations. Hence, if the following analysis holds true for Hungary, it is more plausible that it will hold true also for other former communist states (critical case selection).

2.2 *Comparative Public administration as a field of research*

There has been much debate over whether comparative public administration constitutes a field of research in itself or is merely a “perspective”. There is now general recognition that comparative public administration is a distinct part of public administration (Van Wart & Cayer, 1990; Heady, 1998). However, the exact status of the field is still ambiguous. In addition, current comparative administration research faces several challenges. Most notably, there is a lack of adequate and reliable data, theoretical underdevelopment and a lack of cumulativeness of concepts and findings (Riggs, 1991; Heady, 1998; Knill 1999; Tummala, 1998; Peters, 1996; Jreisat, 2001). These are the problems comparativists face, not least when carrying out research in Central and Eastern Europe (CEE) where public administration research has not been established as a comparative approach. The existing single-case country studies of Central and Eastern European public administrations are not systematically compiled and evaluated, nor driven by defining theoretical assumptions. Many studies are merely descriptive (Peters, 1996). Yet, overcoming such hurdles is part of the approach, and it is vital that comparative research on public administration continues, not least considering today’s intensified globalization, where ideas and techniques increasingly seep across national boundaries. In a global world there is a need for theoretical concepts that are sufficiently abstract to travel across national boundaries.

Delineation of comparative public administration depends on how “comparative” is defined. One standpoint is Rose’s (1991: 454) definition of a comparative single-case study as an “extroverted case study with generic concepts”, a study of a single country that employs concepts making it possible to derive generalizations that can be tested elsewhere. I believe this definition to be superior to the more strict view that two or more countries should be overtly compared in order to constitute a comparative study. Thus, single case studies can be useful not only to scholars interested in politics other than their own, but can contribute to the general accumulation of knowledge in comparative public administration. As such, this paper places

itself within this approach, using combined theory testing¹ and thesis assertion,² thus testing the explanatory power of rational choice institutionalism in the field of comparative public administration in CEE and proposing theoretical concepts to be applied and tested empirically in other situations.

It is rather difficult to apply a model developed in a Western context to countries undergoing transition as their circumstances of constantly changing social conditions, undefined legal structures, high levels of politicization and frequently fighting corruption problems are so very different (Verheijen & Rabrenovic, 1999). CEE countries departed from a specific centralized concept of unitary government (unity of state power), but have yet to arrive as efficient democratic societies with clearly defined civil service systems. Most transitional regimes face the dual challenges of building effective democracies and the machinery needed to govern in limited time periods, while simultaneously attempting to institutionalize viable market economies (Peters, 2001: 9). Such conditions make for difficult analysis, e.g. defining the unit of analysis (how is the concept 'civil servant' delineated). Also, an analysis applying a 'Western' theoretical framework to CEE can be problematic. One recurrent problem in this respect is the discrepancy frequently seen in former socialist societies between formal legal rules and the actual behavior of different social actors. The difference between the legal and the actual system can be very significant indeed, so that legal acts stipulate one thing while practice is very different (Verheijen & Rabrenovic, 1999:20ff). Thus, an important analytical task is simply to reveal the empirical reality in terms of abstract theoretical concepts, making it possible to analyze and categorize the relationships between empirical reality and given normative principles.

2.3 Choice of Theoretical Framework

As stated above, there is no established general theoretical framework for comparative public administration studies. Verheijen & Rabrenovic have suggested that due to the various difficulties associated with comparative public administration analysis in CEE countries, a case-by-case basis with necessary adjustments of the existing 'Western' theoretical models should be adopted (Verheijen & Rabrenovic, 1999: 22). However, another approach could be a rational choice institutionalist framework, which incorporates the importance of institutional structures in a stringent theoretical framework. A rational choice institutionalist approach is somewhat controversial in the field of comparative public administration, yet I believe it to be a constructive theoretical framework. First, a rational institutionalist approach is capable of explaining policy outcome (politicization of the Hungarian civil service system), as it incorporates the importance of institutions and economic incentives and provides insights into how individual preferences are identified and aggregated to the level of collective choices. Second, rational choice institutionalism can provide a foundation for a coherent and stringent theoretical framework, making for more correct theoretical conceptions, a substantial and instructive analysis of civil-service systems and a foundation for predictions and policy recommendations about future developments. Third, a rational choice institutionalist based framework allows me to test the explanatory power of rational choice institutionalism in the field of comparative public administration in CEE.

More specifically, I apply Knight's (1992) theoretical framework to show why institutional change can be hard to attain. Thus, exporting Western institutional frameworks to former

¹ Theory testing is defined as hypotheses or relationships that are spelled out prior to data gathering in an effort to test theoretical assertions (Van Wart & Cayer, 1990: 242).

² Thesis assertion is defined as a fairly well articulated statement or proposition around which data and arguments are structured (Van Wart & Cayer, 1990: 242).

communist states in CEE does not in itself provide the conditions necessary for an effective public administration. Even if a Western institutional framework would indeed be optimal for the state in question, the creation of formal institutions does not necessarily make it a rational strategy for individuals to follow these rules, nor provide the incentives required if civil servants or politicians are to change already existing (informal) institutions. Unless a rational utility-maximizing actor is confident that a new rule will be recognized and applied by fellow social actors, he or she will not change probability estimates (ibid.: 185). In accordance with Knight, institutions are here defined as “sets of rules that structure social interactions” (ibid.: 19). Thus, I differentiate between the strategies of the actors and the fundamental rules that constrain and enable action (North, 1990). Doubts about whether other social actors will follow a new set of formal rules can be based on three reasons: 1) strength of enduring expectations, 2) ambiguity of the new rule, and 3) uncertainty regarding punishment for non-compliance. These doubts can diminish the probability that newly established sets of formal rules will be adhered to and thereby threaten their efficiency (Knight, 1992: 186ff.). In the case of the Hungarian civil-service system, all three factors seem to be present, as will be shown in section 3.4.

Finally, this paper draws on game theoretical insights. A game theoretical approach can render the argumentation more stringent and thereby amenable to empirical testing, criticism and correction. Hence, applying an explicit theoretical framework such as game theory should give rise to more correct theoretical conceptions in accordance with empirical data and facilitate aspirations for developing a framework for further comparative research. Formal game-theoretical analysis assumes intentionally rational actors, that is, utility-maximizing individuals with consistent preferences that can be ranked. Game theory is thus compatible with rational institutionalism (rational institutionalism in the tradition of writers such as Knight and North) as both approaches operate with the concept of rational utility-maximizing individuals and both can be based on the concept of boundedly rational actors.

3.0 The Hungarian civil service system

3.1. Outline of the historical context

Hungary has relatively successfully adopted the *Acquis Communautaire*. Nevertheless, the communist legacy remains a hard nut to crack, not least in the area of public administration. There is a legacy from the former weak policy-making capacity where state executives primarily oversaw administrative functions while governmental functions in important matters were handled by party-bureaucracy. Also, state personnel was strongly politicized as party-loyalty and political reliability were officially demanded of all state employees, and the party *de facto* controlled staffing in all key areas of the state administration (Goetz & Wollmann, 2001: 865). Attempts to adopt the legal framework of a merit-based civil service system notwithstanding, this communist legacy is evident in the vital area of developing a neutral, professionalized and efficient civil service system (Vass, 2001; Ágh, forthcoming: 4, 12). But not only is the legal framework at best insufficient. In addition Hungary suffers from a “legislation gap” between reform legislation and administrative practice. This implementation deficit is very much apparent regarding attempts to limit political influence over civil servants (Goetz, 2001: 1034ff., Goetz & Wollmann, 2001: 880). Consequently, the legal framework has the double weakness of being inadequate and of not being implemented in full.

3.2 The civil servant concept

The Hungarian definition of civil servants is “those specialists, who are employed at central public administrative organs or at local public administrative organs, who act for and on behalf of the state or the local government, and who can take decisions binding on citizens” (György,

1999: 132f.). This rather narrow definition excludes public servants that in some other countries would be included as civil servants (e.g. judges and professionals of the armed forces). However, as the Hungarian civil service framework only covers the legal rights of this group, focus is on this group only. Furthermore, the paper format requires that the analysis be limited to the state administration³ as the primary forum for policy-making and administering. Accordingly, the state administration is assumed to be the primary target for politicians hoping to influence administrative decisions.

3.3 The concept of politicization and degree of politicization in Hungary

Degree of ‘formal politicization’ of the institutional arrangements of the state civil service is defined as “the extent to which the government of the day, or its ministers, is unrestricted by formal-legal procedural constraints⁴ in its ability to exercise civil service policy authority”. This definition resembles those put forward by Meyer-Sahling (2001) and Schnapp (2000), but is in my opinion more clear and concise.⁵

The word *ability* points indicates that a high degree of formal politicization does not necessarily mean a politicized public administration in practice. However, the institutional set-up is such that it makes a highly politicized administration possible. Accordingly, a high degree of formal politicizing does not require a high percentage of civil servants who are officially appointed politically. The fact that only about one percent of Hungarian civil servants are politically appointed (Nunberg, 2000: 274, 318) therefore cannot be used as a measure indicating a low degree of politicization as such an assessment is much more complicated. A high degree of politicization can be said to exist when the government and/or the ministers in fact exercise policy authority in civil-service issues and can do so largely unrestricted by formal-legal procedural constraints.

In this respect, politicization is still very much an issue in Hungary. Provisions intended to guarantee civil servants’ political impartiality do exist, notably that civil servants, not politicians, have formal decision-making power concerning nominations and promotions of civil servants. However, there are noteworthy exceptions such as ministers’ rights to exercise power over high-ranking managers. Furthermore, empirical studies have revealed that deviations from the legal model are common (György, 1999: 143ff). Party political considerations are hence thought to influence personnel policy in general (Goetz, 2001: 1046; Nunberg, 2000: 318). Especially appointments to top positions in the ministerial civil service system (administrative state secretaries, deputy state secretaries and heads of departments) are subject to political interference by ministers (Vass, 2001: 84ff.).

Moreover, politicization is increasing at the middle level of the ministerial civil-service system. Verheijen (1999: 336) finds that politicization, particularly since the 1998-elections, has increased, the government⁶ trying to interfere in civil service affairs that they should have stayed out of to effectuate the principle of an impartial, professional administration. It is clear that neither civil-service reform following the introduction of the Civil Service Act in 1992 has led

³ State administration is defined as central and de-concentrated government.

⁴ Procedural constraints can be numerous, e.g. dismissal procedures, independent overseeing boards etc.

⁵ Meyer-Sahling defines formal politicization as “the extent to which the government of the day, or its ministers, has the formal-legal *possibility* to exercise civil service policy authority, and the extent to which the exercise of this authority is restricted by formal-legal procedural constraints” (Meyer-Sahling, 2001: 962). Schnapp defines formal politicization as “the possibility for the government of the day, or its ministers, to pick their top-bureaucrats at will without major procedural obstacles” (Schnapp, 2000: 29).

⁶ The government referred to is the government from 1998-2002.

to a decrease in politicization. Thus, the amendment in 1997 to the Civil Service Act as well as the introduction of the Senior Executive Service in 2001 have only marginally altered the system, thereby stabilizing the high degree of politicization (Meyer-Sahling, 2001: 964).

One indicator of the degree of politicization is civil servant turnover-rate. The World Bank estimates the average Hungarian turnover-rate of civil service staff at 9 percent p.a. and 15 percent for category I and II staff⁷ (the international standard is turnover-rates below 5 percent; Nunberg, 2000: 15, 282, 327). However, others have found turnover-rates in certain ministries to be as high as 75 percent p.a. for top level civil servants (Ilonszki, Johannsen & Kas, 2002: 31), and that after the 1998-elections, only two of twelve administrative state secretaries remained in place after the change of government (Nunberg, 2000: 274). Moreover, many civil servants are not laid off but re-assigned when governments change. Incumbent governments tend to be suspicious of civil servants affiliated with the previous government, but the civil service laws have made it more difficult to dismiss civil servants outright. They are therefore often re-appointed and typically degraded. Also bypassing career civil servants while leaving them in their previous positions has been practiced, most notably during the 1998-2002 government's strengthening of the Prime Minister's Office where shadow ministerial structures were created, duplicating the existing structures of core ministries such as the ministries of economy and finance.

Another parameter to measure whether merit and not personal and political preferences is a driving force in employment practice is the extent to which public administration staff are recruited openly, objectively and fairly on the basis of qualifications. Hungary has no official requirements of open competition for public administrative positions (György, 1999: 154). Likewise there are no procedural requirements of merit-based recruitment such as regulations concerning advertisement of positions externally or of subjecting potential employees to objective examination (Nunberg, 2000: 4, 277ff.). Additionally, Hungarian politicians are generally ambivalent towards the concept of impartial civil servants and wish to reward loyal supporters with a position in the civil service (György, 1999: 144f.).

In summary, the institutional arrangements of the Hungarian state civil service are definitely highly politicized. That is, formally politicized as the government and its ministers have largely no formal-legal procedural constraints on their ability to exercise civil-service policy authority, and politicized in practice as there is persistent political influence on the management of personnel policy. Consequently, the civil service system experiences a lack of continuity due to frequent staff rotations. Also, the functioning of the system is likely to deteriorate further as the high degree of politicization is not recognized officially and therefore not countered in the legal framework, the official aim of which is to establish a merit-based system. An ill-suited legal framework coupled with a communist legacy and some degree of corruption⁸ is a sub-optimal foundation for a well-functioning civil-service system. The question is *why* the Hungarian civil service system is still characterized by this relatively high degree of politicization despite the formal aim of establishing a merit-based system. Game theory can explain how the institutionalization of the system does not generate individual incentives to follow a career in a

⁷ Category I and II consist of senior managers and non-managers with higher-level qualifications (Nunberg, 2000: 279ff.).

⁸ Corruption is not officially an issue, but in a survey of 50 ministers/former ministers 34 percent said that they had experienced bribery attempts (Demstar, 2001). Further, the Berlin-based *Transparency International Corruption Perceptions Index* estimates that Hungary has a score of 4.9 on a scale ranging from 0 (highly corrupt) to 10 (highly clean).

neutral civil service system even though this would be in the overall interest of individual actors and the state (collective action problem).

3.4 Analysis based on Knight's analytical framework

Applying Knight's analytical framework to the Hungarian civil service system, all three factors contributing to doubts about whether social actors will follow a new set of rules seem to be present. Regarding the first factor, the strength of expectations based on old rules is indeed strong. The communist legacy is evident in the organizational culture and management practice (Vass, 2001: 84ff.), for instance in the lack of will to implement reform and to decentralize decision-making and discretionary power to lower managerial levels. There was strong resistance from many institutions of the former system and overcoming the previous administrative culture (strongly politicized, rigid and hierarchical) turned out to be much more problematic than expected (Ágh, forthcoming: 9).

Concerning the second factor, the legal framework in the civil service area is ambiguous. It may at first sight appear that a legal framework is in place, but closer scrutiny reveals that the system is "overly detailed, locking in inappropriate incentives", sometimes containing inherent contradictions and often only vague guidelines (Nunberg, 2000: 11). The absence of clear procedural manuals results in wide variation in both understanding and application of the civil service law, and key parts of it are not consistently enforceable across the public sector because of the lack of supporting regulations and manuals (ibid.: 273, 278).

In relation to the third factor, uncertainty regarding punishment for non-compliance, it is closely connected to the lack of implementation and the shortage of resources for inspection and audit. After the first years of success the reform process lost momentum as the initial ambitious initiatives were not implemented (Ágh, forthcoming: 9). Thus, at present, a widely shared point of view is that "bureaucracies of the ancien régime have proved strikingly resistant to wholesale transformation... the overwhelming tendency has been of structural conservatism" (Nunberg, 1999: 265f., 276ff).

In other words, the expected utility of the strategy dictated by the old rules will still be greater than that of the new set of rules. To change expectations in such a way that it becomes a rational strategy for the individual actor to support a neutral and professionalized merit-based civil-service system requires not only that the formal rules must be established but also that informal rules and expectations must be changed.

4.0 A Game Theoretical Analysis of the individual civil servant's job rewards

Game theory can be used to analyze the strategy of the individual civil servant. The game can be modelled as a classical prisoner's dilemma type of non-cooperative mixed motive game.

In Hungary, individual civil servants face a choice between a strategy based on the so-called merit-based civil-service system and one based on party-affiliations. An individual's chosen strategy will depend on the benefits offered by the two systems respectively. In this regard, benefits are assumed to be career opportunities/promotion, payment, job-security and policy-making power. Thus, the following analysis will in accordance with the assumption of utility-maximizing individuals be based on the assumption that civil servants want to work for promotion and to acquire interesting jobs with management responsibility and policy-making power, high salaries and a high degree of job-security.

The party-affiliation system is a legacy of the communist regime. The *party-affiliation strategy* comprises two kinds of strategy; one is the politically appointed civil servant employed officially, while the other uses party-affiliations as a means of pursuing a career although not officially being a politically appointed civil servant. However, in order to achieve analytical and conceptual clarity the party-affiliated civil servants will be viewed as one group following the same strategy (party-affiliation strategy) as both strategies are based on party-affiliations, regardless of whether the appointment is officially a political appointment or not. Both thereby add to the politicization of the civil-service system and consequently there are fewer attractive jobs for neutral civil servants.

The other strategy is the so-called merit-based strategy, or more correctly, the *seniority-based strategy*. As the following analysis will show, seniority-based strategy is a more correct name, as seniority is the one dominating criterion that determines the promotion opportunities available to neutral civil servants. Thus, the neutral Hungarian civil service system offers very limited possibilities for early promotion as the first criterion for promotion prescribed by the Civil Service Act is years of experience (György, 1999: 137; Vass, 2001: 87). So despite the formally required performance evaluation before a civil servant can be promoted to a higher rank, actual promotion is based on number of years of experience.⁹ The system “implies an automatic promotion process” and promotions are only rarely used to reward outstanding performance (Vass, 2001: 87). György (1999: 136) emphasizes that for some positions specific knowledge or certain academic degrees are required, e.g. a law degree. However, this must be characterized as employment criteria for specific positions, not promotion criteria, as it is not the individual's working effort that is the reason behind exclusion of, for instance, persons with other academic backgrounds than those required.

Also the payment system has largely been decoupled from incentives. The Hungarian civil service payment system consists of 21 categories of basic salary coupled with grants, allowances and bonuses, where the average percentage of earnings in the form of supplements is 27 percent. But these supplements are largely disconnected from performance or skills, creating “a web of perverse incentives and entrenched interests” (Nunberg, 2000: 14, 279-286).

These findings are in accordance with a World Bank report stating that: “Hungary’s civil service law provides only for automatic advancement”, while characterizing the legal framework for the civil-service as “...based rewards on seniority rather than performance” (Nunberg, 2000: 11, 16). Hence, despite a widespread Hungarian conception of the civil service system as showing “most of the characteristics of a merit system” (György, 1999: 136), the system can hardly be characterized as being merit-based but is rather seniority-based. Because although seniority is typically part of a merit-based system, such a system must also include some kind of incentive structure, efficiency criteria and an evaluation and review system and cannot be based solely on seniority.¹⁰

4.1 Pay-off matrix of the Hungarian civil servant

As indicated in the above analysis, individual civil servants can choose between a strategy based on the “new seniority-system” and one based on traditional party-affiliation structures. As a consequence of the configuration of the seniority-based civil service system it is difficult to

⁹ A World Bank report asserts: “the manner of appraisal has not changed since the communist period, and the requirement is not enforced” (Nunberg, 2000: 17).

¹⁰ The merit-based civil-service system that Hungary aims for can be characterized as a Weberian civil-service system coupled with managerial focus on efficiency criteria, incentive-mechanisms and performance-oriented assessment procedures etc. (see e.g. Verheijen & Coombes, 1998).

promote young hard-working people and options for early promotion are very limited even as rewards for outstanding performance. In the party-affiliation system, on the other hand, promotion possibly depends on connections and quality of work, given party-loyalty. The existence of the party-affiliation system does not affect the options for promotion based on seniority on a formal level as promotion is triggered by years of employment. However, the scepticism of the Hungarian politicians towards the concept of professional neutral civil servants (György, 1999: 144f) is justified and reinforced by the existence of politicized civil servants. Therefore in reality the existence of politicized civil servants results in attractive jobs being reserved for those who have proved their political loyalty through party-affiliations (Goetz & Wollmann, 2001: 880; Vass, 2001: 85f.). The number of attractive positions therefore becomes very limited for civil servants choosing the seniority-based promotion-strategy.

In the pay-off matrix in Table 1 P_H denotes high promotion probability for a top-position, while $1-P_H$ denotes the corresponding probability of not being promoted when only one player uses the party-affiliated strategy. P_M denotes medium promotion probability and $1-P_M$ the likelihood of no promotion when both players follow the seniority-based strategy or both follows the party-affiliated strategy. Finally, P_L denotes low promotion probability for a civil servant following the seniority-based strategy if his counterpart follows the party-affiliation strategy. For simplicity we assume $P_L=0$. The actual probability of being promoted to a top position may be higher than zero, but this assumption serves to achieve analytical clarity without altering the logic of the game. Also, in line with the analysis, we assume that $P_H > P_M > P_L$ (see appendix).

Salary also affects the pay-off matrix. Party-affiliated civil servants are often found in the upper echelons¹¹ of the civil service, but there is no indication that party-affiliated civil servants are systematically better paid than others within the same category. Yet, there are insufficient statistics and evaluations of the civil service payment system in general and interesting results could turn up if a thorough evaluation of the extremely opaque and complicated system is carried out. Such an evaluation is outside the scope of this paper, however, and as there is no indication of systematic wage disparity between seniority-promoted civil servants and those appointed politically in the same category, I only consider salary as a factor enhancing the benefits of achieving promotion. Thus, the benefit to a civil servant in the starting position $B_0(s_0, m_0)$ depends on salary (s_0) and policy-making power (m_0) in the starting position. Accordingly, $B_1(s_1, m_1)$ is the benefit of a civil servant in a top position (after promotion). $B_1 > B_0$ as salary (s) and policy-making power (m) increase after a promotion.

Difference in risk of dismissal affects the pay-off matrix. It is not possible to show a systematic difference in the risk of being discharged between neutral and politically appointed civil servants in the current system. Thus, the largest group of politicized civil servants is the one that is not officially politicized and has status merely as civil servants, making it difficult empirically to pinpoint the dividing line between politicized and neutral civil servants. However, while the job of a civil servant is rather stable, a management position can be withdrawn at any time.¹² Presumably, a new government wants to dismiss civil servants who have political affiliations with the previous government. Yet, as civil servants are difficult to dismiss because of their protection under the civil-service laws, politicized civil servants will in practice often be degraded or bypassed (see section 3.3).

¹¹ They are often placed in category I and II, see note 9 (Nunberg, 2000: 279-286).

¹² According to present civil-service laws in Hungary, degrading of civil servants with management responsibilities can happen at the minister's discretion at any time without reason. However, the Civil Service Law makes it difficult to dismiss civil servants and former managers keep their status as civil servants (György, 1999: 137; Vass, 2001: 85, 87ff.).

However, civil servants with party-affiliations seem to have enhanced risks of degradation and dismissal. The “pendulum” changes of Hungarian governments¹³ and the subsequent re-shuffling of administrative staff have reinforced a perception of Hungarian civil servants as running a high risk of dismissal/degradation linked to the politicized system. In contrast, mistrust on the part of politicians towards the concept of neutral civil servants would be reduced in a non-politicized system and the risk of degradation/dismissal therefore decrease. Hence, civil servants perceive a higher risk of degradation or dismissal when politicization increases. C_p denotes this cost of high risk of degradation/dismissal in a politicized system; a cost not apparent in a non-politicized system.

Using the above information, a pay-off matrix can be modelled on job rewards in civil service top positions (see Table 1).

Table 1 approx. here

The game can be formulated as a prisoner’s dilemma game if $C_p < (P_H - P_M) * (B_1 - B_0)$ and $P_M * B_1 + (1 - P_M) * B_0 - C_p > B_0$.

In this case, the party-affiliation strategy is dominant for both players. Thus, civil servant 1 gains most utility by using the party-affiliation strategy, no matter whether the other civil servant is pursuing a seniority-based or a party-affiliation strategy. The same is true for civil servant 2, however, as the game is symmetric. Consequently, for both civil servants the party-affiliation strategy is the dominant strategy and the lower right hand corner is the dominant strategy equilibrium.¹⁴ The outcome is a politicized civil-service system even though both civil servants would be better off with a seniority-based non-politicized civil-service system. Here the prospect of a top position has a long time-horizon, but the risk of degradation/dismissal is much lower. In order to clarify the ranking of the pay-offs, the equation can be replaced by with utility-units (ordinal-scale) (see Table 2).

Table 2 approx. here

Based on this game model we can formulate explicit hypotheses about possible countermeasures against continued politicization of the civil-service system; civil servants’ incentives to use a seniority-based strategy will, *ceteris paribus*, increase by:

1. Increasing the cost linked to risk of dismissal/degradation in a politicized system (C_p).
2. Decreasing the benefits of promotion, thereby reducing the difference in benefit before and after promotion ($B_1 - B_0$).
3. Increasing the promotion probabilities of neutral civil servants in a politicized system.

4.2 Conclusion

In light of the pay-off matrix described above, it is rational for civil servants to choose a party-affiliation strategy as it carries better promotion probabilities and higher job rewards. To “solve” this non-cooperative game the incentive structure (pay-off) of the individual civil servant needs to be altered. As the above hypotheses show, changes in the incentive structure can be accomplished in a number of ways. However, decreasing the difference in benefits before and after promotion as well as securing actual promotion possibilities of neutral civil servants

¹³ Hungary has changed government after every election since 1990 (Essex university database).

¹⁴ A dominant strategy equilibrium is a strategy combination consisting of each player’s dominant strategy defined as that player’s best reply to any strategy that the other player might choose (Rasmussen, 1994: 23).

requires structural changes of the current system. Regarding costs linked to the risk of degradation/dismissal, perceptions of the costs as well as the actual risk of degradation/dismissal can be increased. But it is hard to imagine that (the perception of) the costs will be notably increased as the pattern of degradation/dismissal has been rather stable, showing slight peaks after elections. Also the general level of unemployment can be a factor that can radically alter perceptions of the risks associated with dismissal. However, unemployment is currently contracting slightly (Hungarian Government Portal). Changing the incentive structure seems thus to require changing the institutionalization of the civil-service system to achieve the formal aim of a genuine merit-based system.

Another option is to ensure some kind of binding agreement between civil servants. The prospects for making such an agreement are, however, bleak as it is difficult to imagine how an agreement of that nature would fit within the legal framework, not to mention how it can be enforced in order to avoid defection.

In summary, a lower degree of politicization is most likely achieved by altering the civil servants' incentive structures by changing the civil service system and establishing a genuinely merit based one. However, changing the current system requires political will. I therefore consider the role to be played by politicians regarding civil-service reforms. What has been their role so far, and what constitutes rational reasoning for the individual politicians?

5.0 Game theoretical analysis of the individual politician's incentives to set reform in motion¹⁵

Individual politicians must have a personal interest in administrative reform if they are to support it. Political costs that can hinder the adoption of reforms is the tradition that jobs in public administration (and various contracts, subsidies and other resources distributed by politicians or bureaucrats) have served as important electoral resources for incumbent politicians. When favouring political supporters, friends or relatives, a politician can trade votes for jobs as well as obtain loyal supporters in the bureaucracy and thereby improve his options for influencing bureaucratic procedures and decisions, e.g. greater political discretion in awarding contracts and political influence on implementation procedures. Administrative reforms threaten to eliminate such political resources if the aim is to replace a politicized system with efficiency criteria and a merit-based civil service system. Thus, if merit becomes the primary criterion for hiring and promotion, the discretion of the incumbent politicians to reward supporters with jobs in the bureaucracy will be correspondingly reduced or eliminated (Geddes, 1993: 163f.). Administrative reforms will additionally enhance transparency and thereby reduce political discretion, for instance in the awarding of contracts.

Nevertheless, politicians can only reach a limited percentage of the population using patronage. Alternatively, a potentially large percentage of the population can be reached if reforms can be shown to improve the effectiveness of the public administration, perhaps enhancing the prospect of EU-membership and/or the strength of the national economy. This enables incumbent politicians and their parties to claim credit for this and use it to increase their chances of reelection. An individual politician may also have incentives to support reforms because he/she has used this issue as a platform in the last election-campaign, making promises that he/she can be held politically accountable for. It is reasonable to presume that risk adverse policy makers will anticipate the response of self-interested voters (Scharpf, 1997: 240). In other words,

¹⁵ The analysis is inspired by a framework developed by Barbara Geddes (1993).

reforms are set in motion when cost-benefit analyses show that the benefits for the individual politician of reform outweigh the costs of reform.

As described above, Hungary has not seen significant civil service reforms. The few attempts (the amendment of the Civil Service Law and the Senior Civil Service Act, see section 3.3) have not been substantial enough to alter the level of politicization. Rather, the politicians have adopted those elements of civil service reforms that can be converted into electoral advantages by grateful employees, i.e. job creation and job security (Geddes, 1993: 183), while failing to establish formal regulations and procedures that could limit political discretion. To uphold the current system, politicians have formed an alliance against transparency and more efficient democratic control with the administration (Vass, 2001: 90f.). The rationale behind these actions can be exposed using a game theoretical approach.

5.1 Pay-off matrix of the individual politician's incentives to reform

A simple game theoretical model (Table 3) shows the incentives available to individual politicians who can choose between two strategies: *supporting a merit-based civil-service system* or *supporting a politicized civil-service system*.¹⁶ That is, individual politicians can on one hand choose to vote for reforms establishing an ideal type merit-based civil service system. On the other hand, they can choose to uphold the current politicized system (the party-affiliation system coexisting with the seniority-based system), where politicians have the option of patronage.

It is a plausible assumption that the paramount aim of politicians is (re-)election. Even if expressed political preferences are public-spirited, politicians will still have as their first order preference to be elected in order to achieve other preferences (Geddes, 1993: 168ff). Therefore as an initial simplification it is assumed that politicians compete with each other in a constant sum electoral game¹⁷ of getting elected; if one politician gains votes, another politician loses an equal number of votes. In this symmetric game each contestant has a baseline probability of winning the next election P_E , which is determined outside the game by issue preferences, party loyalty of the voters etc. This baseline probability is assumed to be improved by using political favouritism and likewise reduced by another candidate's distribution of political favours; f_1 and f_2 denote gains of patronage of the respective politicians (Geddes, 1993: 170f.). Along these lines, the incumbent government and members of a governing party have the greatest advantages in a politicized system. Government members have the option of hiring and firing (degrading) civil servants and the best options for influencing civil service policy issues. The options of influence by members of a governing party (other than the incumbent government itself) are greatly enhanced by the fact that Hungary has closed party-lists. When party leaders determine placement on party-lists, they thus also to a high degree determine each candidate's electoral chances (Geddes, 1993: 168ff). This creates a channel for party influence on individual government members, which can be utilized by party leaders and influential party members. Consequently, members of a governing party can be expected to have greater options for patronage through their connections to members of a government whose individuals wish to enhance re-election options.

Also opposition members of Parliament could have options of patronage in a politicized system, e.g. by advocating specific interests when submitting a bill. They likewise have a good chance of attaining an important position after the next election and hence might succeed in

¹⁶ The analysis is limited to parliamentary politicians who have the option to vote on reform.

¹⁷ Constant-sum games are strategically identical to zero-sum games (Morrow, 1994: 102).

manipulating civil servants. However, incumbent politicians will always have greater options for patronage. This assumption is supported by empirical observations of the functioning of the Hungarian political system, where only a rather small and well-known group of non-governmental parliamentarians consistently seek to influence civil service policy issues, albeit without much success. A governing party politician's electoral gains by patronage are therefore assumed to be greater than those of an opposition party politician; $f_1 > f_2$.

Given these incentives available to individual politician, it would seem that no rational politician in competition with others engaged in patronage will unilaterally choose to give it up and thereby forego electoral gains accessible to competitors. On the other hand, as described above also the option of winning votes by supporting administrative reforms can influence politicians' strategies; y denotes the amount of credit a legislator can claim by supporting reform.

In order to model the pay-off matrix of the incentives of individual politicians to support reform, two more factors must be taken into account. The benefit of being in government depends on the type of administrative system: politicized or non-politicized.¹⁸ B_{G0} is the benefit accruing to a politician in government in a non-politicized system, while B_{G1} is the benefit from being in government in a politicized system; $B_{G1} > B_{G0}$ as there are greater benefits associated with being in government in a politicized system due to much greater political discretion. Frequent changes of government in Hungary mean (see note 15) that opposition politicians have reliable prospects of coming into office, which is hence assumed to influence their incentives. These prospective benefits again depend on the type of system. B_{P0} denotes prospective benefits of being in government in a non-politicized system, while B_{P1} the prospective benefits being in government in a politicized system; $B_{P1} > B_{P0}$ due to the greater political discretion in a politicized system. It is assumed that if an opposition politician publicly pushes for reform to such a degree that he/she gains electoral advantages, then that politician can be held politically accountable. Consequently, he/she must implement reform if elected.

Table 3 approx. here

The pay-off matrix in Table 3 shows that if both politicians support reform, then neither will be able to use patronage, neither will win votes by supporting reform and neither stands to gain from being in government in a politicized system. The upper right corner shows the situation where the opposition-party politician has voted for reform while the governing-party politician did not. Here in order to assess pay-off it is essential whether the reform is passed or not. Thus, a necessary assumption is that the action of the governing-party politician is representative of the actions of all government-party politicians. As governing-party politicians hold the majority,¹⁹ the reform fails. Consequently, both politicians can use political favours to increase personal election chances, but at the same time the opposition politician has gained y credit and committed him-/herself to reform. In the lower left corner, the reform has been passed. There are no extra benefits from being in government in a politicized system as patronage is not possible and the governing-party politician has gained y credit. In the lower right corner, the politicized system and the benefits associated remain unchanged, and neither candidate has gained advantage by voting for reform.

¹⁸ Thus, the subgame of election is a constant-sum game; the game itself, however, is a variable-sum game.

¹⁹ Hungary has had majority government-coalitions since the first freely elected government in 1990 (Ilonszki, 2001: 99).

Given this incentive structure, a politician from the opposition will always choose reform if he/she knows that the government politician chooses reform. The government politician is not likely to choose reform, however, because if he/she is to support reform, the number of votes gained by voting for reform has to make up for the loss of votes won through patronage as well as the difference in benefit from being in government. The following conditions must hence be met if a government politician is to support reform:

$y > (P_{E1} + f_1 - f_2) * B_{G1} / B_0 - P_{E1}$ if the opposition politician votes for reform, and
 $y > P_{E1} * (B_{G1} - B_{G0}) / B_{G1} + f_1 - f_2$ if the opposition politician votes against reform.

In other words, if the votes to be gained by supporting reform do not outweigh the votes gained by patronage and the extra benefits from being in government in a politicized as opposed to a non-politicized system, supporting the current politicized system is a dominant strategy for the government politician. This incentive structure can explain the lack of substantial reform of the Hungarian civil service system. As administrative reform is not a subject that traditionally has caught the interest of many voters, the extra number of votes gained by supporting reform, y , simply do not outweigh the politicians' costs of giving up the benefits of a politicized system.

Given this incentive structure, the opposition politician knows that the government politician will not support reform. As such, the opposition politician is comparing pay-offs in the right side of the pay-off matrix, weighing the extra votes to be gained by supporting reform against the difference in prospective benefits from being in government in non-politicized and politicized systems. Again, as long as being in government in a politicized system provides much greater benefits, the number of extra votes gained by supporting reform has to be substantial if the opposition politician is to have incentives to vote for reform.

Based on this game model, it is possible to formulate explicit hypotheses about the prospects for adopting civil service reform; the prospects of reform will increase if:

1. The number of votes gained by supporting reform increases.
2. Politicians' electoral gains from patronage decrease.
3. The benefits of being in government in a politicized system, as opposed to a non-politicized system, are reduced.

6.0 Conclusion

The analysis demonstrates North's (1990: 99f.) point that institutional patterns are self-reinforcing even when they are socially inefficient. The players act under institutional constraints in the sense that individuals follow the rules of the institutions in order to maximize their own utility, and game theory clearly illustrates how the rational behaviour of the individual actor can result in a non-efficient outcome. The incentive structure of civil servants must be changed to secure independent public administrators. This requires changing the institutionalization of the civil service system to achieve the formal aim of a genuine merit-based system. The politicians have the option of changing the institutionalized rules, the rules of the game for the civil servants. However, they do not act on this option, as the individual government party politician has no incentives to support civil service system reform. Knowing this, opposition politicians do not have incentives to support reform either. Yet, the pay-off structure of individual politicians can be changed, most likely through public calls for reforms combined with a widespread willingness to reward reform and punish patronage on election day.

7.0 Prospects for reform

The benefits of supporting civil service system reform can be expected to increase, as there has been increasing focus on this issue in Hungary. Whether this heightened focus will suffice to fuel public calls for civil service reforms is hard to say, though, not least as Hungary is still undergoing transition and many important issues require attention. In addition, the newly elected Hungarian government does not have any particular incentives to reform the civil service system as no candidate has used the civil service issue as a campaign platform and therefore must support reform to sustain credibility.

However, if the issues of the civil service system and patronage are linked to EU demands politicians might be forced to support reforms. Another way to strengthen the incentives to reform is to enlist the backing of party leaders. Because of closed party lists, party leaders can gain great influence on the struggle over reform. As described above, government members will be inclined to consider party preferences, and also members of parliament pondering whether to vote for reform will take into consideration the expected effect of the vote on the party leaders (Geddes, 1993: 168ff). If party leaders could somehow be persuaded to support civil service system reform, the prospects for success would therefore increase. It remains unclear, however, why party leaders should support reform and give up means of political influence. But the mechanism could be a public desire for civil service reform, which might persuade party leaders to support reforms through pressure from the mass of party members. Thus, strong public pressure seems to be the dominant domestic mechanism for reform.

Hence, public calls for reforms combined with willingness to reward efforts to reform on election-day seems to be one feasible way to change the politicians' incentive structure, and hence the incentive structure of civil servants. As North (1990: 99f) has pointed out, information deficit and insecurity are essential concepts for explaining how inefficient institutions can survive for a long duration of time. Information on the deficiencies of the current system would be one way to heighten public awareness of the inefficiencies besetting the administrative system. However, the number of votes gained by supporting reform could also be increased in a short-term perspective; e.g. if some kind of corruption scandal fuelled public desires for immediate reform.

If reforms are indeed passed so the regulations needed for a merit-based civil service system are in place, the actual implementation of the new rules is another essential requirement. In the context of the Hungarian civil service system, the rules of a merit-based system must be *established, implemented and enforced* to ensure the cooperation of rational utility-maximizing individuals. In this regard, sanctions are essential to ensure incentives to abide the rules (Knight; 1992: 171ff.). Accordingly, the civil-service legal framework requires revision to ensure that dismissal and degradation procedures are explicitly stated as well as subject to review by a non-political institution with independent experts in order to ensure compliance with the law. Only in this way can the Hungarian system become a well-functioning merit based civil service system.

Tables

Table 1: pay-off matrix on job rewards in civil service top positions, equations.

		Civil Servant 1	
		Seniority-based career	Party-affiliation career
Civil Servant 2	Seniority-based career	$P_M * B_1 + (1 - P_M) * B_0$	$P_H * B_1 + (1 - P_H) * B_0 - C_p$
	Party-affiliation career	$P_M * B_1 + (1 - P_M) * B_0$	$P_M * B_1 + (1 - P_M) * B_0 - C_p$

Note: P_H denotes high promotion probability and $1 - P_H$ risk of no promotion when one player uses a party-affiliation strategy. C_p denotes cost of high risk of degradation/dismissal in a politicized system. P_M denotes medium promotion probability and $1 - P_M$ risk of no promotion when both players follow the seniority-based strategy or both follow the party-affiliated strategy. $B_0(s_0, m_0)$ and $B_1(s_1, m_1)$ are benefits in a starting position and after promotion, respectively, depending on salary (s) and policy-making power (m) in the position.

Table 2: Pay-off matrix on job rewards in civil service top positions, utility-units.

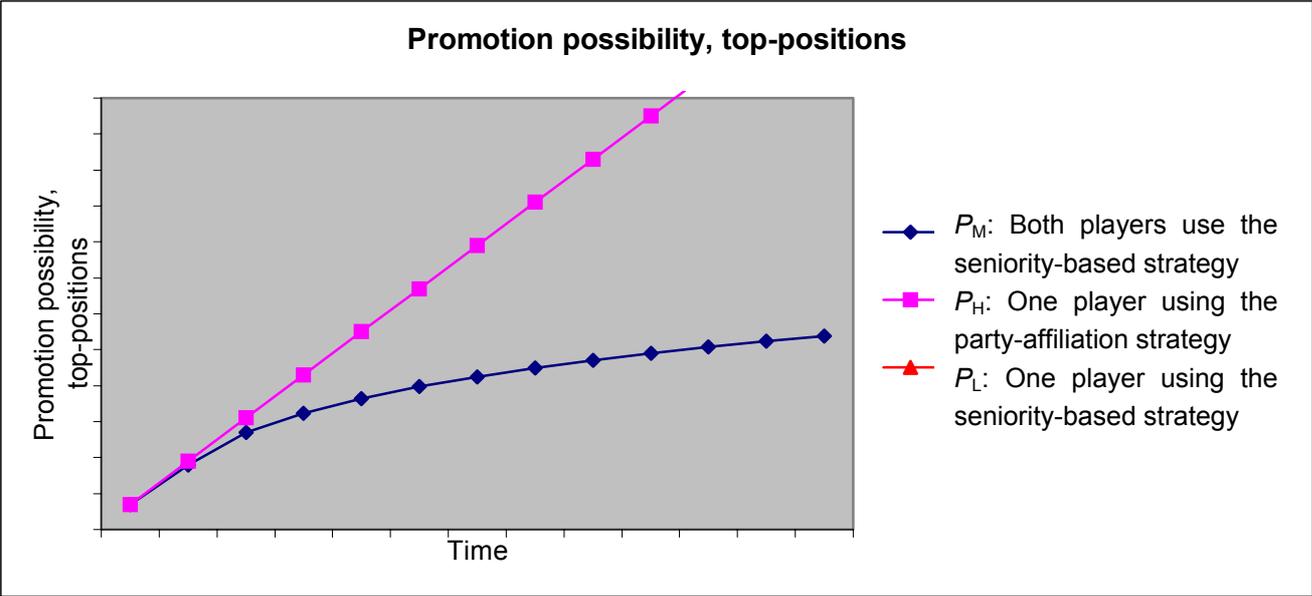
		Civil Servant 1	
		Seniority-based career	Party-affiliation career
Civil Servant 2	Seniority-based career	3	4
	Party-affiliation career	4	2

Table 3. Pay-off matrix on the individual politician's incentives to reform

		Politician 1: governing-party	
		Reform	Politicized civil-service system
Politician 2: opposition	Reform	$P_{E1} * B_{G0}$	$(P_{E1} + f_1 - f_2 - y) * B_{G1}$
	Politicized civil-service system	$(P_{E1} + y) * B_{G0}$	$(P_{E1} + f_1 - f_2) * B_{G1}$

Note: P_{E1} and P_{E2} denote the candidates' election-probability; f_1 and f_2 denote the candidates' gains in election-probability using patronage. B_{G0} and B_{G1} are benefits from being in government in non-politicized and politicized systems, respectively. Correspondingly, B_{P0} and B_{P1} are an opposition-politician's prospective benefits from being in government in non-politicized and politicized systems, respectively; y denotes votes gained by supporting reform.

8.0 Appendix



Note: It is assumed that $P_L=0$ and that over time the difference in promotion possibility increases as the difference in starting position reinforce the difference in promotion possibility.

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