



Game theory and educational policy: Private education legislation in China

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ABSTRACT

This article presents a game theory analysis of legislating private education in China, based on set of primary and secondary documents related to this issue. The article argues that shaping educational legislation is a dynamic, repeated game of negotiation, cooperation, and/or competition on multiple occasions among various interested actors, including lawmaking institutions, each with its own goals, authorities, information sources, and strategies. This article suggests that game theory complements existing models for understanding the politics of educational legislation in China, and it elucidates the implications and limitations of using this approach to understand the dynamics and complexity of educational policymaking.

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1. Introduction

Since the 1980s, legal and educational researchers have become increasingly interested in the impact of legislation on educational policymaking and reforms (Birch, 1993; Darling-Hammond, 2006; DeMitchell and Fossey, 1997; Harris, 1993; Tulasiewicz and Strowbridge, 1994; Woolman and Fleisch, 2006). France, Japan, Taiwan, the United Kingdom, and the United States (Government of France, 2005; Government of the United Kingdom, 1988; Law, 2003; Schoppa, 1991; United States Congress, 2002), among others, are promoting law-based educational reforms by turning educational policies or reform proposals into laws.

China is no exception to this international trend of instituting law-based educational reforms (Williams, 1994). Since its economic reforms of the 1980s, China has reinstated the role of law in nation-building, and it has used legislation to consolidate and further the results of educational reforms, to regulate new relations and practices arising from its social transformation, and to redistribute power among the state, its citizens, and educational institutions (Law, 2002, 2007; Pan and Law, 2006). In 1993, the state pronounced that education would be governed in accordance with the rule of law (*yifa zhijiao*) (Communist Party of China Central Committee and State Council, 1993). This concept was also applied to the governance of the entire nation (*yifa zhiguo*) and was written into the national constitution in March 1999 (National People's Congress, 1999a,b).

Four major models have been used to explain China's lawmaking politics (Tanner, 1999). The first is the command model, which sketches lawmaking as a unified, tightly run, top-down process in which the Communist Party of China (CPC) leadership uses the National People's Congress (NPC) as a "rubber stamp" to unanimously approve legislation drafted in accordance with CPC directives (Cohen, 1978; Foster, 1982; Hsia and Johnson, 1986; Wu, 1980). The second, the leadership struggle model, argues that the process tends to produce policies that enhance the power of key political leaders. In this model, the CPC's principal role is to resolve law-related issues, while the NPC and ministries of the State Council promote the views of political elites (Chang, 1990; Nathan, 1973; Pye, 1981). The third, the organizational politics model, views lawmaking as a means for organizations to enhance their own power and bargain for resources, and it identifies a derogation of lawmaking power from the Central Committee of the CPC to the State Council, the NPC, and local authorities (Lieberthal and Oksenberg, 1986, 1988). The fourth is called the garbage can model, which can help analyze decisions of organizations with unclear preferences, unclear technology, and fluid participation (Cohen et al., 1972). It argues that organizational decisions are not purely rational; rather, they are determined mainly by the mix of decision makers involved, recognized problems, and available solutions. This model depicts the Chinese lawmaking system as "ambiguous," with a lack of a clear goals or direction and poorly defined roles for the various lawmaking institutions (Chen, 1988, 1997; Sun, 1979; Zhang, 1999).

The literature on law-based reforms partly explains the strengths and limitations of legislation's role in codifying educational policies to effect education reform in response to social change, but it does not specifically explain the dynamics and complexity of interactions among China's various stakeholders in

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the lawmaking process. Moreover, while they are somewhat useful in explaining some aspects of the interrelationships among Chinese lawmaking bodies, they are limited in explaining Chinese lawmaking politics. For example, the command model no longer can explain the gradual making of the NPC and local people's congresses as powerhouses supervising the government at various levels since the 1990s (Cho, 2002b). Also, the garbage can model cannot explain the clear preferences of the NPC, State Council, and the private education sector at different stages of law legislation, enforcement, and supervision. In particular, none of the four models of China's lawmaking politics sufficiently explains three specific phenomena relating to the interactions between the legislature and administration in the process of legislating private education in China (as discussed later): the co-existence of strategic cooperation and competition between the NPC and the State Council in the legislative process; the importance of the information available to lawmakers seeking to make choices; and the influence of lawmakers' purposes, authority, and strategies on the contents of legislation.

The literatures of game theory and bounded rationality, as extensions of decision-making theory, can help address these inadequacies, both in the specific case of China and in education lawmaking in general. Both literatures assume that human behaviors are goal-oriented and that rationality plays an important part in decision-making to maximize outcomes. The theory of bounded rationality recognizes two major limitations of rationality and the environment's influence on decision-making (Simon, 1957, 1997): people's ability to gather information or knowledge and their capacity to process it to discover the optimal outcome in the course of decision-making (Foxon, 2006; Odell, 2002). Similarly, game theory is an interdisciplinary approach to studying human behaviors (McCain, 1999). Game theory has been useful in analyzing situations that involve the interdependent, strategic interactions of multiple decision-makers who have their own interests and preferences when making logic-based decisions (Davis, 1997; Myerson, 1997). Game theory also considers the influence of possessing perfect and imperfect information on decision-making, and how each actor's strategy can be affected by other's strategy in the same game.

We suggest that game theory can provide a broad and useful guiding framework for analyzing China's lawmaking politics, particularly the strategic interactions between lawmaking bodies in legislating private education on multiple occasions. We have no intention to develop from the case of China a new game-theoretic model, which requires more mathematical endeavors and deserves a separate study. Instead, this article has two major purposes. First, it uses the *theoretical framework* of game theory to analyze the strategic interactions in China between the state's legislative and administrative authorities in the process of establishing a legal framework for regulating new relationships between state and non-state actors in private education. Second, it uses the case of China to explore the *implications and limitations* of game theory for understanding the complexity of educational lawmaking. We argue that shaping educational legislation in China is a dynamic and repeated game of negotiation, cooperation, and/or competition on multiple occasions among various interested actors, including lawmaking institutions, each with its own goals, authorities, information sources, and strategies.

2. Game theory and educational policymaking

Game theory was developed in the 1950s as a means of using mathematical models to analyze conflicting economic phenomena and to find points of possible cooperation among two or more actors who strategically interact with a view to maximizing their own

returns (Neumann and Morgenstern, 1953). Since then, despite its mathematical complexity, game theory has been widely applied in many academic disciplines, including biology, computer science, economics, military strategy, international relations, law, and sociology (Burns et al., 2001; Burns and Gomolinska, 2000; Correa, 2001; Lucas, 1981). Researchers have used game theory to explain complex situations, including decision-making wherein players make rational choices that might affect other players' interests and decisions (Morgenstern, 1997; Smith, 1982). In particular, game theory has been used for examining social phenomena based on methodological individualism (Aumann and Hart, 1992; Heap and Varoufakis, 2004) and studying such situations as social dilemmas, conflicts of interest, rational choices, cooperation, competition, and coalitions in decision-making processes (Bernard, 1954; Crozier, 1964; Goffman, 1961; Luce and Raiffa, 1957; McCarty, 2007; Scharpf, 1997; Schelling, 1960). Jacobson (1999), Rasmusen (2001), and Ayres (1990) showed the extent to which using law as a rule of the game can affect people's behaviors and social lives. In addition, Baird et al. (1994) argued that game theory can provide people with a new way of thinking about law and help them understand how law affects the ways they behave.

However, in the law literature, very few studies have employed game theory to explain the complexity of educational legislation. Fennell (2001) used game theory to explore the role of user participation in education as a public good, the users' choice of actions, and the interdependence of decisions within and among pools of users. Crump (2001) demonstrated the possible applications of game theory in the legislative realm by employing the method to unfold multiple, competing meanings of equality. Based on Crump's work, Dyson (2004, p. 580) argued that game theory is useful for understanding "the complexity of influences upon educational policymaking." Using the America's No Child Left Behind Act of 2001 as an example, Dyson (2004) adopted a game-theoretic approach to explain the gap in education between the "law in book" and the "law in action" by exploring how policymaking outcomes can be shaped by complicated, strategic interactions between the state and private-market actors, and how units of governance at lower levels, including schools, can use legal loopholes to find various ways to escape imposed legal demands and seek their own maximum benefits during a law's implementation. In the education literature, the use of game theory to assess issues of educational policy is extremely rare. Lumby and Morrison (2006) used game theory to explain the British government's failure to promote partnerships among different education stakeholders that would benefit learners.

Despite these studies, game theory has been under-used and under-researched in education for exploring how policy processes are strategically manipulated, and for examining how actors, including state and non-state organs with competing interests, shape policy outcomes. Following in the footsteps of Crump (2001) and Dyson (2004) and as a preliminary attempt to bridge game theory and the education literature, we use a game-theoretic approach to explore and explain the complexity of law-based educational reform in China. Before doing so, it is important to understand the assumptions and basic elements of game theory.¹

2.1. Basic assumptions of game theory

Game theory's object of study is any interactive situation (Turocy and von Stengel, 2002). A game can be briefly defined as

¹ It should be noted that because of space limitations, we provide only simple explanations and examples of terms used in the article. For more detailed and technical (or mathematical) illustrations and for more examples, see Davis (1997), Myerson (1997), Osborne (2003), Watson (2007), and McCarty (2007).

having rules and a set of players, such that each player has his/her own set of preferences over a set of action profiles and considers all other players' preferences before making his/her choice of action (Osborne, 2003). As Heap and Varoufakis (2004) summarized, game theory is based on four basic assumptions about the rationality of human behaviors:

- instrumental rationality—actors in a game are rational and purposeful decision makers;
- common knowledge of rationality—actors in a game hold expectations about each other, and other actors are likely to inform what it is rational for the actor to do;
- common priorities—rational individuals in a game will draw the same inferences on how a game is to be played;
- action within the rules of game—individuals know the rules of the game; that is, they know all the possible actions and how these actions combine to yield particular payoffs for each player.

These rationality assumptions mean that players in the game are rational and act to maximize the achievement of their “postulated goal[s]” (Brams, 2004, p. xv).

2.2. Essential elements of a game

The essential elements of a game include (1) the players, (2) the strategies or preferences they choose, (3) the information available to them, (4) the order of play, and (5) the outcome or payoff of the game, which is influenced by the previous four elements. A game involves at least two players who make decisions and who can be individuals, communities, corporations, or the government. Each player has his/her own preference and strategy, which is “a complete plan of action that describes what a player will do under all possible circumstances” (Davis, 1997, p. 7). However, not all strategies can be spelled out explicitly because they can be very complicated in the real world. Each player needs to possess information about the situation and other players' strategies or preferences. If the information is public and each player knows what actions the other players already have taken before making their moves (as in games like chess and tick-tack-toe), he/she is said to possess perfect or complete information. If players keep their own preferences private (e.g., as in the case of a nation's military secrets during war), each player has imperfect or incomplete information and is uncertain about how other players will play (Linares, 2003). In a game, players follow the order of play by choosing their strategies one after the other, either in sequential moves (as in checkers) or simultaneously (Ross, 2006). The outcome of the game is the joint set of choices or convergence of all the players' strategies, and each player has his/her payoff as either a reward or punishment for his/her decisions (Davis, 1997; Dutta, 1999).

Moreover, participants in the game are interdependent in three major aspects (Elster, 1982, pp. 464–465). First, “the rewards of each depend on the choices of all”; in other words, when all actors have chosen strategies, each obtains a reward depending on both his or her and others' strategies. Second, “the reward of each depends on the reward of all.” Such rewards can be material benefits, or anything in the situation that is valuable to the actor, including (possibly) the rewards accruing to other actors. Third, “the choice of each depends on the choice of all.” When actors choose a strategy to maximize their rewards, they must take into account what the others might do. A strategy that is optimal with regard to one set of others is not necessarily optimal for another set. Therefore, when making decisions, actors must foresee other actors' decisions, while knowing that the other actors are trying to foresee theirs as well. The principle of interdependent choices

conveys the complexity of how people make decisions when “their actions and fates depend on the actions of others” (Ordeshook, 1986, xii).

2.3. Selected types of games: dynamic, cooperative, and repeated

Of the many game types, the “separation of powers game” seems to be a useful model for analyzing the interaction among institutional players (including the administration, legislature, and judiciary) with checks and balances in state affairs, including legislation and law enforcement at the macro level (Groseclose and Schiavoni, 2001; Martin, 2001; Segal, 1997). However, this specific game model cannot be applied to the case of China because its three powers are not separated, but are led by the ruling party, the CPC (National People's Congress, 1998). We thus turn to more generic game types and highlight below the ones that are used in this article.²

In a dynamic game (also called a sequential game), players play in turn in such a way that later players have at least some information about earlier players' choices, and thus they may make their plays contingent on past moves (Belleflamme, 2002; Rasmusen, 2001; Straffin, 1993). In a zero-sum game (such as a win-lose poker game), players have diametrically opposed interests, and some win while others lose. In a non-zero-sum game, players can have a maximum gain, or a negative, average payoff (e.g., people who regularly buy lottery tickets).

The outcome of a game also can be affected by players' strategies of cooperation. Although they do not actually cooperate, they can play a cooperative game to match one another's actions (like division of labor and exchange) because they can make agreements or contracts that are enforced by an outside party, such as the police or judiciary (Shor, 2005). One strategy to achieve cooperation is that players can make a binding agreement that is enforceable under the rules of the game (Staatz, 1983; Ward, 2004). Another cooperation strategy is negotiation, through which players with competing interests can bargain for some sort of agreement before the final game is played (Harsanyi and Selten, 1988). A third cooperation strategy is lobbying, through which players can push the outcome in a certain direction from the status quo by applying a certain amount of force, but without entering into an actual conflict. The fourth strategy is creating a coalition, through which players can form alliances to achieve a common end (such as gaining voting power in elections) by sharing each other's problems, and communicating and coordinating their choices to form a joint, rather than individual, choice (Brams, 2004).

In contrast, players also can play non-cooperative games. These are not defined as games in which they do not cooperate, but as ones in which they cannot reach the agreements enforced by outside parties. In such games, agreements, if any, must be self-enforced (Shor, 2005). The outcome of a non-cooperative game is a set of strategies by means of which each player's strategy is optimal vis-à-vis other players'. Any players who change their strategies first receive less than their expected return. Players with competing interests are more likely to play it safe by adopting risk avoidance strategies so as to reach the equilibrium that represents their less risky choice (Dixit and Nalebuff, 1991). However, a player who has the dominant (best) strategy for reaching an equilibrium can win the game regardless of the other players' choices. Moreover, a player can choose not to follow the order of play by adopting the first-mover advantage strategy so that he/she can move first and become a leader, and so that he/she will not be worse off than in the original order of play (Turocy and von Stengel, 2002, p. 414).

² For more game types, see Brams (2004) and McCarty (2007).

Whether players meet again also can affect their strategies and therefore the game's outcome. In a repeated game, in which players interact by playing in similar situations on more than one occasion (McCarty, 2007; Ross, 2006), the strategies and outcome can differ from those of a one-shot game, in which players will not meet each other in isolated interaction. According to Ratliff (2003), many one-shot games are non-cooperative because players prefer to "fink" than to cooperate. Unlike in a one-shot game, players in a repeated game expect to face each other and play with future games in mind. In repeated interactions, players' strategies are contingent on their past moves; in other words, past behaviors and the expectation of future behaviors are linked (Mailath and Samuelson, 2006). This allows players to build their reputations, maintain trust and long-run relationships, and avoid retaliation in future games (Heap and Varoufakis, 2004; Mailath and Samuelson, 2006). This in turn can encourage cooperation. However, despite its usefulness in understanding cooperation in politics, simply repeating the game, as Ordeshook (1986, p. 443) warned, does "not always induce cooperation" because players might play differently depending on whether they know when the game will end.

3. The general context of Chinese lawmaking politics: a game-theoretic analysis

Legal rules can be the rules of the game for legal issues (Baird et al., 1994; Dau-Schmidt et al., 1997; Rasmusen, 2001). The subsequent analysis applies game theory as a guiding framework by way of two major explorations: an institutional analysis of Chinese lawmaking politics and a case study of a recent Chinese education law, the Law for the Promotion of Private Education. This law was chosen for the analysis because it is the most controversial education law in China.

3.1. Methodology

We adopted a document analysis as the major methodology and utilized archival resources about China's lawmaking politics in general, and the private education law in particular, as the major source of data.³ As Marshall and Rossman (1999) noted, analyzing documents, such as formal policy statements and minutes of meetings, can generate an understanding of the setting or group studied and portray the values and beliefs of the people involved. To understand the dynamics of China's private education legislation, we collected data from three major types of primary sources: (1) the original texts of the private education law and regulations, (2) other public official documents (such as agendas and brief reports of meetings of NPC, and the speeches of officials presented at these meetings and other occasions), and (3) articles presented by private education investors at local and international conferences. We also collected data from two types of secondary sources: (1) articles and comments by experts on the issues and problems confronting private education legislation and (2) the mass media's coverage of the controversial debates in the deliberations about the law in the NPC's meetings (in such national newspapers as *People's Daily* and *China Education Daily*).

In the data analysis, we followed the methods of content analysis to identify appropriate categories and units of analysis (Cohen et al., 2003; Wiersma, 2000). As demonstrated later, we (1) identified key players as well as their roles and preferences at different stages of Chinese private education legislation, (2)

compared the texts of the private education law and regulations, (3) searched for patterns of thinking, behaviors, words, or phrases that appeared with regularity or seemed to resonate in multiple sources (such as "reasonable return of profit"), and (4) identified potentially noteworthy events and incidents.

3.2. Key institutional players and their roles in creating Chinese legislation

China's lawmaking system comprises three major types of lawmaking bodies, which have different statuses, powers, and functions in the state hierarchy and administration: the core leadership of the CPC, the people's congresses, and national and local governments.

The first and most important institutional player in legislation is the CPC Central Committee, which has defined the basic rule of the game in virtually all dimensions of society since the CPC's assumption of power in 1949. Despite its status as an extra-legal body, the CPC Central Committee has complete control over the Constitution and its amendments. Most significant changes of the CPC's party line, objectives, or policies have led to a corresponding revision of the Constitution. The CPC Central Committee also can issue decisions and opinions on important issues, which later become directives for all state organs, such as the *Reform of China's Educational Structure* (1985) and *The Guidelines on the Reform and Development of Education in China* (1993).

The second type of key institutional players is the state's legislative arm, the people's congresses under the CPC's leadership (GOV.cn, 2006; National People's Congress, 1982). The NPC and its permanent body, the NPC Standing Committee, is the nation's highest-ranking, law-making body. At the local level, *difang*, which is a broad term used by the Chinese government to refer to a wide range of administrative areas covering provincial, city, county, township and village-level people's congresses, can enact local laws, provided they do not contravene the Constitution, national laws, or national administrative regulations. They also have the legal power to supervise the corresponding government bodies and their performance in implementing laws.

The third type of key institutional players in legislation is the state's executive arm, comprising the State Council and governments of other levels. The NPC gives the State Council and its ministries legal power to enact the administrative regulations that are necessary to implement national laws, while governments of lower levels can adapt national laws and administrative regulations to make them commensurate with specific local regulations. However, unlike the NPC, the State Council is responsible for directing and administering the affairs of all sectors, such as the economy and education.

3.3. The general order of play in the process of Chinese lawmaking

Lawmaking in China is structured as a dynamic, repeated game in which key institutional players interact with each other in multiple stages: the proposal, drafting, deliberation, and passage of a bill into law; the drafting and issuing of implementation regulations; and the supervision of law enforcement (*zhifa jiancha*). First, both the NPC and ministries of the State Council may propose bills. A proposed bill may be placed on the agenda for an NPC session to be considered by all NPC delegates, or it may be submitted to the NPC Standing Committee for legislative deliberations and passage. According to the 2000 Legislation Law, the Standing Committee's Chairperson can decide whether to put a bill to a vote at the Standing Committee meeting, which normally takes three legislative deliberations in the same session to pass a bill into law (National People's Congress, 2000, Article 27).

³ We planned to organize interviews with key senior lawmakers who played a vital part in developing private education legislation, but could not manage to do so because of their high seniority and political sensitivity in China's state machineries, as well as our limited capacity as academic researchers.

More than three deliberations are permitted in the case of more controversial bills (Article 38); an example of this is the private education law (which is discussed later), though this is not common.

Second, after a national law is passed, the State Council and its ministries are responsible for drafting nationwide implementation regulations. This is the first step in implementing a law as a mandatory policy and involves turning the law into a clear set of guidelines and instructions that local governments will interpret and carry out. For education laws, the Ministry of Education is usually the principal drafter of national regulations. Local governments play the most influential role in making local rules to enforce national law and implementing regulations.

Third, the enforcement of a law is supervised after it is implemented to identify any resulting problems and to enable governments to address and correct them (National People's Congress Standing Committee, 1993). Local people's congresses are the principal actors in the supervision process, organizing supervisory groups, investigating, identifying problems, and ensuring that local governments address problems and report the results within a given period. At the national level, the State Council functions as the state's executive branch, supervising legislation and ensuring that its ministries respond to requests from local people's congresses to correct problems that have been identified in the evaluation process; whereas the NPC can conduct investigations to verify whether the State Council follows through (National People's Congress Standing Committee, 1999).

4. The legislation of private education: a repeated game of negotiation, cooperation, and competition

With reference to the legislation of private education law, this section demonstrates how China's lawmaking bodies interact strategically during the game of creating legislation. In the process of legislating private education in China, there were three major players: the state's executive arm (represented by the State Council, particularly its Ministry of Education), the legislative arm (represented by the NPC Standing Committee), and the private education constituency, particularly investors and founders of private schools and education institutes. This process can be seen as a repeated game of negotiation, cooperation, and competition, in which these, particularly the first two, players expected to encounter each other in similar situations on multiple occasions. Negotiation enables players holding competing interests to reach some sort of agreement before the final game is played (Harsanyi and Selten, 1988). However, in China's case, negotiation took place both before and after the private education law was passed. This happened during four major stages of legislation: pre-enactment, law enactment, law enforcement, and supervision of law enforcement (which just started at the time of this writing).

4.1. Pre-law enactment stage before 1998: the state council as a key player and policy issues associated with private education

The repeated game of legislating private education law between the State Council and the NPC can be traced back to the reemergence of private schools and institutes in the 1980s. During this stage, the State Council played a leading role in drafting, promulgating, and enforcing administration regulations to govern private education.

4.1.1. The reemergence of private education

In China, private education refers to the provision of education by schools and tertiary institutions that are funded and operated by individuals or social groups other than the government (Lin

et al., 2005). These are officially called "people-run" (*minban*) or "social forces-run" (*shehui lilian ban*) schools or institutes. Before the CPC's assumption of power in 1949, private schools in China accounted for about 40% of the school sector (Wang, 2000). Between the early 1950s and early 1980s, private education "disappeared" because the CPC nationalized education, converting all private schools into public schools for the socialist cause. Since the 1980s, China's economic reform has generated increasing educational demands from the state, the market, and individuals; one of these demands was to provide more opportunities at the post-compulsory schooling level (Deng, 1997; Kwong, 1997).

To help ease these demands, the private education sector began to reemerge (Mok, 2000, 2003). Between 1999 and 2006, enrolment in the private education sector increased from less than six million to over 23 million students (China Education Yearbook Editorial Board, 2000; Ministry of Education, 2007a). The number of private schools and private education institutes rose from 45,000 to 93,200 (including about 75,400 kindergartens, 6200 primary schools, 4600 junior secondary schools, 3200 senior secondary schools and 2600 senior vocational and technical schools, 280 higher education institutes, and 1000 training institutes). Despite this growth, the private education sector still remains small and accounts for less than 10% of the total student population.

4.1.2. The NPC's basic preference for encouraging the development of private education

At the pre-law enactment stage, in 1982 the CPC-led NPC articulated for the first time in the national constitution its general preference for encouraging the development of private education. In the Education Law, which is the basis for all other educational laws and regulations, the NPC (1995a, Article 25) expressed a similar policy toward private education. Without careful thought about its implications for private education (as reflected in hindsight by the controversy about the profits made by private education investors as discussed later), the NPC established in the Education Law a broad principle: that organizations or individuals "should not set profit-making as their goal" (*bude yi yingli wei mudi*) in the founding and running of educational institutions (Article 25). Though it established this principle, the NPC did not create any specific law to govern private education until the late 1990s, probably because of its busy legislation agenda, the small scale of private education, and NPC members' lack of urgency for private education legislation.

4.1.3. The state council's preference for keeping administrative order in private education

Unlike the NPC, which does not need to be involved in education's regular administration and order-keeping, the State's executive arm, including the State Council and other levels of government, was increasingly confronted by issues and problems arising from the burgeoning private education sector. The government preferred to limit its involvement primarily to administration and order keeping, and therefore its attitude toward private education was unstable and shifted largely depending on which problems arose. This was reflected in its two administrative regulations, which were successively enacted in 1987 and 1997.

Initially, the State Council cooperated with the NPC by enacting the 1987 Provisional Regulation on Schools Run by Social Forces to encourage private education and to function as a test case for new policies on private education (State Education Commission, 1987). Many enterprises and individuals, including young entrepreneurs, seized this golden opportunity and began to invest in private education. Some private school founders saw their schools as

education-related investments; thus they are called “investors” (Yang, 2002), rather than “educators,” in Chinese society. As a result, the private education sector grew quickly. However, later, irregularities arose, for example, many students complained that the schools lacked sound management mechanisms, effective curricula, and stable teaching forces (Gu, 2000). Some schools made excessive profits and produced misleading advertisements, promising prospective students a better quality of education than they were capable of providing (Jing and Shen, 2001).

These administrative problems triggered the State Council to deviate from the NPC's preference. To curb private education, the State Council changed its attitude from promoting its development to tightening control over it. In 1997, the State Council issued the Regulation on Schools Run by Social Forces, which adopted a policy of “active encouragement, vigorous support, right guidance, and strengthening governance” of private education by the state (*jiji guli dali zhichi zhengque yindao jiaqiang guanli*) (Article 4). Despite declaring the state's encouraging attitude, the new Regulation did not specify any encouraging measures. Instead, detailed regulations were made to rectify irregularities and facilitate the government's control over private education. Moreover, in line with the NPC, the State Council transplanted the clause about not making profits into the 1997 Regulation on Private Education (State Council, 1997, Article 6).

However, these two regulations did not deal with the central policy issues arising from the new relationship between private education providers and the existing national educational policy. They included (1) the concept of private education in a socialist economy; (2) public welfare undertaking private education; (3) property ownership by private schools; (4) the legal rights and benefits of private schools, and their teachers as well as students; (5) local governments' inconsistent practices of levying taxes on private educational institutes in different areas; and (6) the return of operating profits to private school founders (Ding, 2000; Gu, 2000; Hou, 2001; Hu, 2001). Of these issues, the last one was the most controversial, particularly during the law enactment stage, as shown in the next section, because it concerned the state's direct conflict with the private education constituency. Related to this issue was whether their profits should be taxed.⁴

4.2. Law enactment stage, 1998–2002: the NPC as a key player and its game strategies

During the second stage of the repeated game (law enactment), the State Council, as the law enforcement agency, continued to implement the 1995 Education Law and the 1997 Regulation, which tightened the administrative control over private education and prohibited educational institutions from making profits because there was no new law to oust them. The major debate centered on the issue of whether profits should be allowed. The private education constituency sought opportunities to express its concerns to and lobby the support of both people's congresses and governments of various levels. To ease the private education sector's concerns, the NPC's officials reversed the spirit of the State's Council's Regulation by reasserting its original position on encouragement and changing their position to allow profit-making.

4.2.1. The NPC's preference for further encouraging private education

As time elapsed, the NPC increased its involvement in private education legislation. First, to address the policy issues associated with burgeoning private education (as discussed earlier) and

respond to the CPC's commitment to governing the nation and education in accordance with the rule of law (Communist Party of China Central Committee and State Council, 1993), in the late 1990s the NPC's officials worked to enact a private education law as a framework for national policy. In 1998, the NPC Standing Committee accepted a proposal from some NPC representatives who had consulted with and solicited opinions from citizens, including the founders and principals of private schools, and put the law for private education on its legislative plan for the Ninth NPC. The Standing Committee delegated the task of drafting the law to one of its sub-committees, the Education, Science, Culture, and Public Health (ESCPH) Committee.

In 1999, the Department of Education, under the ESCPH Committee (2002a), began working to legislate for private education by involving officials from the State Council's three ministries (particularly the Ministry of Education) in drafting the legislation. According to Hou (2003) and Lu (2003), who both were heads of the Department, the ESCPH Committee hoped to draft a private education law that would promote, rather than confine, private education and achieve four main goals:

- provide a common legal framework for regulating both new private education practices and the government's administration of private education;
- recognize and protect the legal rights and benefits of private schools and their teachers and students;
- protect private education providers' legal rights and freedom to own and use their private property for private schools; and
- increase investors' interest in expending more capital on education.

Second, to further encourage private education, the NPC's law drafting committee suggested adopting a new position on profit-making, from forbidding all schools and institutes (including private ones) from earning profits to allowing the return of operating profits to the founders of private schools (Chu, 2003). Private education investors welcomed the proposed change, but those who felt that profits should not result from education strongly resisted it. This proposal marked not only a conspicuous deviation from the NPC's 1995 Education Law and the State Council's 1997 Regulation, but also the beginning of the public competition between the officials of the NPC and the government in the “game” of private education, in which the legislation's stated goals challenged the government's previously dominant power over private education.

Third, after changing its position, NPC officials used legislative deliberation as a major arena of consensus-building to win the support of its own members, the State Council, and other critics. In June 2002, the Chairman of the NPC Standing Committee, Li Peng, put the draft law on the agenda of its 28th meeting of the third session. Reviewers included not only the NPC Standing Committee members, but also officials of the State Council, representatives from local governments, and legislative professionals. The requirement for an inter-organization deliberation, as explained earlier, is normal practice in the Chinese lawmaking process. The NPC also intended to resolve possible inter-organizational legislative disputes, to achieve consensus, and to pass the bill unanimously as a strong expression of support for private education.

However, the reviewers hotly debated the draft bill and no consensus could be reached in the three legislative deliberations held in the 28th, 29th, and 30th meetings of the NPC Standing Committee between June and October 2002. This is a useful example showing that neither the NPC nor the State Council was (nor is) a homogenous body, and that their members could have

⁴ This article does not deal with the first four issues; for details on them, see Hu and Ding (2001) and Ning (2003).

different views on the policy issues related to private education in internal meetings and private discussions.

4.2.2. Key source of controversy: non-profit or for-profit

During the law enactment stage, the discussion about whether private education investors should be allowed to profit intensified because it had created an ideological and practical dilemma for the state's lawmakers and policymakers (Chu, 2002; He, 2002). Related to the problem of profits in private education was the concern about levying taxes on such profits. One the one hand, the 1995 Education Law, as mentioned earlier, stipulates that education should not be profit-oriented (Article 25), and therefore education investors, in principle, should not be taxed. However, many private schools and education institutes made profits, and some of them even used illegal means to profit excessively. On the other hand, according to the Ministry of Finance's (1993) Implementation Rules, tax exemptions would be applied only to schools and education institutes whose programs lead to degrees or certifications recognized by the government (Article 26). However, most private schools and educational institutes offered programs that did not lead to recognized qualifications. As Gu (2000) noted, private education investors complained about two major inconsistencies: first, the inconsistencies between the Ministries of Education and Finance, and between the Education Law and Implementation Rules on taxes; and second, variations in local governments' practices of levying taxes on private education in different areas.

These views were reflected in the draft of the private education law presented for the first deliberation in the 28th meeting. In his introductory speech, a deputy head of NPC's ESCPH Committee (2002b) highlighted and explained the clause that allowed private education investors to generate "reasonable profits" (*heli huibao*). He argued that private education investors should be given a reasonable return of profit because this could enhance investors' motivation to invest in private education and therefore attract more non-state funding to education. In the deliberation meetings, advocates echoed the NPC committee's view and defended the provisions for two additional main reasons (Liu, 2002). First, private education was considered by law to be a public good, and allowing for a return of profits could be seen as a policy of encouragement and support to help attract more private capital to the education sector, thereby benefiting the general public. Second, despite the fact that it operated a vast domestic educational system, the state did not have enough resources to meet the growing popular demand for education. Private education contributes to the public good by filling the gap between a society's increasing educational demands and its government's lack of resources.

However, in the third deliberation held in the 30th meeting, critics backing the State Council's 1997 Regulation (which was based on the NPC's old position of forbiddance) argued that allowing a private education provider to make a profit was unacceptable because education was a public good, intended to transmit knowledge and skills for the entire country's benefit. Allowing a return would mean that private schools would violate existing policies, particularly the 1995 Education Law. After the third deliberation, critics who supported the State Council's regulation seemed to win the debate because the clause about the return of "reasonable profits" was dropped and replaced with amendments that reflected the State Council's views, such as "persisting in the public good nature" of private education and "not allowing [private education] to set making profits as [its] goal" (NPC ESCPH Committee, 2002c).

4.2.3. The NPC's game tactics: strategies of avoidance and dominance

To reverse its losing situation, the NPC's offices adopted two strategies. The first strategy was risk avoidance, in other words, not engaging in activities that produce loss exposure (Davis, 1997). To avoid the risk of the bill being defeated or passed with strong opposition, the Legislative Committee (a sub-committee of the NPC Standing Committee) proposed not to follow the normal procedure by putting the bill to a vote right after the third deliberation in the 30th meeting, on the grounds of divisive views on important questions and the need for further deliberations (Wu and Chang, 2003). This helped the NPC's offices "buy" time to solicit further support by using another strategy, the dominant strategy: using a national leader's political influence. According to Davis (1997), a strategy is dominant if it helps a player get a larger payoff than any other strategies or win the game regardless of other players' strategies. As part of the dominant strategy, in late November 2002, the ESCPH Committee organized a top-level team to visit private schools and colleges in China for the fourth legislative deliberation, and it was led by the heavyweight political leader, Li Peng, who was not only the Chairman of the ninth NPC Standing Committee, but also a former Premier of the State Council who had just stepped down from this position, and, more importantly, a very senior member of the CPC Politburo. It should be noted that the Politburo is the highest decision-making body comprising very few members, including the President, the NPC's Chairman, and the Premier of the State Council. During the investigation, Li Peng set the tone of private education legislation by opining that: [promoting the] healthy development of private education can meet the educational demand of the society, and benefit educational undertakings. We should allow providers [of private education] to earn a reasonable return on their investment, though we certainly need to ensure that private education should not set profit-making as its sole educational objective (translated by authors from Fu, 2002b).

4.2.4. The outcomes

Because of Li's political seniority and authority in the CPC, the legislature, and the administration, his view, which to a large extent represented that of the CPC Politburo, spread rapidly in the national printed and electronic mass media (such as *People's Daily*, *China Education Daily*, *China Youth Daily*, and State-run television stations). This created a strong social and political pressure to compel the State Council to concede. Noting this new development, the NPC Standing Committee (2002) decided that the conditions for passage were ripe and seized the opportunity to organize the final meeting for the fourth deliberation and voting at the 31st meeting in December. Li continued to use his political influence to ensure the law's smooth passage by attending the fourth legislative deliberation meeting and later presiding over the vote on the bill (Fu, 2002a).

As a result, the Law for the Promotion of Private (Minban) Education was passed with extremely strong support on 28 December 2002 (Lu and Wang, 2002). The drastic reversal from hot debate to very smooth passage of the law suggests that under pressure resulting from the dominant strategy's success, critics who supported the State Council's 1997 Regulation offered a strategic concession to show their cooperation with the NPC in consensus-building before the final vote. The Law rectified the 1997 State Council's Regulations and clearly enshrined the spirit of promoting (rather than restricting) private education, particularly the concept of "reasonable profits" for private education investors (National People's Congress, 2002, Article 51).

The law's passage did not signal the end of the lawmaking game, however. Although consensus-building can resolve policy differences between different organizations, "political actors who are

dissatisfied with the current consensus on a draft law will unavoidably be drawn to resume the battle in another, more sympathetic arena” (Tanner, 1999, p. 50). Structured in the form of a repeated game, Chinese lawmaking mechanisms gave the State Council a chance to play a leading role during the stage of formulating implementation regulations, when more players were involved.

4.3. *The stage of formulating implementation regulations, 2003–2007: the state council as the key player and its game tactics*

During the third stage of legislation (2003–2007), the private education law needed to be turned into a set of operational regulations for implementation. During this stage, the NPC had very limited influence over the contents of implementation regulations because the task was in the remit of the State Council. In order to bargain with the NPC, the State Council restarted the game of negotiation, played a leading role, and adopted various strategies, including making use of the first-mover advantage, the avoidance strategy, and the political rhetoric of cooperation.

4.3.1. *The state council's game tactics: first-mover advantage and the avoidance strategy*

During this stage, the State Council adopted two major strategies to formulate the implementation regulations with a view to facilitating its administration of private education later. First, from a game-theoretic viewpoint, the State Council successfully used the strategy of “first-mover advantage” by changing the rule of game. Unlike the original version of first-mover advantage, in which the player changes the order of play by becoming the first entrant in the game (Turocy and von Stengel, 2002), the State Council modified the strategy in such a way that it started and became the leader of the next game (i.e., enactment of regulations on the implementation of the law) before the end of an earlier game (i.e., enactment of the law) so as to gain bargaining power with the NPC and reduce the NPC's influence in an earlier round on setting the agenda for discussion in the next round. In an attempt to bargain, the State Council seized the first-mover advantage by drafting implementing regulations before the law was passed. The Ministry of Education (2004c) admitted that after receiving the State Council's instructions, it started the process of drafting the implementation regulations in mid-2002. In other words, the State Council changed the order of play in legislation by starting the stage of law enforcement before the private education law was passed on December 28, 2002. In the law, the NPC (Article 51) did not define clearly the meaning of “reasonable” profit, nor did it detail how the law was to be implemented. Instead, it asked the State Council to draft the details. This gave the State Council “space” for creating both national and local implementation regulations. Later, the State Council (2004) promulgated the Regulations on the Implementation of the Law for the Promotion of Private (Minban) Education.

Second, similar to the NPC officials earlier, the State Council adopted the strategy of avoidance. In a game, the player's capability to change the order of play indicates that the player is powerful enough to change the rule of game, and at the same time can raise a possible “threat” to another player (Ayres, 1990, p. 1304). To avoid raising any visible threat to the NPC's officials and inviting backfire, the State Council also used the tactical, political rhetoric of cooperation with the NPC. The State Council (2004) reiterated that “[t]hese regulations are formulated in accordance with the Law for the Promotion of Private (Minban) Education.” The Ministry of Education (2004a) even publicly claimed that the regulations “faithfully enforce” the law.

4.3.2. *The state council's continuing preference for order-keeping*

Since the promulgation of the law on private education, the State Council has formulated and issued two sets of implementation regulations. These sets of regulations serve a similar purpose of keeping order in private education by addressing specific problems and irregularities and increasing the government's monitoring of private education. The first set is the 2004 Regulations for all levels of private education, which can be seen as the State Council's recourse to regaining its say in the controversial issue of allowing private education providers to make profits. In particular, it set four criteria for what constitutes and how to obtain a “reasonable return” (State Council, 2004):

- if a school collects high school fees but shows low input into educational and school facilities, and is found to provide a low quality of education in comparison with other private schools, the investor cannot claim a higher return than other similar private schools (Article 45);
- before the investor can claim a return, the private school should release to the public information about the standards and quality of its educational provision and financial situation (Article 46);
- the investor cannot claim a return if the private school is found guilty of making illegal profits by using ways such as misleading advertisements, fees abuse, and selling diplomas (Article 47); and
- the investor must abide with the law in running the private school; otherwise he or she will face confiscation of the return, an end to student admissions, annulment of the school's operating permit, or even prosecution (Article 49).

However, the 2004 Implementation Regulations did not specify the ratio of the return of “reasonable profit.” The Ministry of Education (2004b) explained that it was difficult to fix such a ratio because of the large variation in local economic conditions and needs throughout China, and that this could give “space to local legislation.” Besides, the 2004 Regulations remind private education investors that if they insist on making a reasonable profit, they need to pay taxes on it, though on more favorable terms than other private sectors; and if they do not want a profit, they can enjoy a tax policy similar to those of their counterparts in public education (Article 38).

All these conditions suggest that the State Council attempted to use the allowance of generating a reasonable profit as a means to rectify some major problems in private education, including the low quality of private schools, making excessive profits, and using illegal means to generate income from students. The State Council also used other implementation requirements in the Regulations to tighten the government's control over private schools by allowing the government to examine a school's internal administration (including financing and teaching) and external relations (such as recruitment of students and competition with other schools), before approving a return of profits to the investors (Articles 32–37). In other words, these requirements deviate from the fundamental spirit of the private education law in two major aspects: “the protection of the autonomy of private schools by the state” (National People's Congress, 2002d,e, Article 5), and the encouragement of investors to invest in private education.

Moreover, after the implementation regulation was issued, the State Council quickly enlarged its power over private education because many local governments adopted more measures to enforce the regulations in their jurisdictions, even though their local people's congresses had not yet adapted the national law into local laws (Ke et al., 2004; Xu, 2005). In some areas, local measures reinforced the implementation regulations and explicitly used the national law's ambiguity to increase the government's control over

private education. For example, some local governments stipulated forcefully that if the founders or investors wanted to obtain a “reasonable return,” but could not provide legal documents to prove they had put money into the school, all of the private school’s property would be deemed to belong to the state. Investors who were unwilling to let the government audit their operations, or who failed to meet requirements laid out in the implementation regulations, were required to forfeit their legal right to claim a return (Fan, 2004; Huang and Dong, 2004; Wang, 2004).

Despite the promulgation of the 2004 Implementation Regulations, problems, particularly in private higher education, did not subside but intensified. The central government issued another set of implementation regulations, comprising the *State Council* (2006) Circular Concerning the Strengthening of Regulating Private Higher Education and the Guidance on Its Healthy Development, and the *Ministry of Education* (2007b) Regulations on the Management of Private Higher Education. In the 2006 Circular, the State Council admitted that despite its contribution, private higher education still had “serious problems and chaos” in student recruitment, school management, and teaching, and this in turn led to student protests in some local areas in the mid-2000s and could affect the long-term “healthy development” of private education. The State Council attributed these problems to two major causes: (1) the “incorrect mentality” and improper ways of some investors and leaders in the running of private education institutes, and (2) the failure of some local governments to supervise private higher education.

In response, the state’s administration introduced three measures. First, the State Council assigned different non-education-related ministries to monitor various aspects of private education, such as the Ministry of Finance on the financial situations of private higher education institutes, the Ministry of Commerce on their advertisements, and the Ministry of Public Security on the illegal private colleges and agencies. Second, to ensure law enforcement, in the 2007 Regulations, the Ministry of Education specified the areas that provincial education bureaus should oversee (Article 4): the registration of private education institutes, the review of their prospectuses and advertisements for student recruitment, annual institutional inspections of private education institutes, the recognition of their achievements, and the investigation of their illegal behaviors. To warn private education institutions, the 2007 Regulation also spells out the penalties in terms of fines (RMB10 000 to RMB30 000), or the suspension or reduction of the approved student enrollment quota (Article 30). Third, to guide the development of private higher education and prevent student protests, the *Communist Party of China Central Committee and Ministry of Education* (2006) jointly expressed a strong need to strengthen the establishment of the CPC’s work on campus. Several months later, in the 2007 Regulations, the Ministry of Education stipulated that similar to their counterparts in the public higher education sector, private higher education institutes “must” establish CPC political organs to “unite” students (Article 9), and set up two teams to manage students’ daily behaviors: one team of political counselors at the ratio of at least one political counselor per 200 students, and another team of class-teachers to take care of students’ daily affairs (Article 18).

4.3.3. *The outcomes*

Consequently, because of their different natures and functions, the NPC and the State Council differed in their preferences. The NPC preferred to allow a “reasonable return” of profits to private education investors to encourage their investment in education, and left a “space” for the State Council to define the ambiguous meaning of “reasonable return.” The State Council used this ambiguity to address specific problems and issues arising from the

burgeoning private education sector. To keep order in private schools and education institutes, the State Council also adopted different implementation regulations to tighten its control. From the NPC’s perspective, the outcome of the game of legislation changed from equilibrium at the second stage to off-equilibrium at the third. Nevertheless, the NPC could search for a new equilibrium by moving to the fourth stage of legislation, the supervision of law enforcement. At the time of this writing, the NPC is preparing to start this stage. How the NPC will negotiate with the State Council to balance its encouragement and keep order in private education remains to be seen.

5. Discussion: a game-theoretic explanation of the politics of legislation in China

As compared with the four existing models of Chinese lawmaking (Tanner, 1999) and the literature on law-based educational reform (e.g., Birch, 1993; Harris, 1993), the game-theoretic approach can provide a more useful guiding framework for analyzing and understanding the interactions of different players in the repeated game of China’s private education policymaking and lawmaking. Lawmaking is a dynamic, repeated set of games in which different lawmaking organizations interact in multiple stages. The mixed nature of the game is affected by three inter-related, structural factors: the different lawmaking bodies’ common commitment, but competing interests in legislation; the interdependent relationships among lawmakers in the state’s lawmaking system; and the availability of both public and private information sources in the process of lawmaking.

5.1. *Key players with a common commitment, but competing legislative interests*

As a special form of policymaking, creating legislation involves interactions among different groups of stakeholders. In China, the structural relationship among lawmakers is marked by a division of labor that serves a common commitment: to establish a legal framework. However, unlike the “command model,” which sees the NPC as a rubber stamp of the ruling party (Foster, 1982; Hsia and Johnson, 1986), and the “garbage can model,” which criticizes the Chinese lawmaking machinery for lacking clear goals or direction (Chen, 1997; Zhang, 1999), this analysis of legislative debates, the law, and the implementation regulations of private education has revealed that, despite sharing a common task in the game of legislation, the NPC and State Council were contending players holding different perspectives on the legislative purposes and goals of private education law. The private education constituency was also an important player in lobbying lawmakers and policymakers to maximize its interests. However, private education investors and school leaders were not actually involved in the legislation process, and large-scale or organized lobbying in China is at a primitive stage.

As the important administration arm of the state, it is natural for the State Council to adopt preferences and means that facilitate its administration and order-keeping in its jurisdiction. The *State Council* (1997, 2004, 2006) sees legislation mainly as a means to address different problems at different times, and to mold the state’s power over private education into a manageable development track that is more acceptable to the existing national educational policy framework. In contrast, as the state’s highest legislative arm, which does not need to engage in the state’s daily administration, the *NPC* (2002) intended to use legislation to promote private education and establish common social rules of the game to promote new practices and relations between private educational institutions and the government that are acceptable to

private education stakeholders. As a result, their different institutional functions and positions led to different outcomes at different stages.

5.2. *Separate entities with an interdependent relationship under the CPC's leadership*

Despite their different interests, players of the same game are interdependent when they choose their strategies and payoffs (Elster, 1982). Unlike the “garbage can model,” which would criticize China's different lawmaking bodies for their poorly defined roles (Chen, 1997; Zhang, 1999), this game theory analysis shows that the Chinese lawmaking machinery has established a clear order of play in the legislation game, particularly since the enactment of the 2000 Legislation Law. At each stage of private education legislation, there was a designated key player who drafted the legal documents, which crucially affected the strategic interplay among players in a dynamic process of legislation. When a key player (such as the State Council) adopted competing strategies, the other player (such as the NPC) coordinated its responses to avoid confrontation, while resuming competition in the other areas in which it was more powerful or influential. This means that both the NPC and State Council adopted joint, rather than individual, strategic choices to respond to each other; and they coordinated their choices to play either a cooperative or non-cooperative game, according to their changing roles and the shifting game context.

However, the struggles and interdependence between the NPC and State Council should not be understood merely in terms of their choices and payoffs. More importantly, in the state machinery, they are separate entities whose interdependence during their contention is maintained by a higher authority in the form of the CPC's leadership, which has held almost absolute control over policymaking since its assumption of power in 1949. Despite the differences between their constitutional roles as the highest legislative and executive authorities, neither the NPC nor the State Council has totally independent authority over legislation; both are state organs under the CPC Central Committee's authority. This may partly explain why both the NPC and the State Council adopted an avoidance strategy to keep away from engaging in direct public confrontations with each other while the Chinese private education legislation was being considered.

Also different from the “leadership struggle model” and the “organisational politics model” (Chang, 1990; Lieberthal and Oksenberg, 1988), this analysis shows that although the NPC's offices and the State Council held different views on governing private education, there were no explicit struggles among the key political leaders. One possible explanation is that their interests in the private education legislation were not diametrically opposed as in the case of a zero-sum game (in which one gains while the other loses). Instead, they needed to negotiate and compromise with each other so as to reflect the CPC's interests.

5.3. *Public information for consensus-building and private information for payoff maximization*

Unlike the literature on law-based education reform and the models of Chinese lawmaking politics, game theory highlights the importance of the information that is available to the players when they make their decisions. Information about who knows what and when, and who moves and when is very important to decision-makers when they choose strategies (Dau-Schmidt et al., 1997). Knowing or failing to know about other players' strategic actions can make a considerable difference in outcomes and the maximization of payoffs (Ross, 2006).

The importance of possessing information is reflected in the repeated game between the NPC and the State Council in the legislation of private education. Both parties possessed two types of public information for consensus-building. The first type is common knowledge about the other institutions involved in the process, which was available to them because all lawmaking bodies are state organs, and as such can communicate with one another and become familiar with each other's functions, staff, and working procedures. The second type of public information is common knowledge about the development of legislation, as all players are required to contribute to the legislative process. In particular, through their collaboration in legislative investigations, inter-organizational reviews, and the consultation process, all players knew one another's interests, possible actions, and the possible outcomes of the legislation. Possessing such public information enables players to coordinate their strategies in a cooperative game.

The NPC and the State Council also possessed private information to maximize their expected payoffs. Players can make their strategic choice of action secret so that other players do not know with certainty when and how they will act (Linares, 2003). At the stages during which they took a leading role, the NPC and the State Council used their authority to keep their preferences private and make unilateral decisions without informing each other. The NPC Standing Committee alone decided when to put and when not to put a bill to a final vote, while the State Council held the exclusive executive power for formulating and issuing the implementation regulations, without involving the NPC. Creating private information caused information asymmetry and therefore different payoffs. A lack of information results in the “loss of the game,” as was the case with the State Council's passive concession to the law's passage right after its fourth deliberation, and the NPC's weak influence over the drafting of the implementation regulations.

6. *Conclusions: the strengths and limitations of game theory for understanding educational policymaking*

Unlike many game theorists who “try to understand conflict and cooperation by studying quantitative models and hypothetical examples” (Myerson, 1997, p. 2), but similar to Crump (2001) and Dyson (2004), we have shown that game theory can be a useful tool for analyzing the process of lawmaking and the strategic interactions among key players.

With reference to private education legislation in China, we have demonstrated that the game-theoretic approach can supplement the general literature of law-based educational reform by shifting the focus of analysis away from the *impact* of legislation on educational change to the complicated *dynamics and interactions* among policymakers or lawmakers during the policymaking process. We also have shown that game theory can supplement the four major models of China's lawmaking politics (Tanner, 1999) by providing a more useful framework for explaining the cooperation and competition among lawmaking bodies in China. Moreover, our analysis of China's case supports the literature of bounded rationality (such as Gigerenzer and Selten, 2002; Odell, 2002; Simon, 1997) in the sense that Chinese lawmaking bodies are bounded rational actors whose strategies and decisions are affected by the possession of information and an ability to achieve maximum payoffs.

This game-theoretical analysis of China's private education law has four implications for understanding educational policymaking. The first implication is this study's possible answer to Ball's (1998, pp. 121, 128) questions about “whose interests are served” by educational policy, and what “solutions” policymakers might

adopt to respond to the problems and challenges associated with educational and social policy. From a game-theoretic perspective, the answers, as suggested in China's case, depend on how policymakers and other stakeholders interact strategically because their interests, strategies, information, and authorities can affect policy outcomes.

Second, as a special form of policymaking, lawmaking in education is a series of complex, goal-directed activities that involve interdependent interactions among interested parties, such as coalition building, lobbying, negotiating, and making compromises. As in the case of the NPC in the law passage and the State Council in the drafting of implementation regulations, each lawmaking party is motivated by its own interests, and has its own preference for a set of actions with a view to maximizing its expected outcomes. Moreover, in the process of policymaking or lawmaking, cooperative and non-cooperative strategies can co-exist in a repeated game in which players can compete with one another without public confrontation, and accept concessions at certain stages because they know they will meet again, or that their leading role can be changed in the next round.

Third, behind the strategic interactions among lawmakers is a deep-seated tension between the legislative and administrative authorities. In China and many other countries (Williams, 1994), educational policymaking is no longer a process dominated by the educational bureaucracy through its administrative power, but rather it falls increasingly within the lawmaking arena, via the vehicle of education legislation. In China, legislation has been used by both the legislature and the administration to govern the newly burgeoning private education sector. However, China's case further shows that the state administration can use legislation to address specific problems and issues at different times, tighten its general control over private schools, and even legalize the CPC's political penetration into campuses by establishing political organs and teams.

The fourth implication is that educational policymaking is not a single-stage exercise, but a repeated game, comprising policy formulation, implementation, and evaluation (in which the sequence is not necessarily linear). Players may be less selfish and cooperate more easily with one another if they know they will meet again in similar situations during later policymaking stages (Ross, 2006). Moreover, in response to changing situations, players can change their preferences, strategies, and goals. This study has shown that in the case of China, largely depending on the contexts and problems to be addressed, the NPC changed its position on the nature of education from forbidding education as a profit-making enterprise to allowing private education to have a reasonable return of profit, and the State Council changed its attitude from encouraging private education to expand to tightening its control over it. In other words, educational policy or law is not static and can be modified in response to social, economic, or political changes.

Despite its usefulness as an analytic tool, game theory, as reflected in this study, has three limitations for understanding and explaining the dynamics and complexity of education policy-making. First, game theory emphasizes logical rationality, starting deductively with the game's postulated goal (Brams, 2004). However, educational policymaking or legislating is not a game of pure logic. The basis of decision-making in policymaking often needs to be extended from logical reasoning to include social, cultural, political, or even ideological considerations and preferences. In the case of China, the influence of the multiple identities of the NPC's Chairman Li Peng on the outcomes of debate and legislation suggests that lawmaking and decision-making can be political and dramatic, rather than purely rational.

Second, game theory, which assumes players' known preferences, cannot explain the formulation of these preferences. Thus it

has been criticized for its lack of a theory of preferences and equilibrium selection in complicated games, and its lack of a standard way to predict the outcomes of complicated systems of action (Linares, 2003). In the case of China's private education legislation, game theory cannot help explain the different preferences of the NPC and State Council, which are determined not only by their functions in the state machinery, but also by the CPC's political will.

Third, game theory can explain the interdependent choices of players involved in the same game on the same level, but it cannot explain the choices of those playing at more than one level. Policymaking as a game of negotiation is not necessarily conducted on a level playing field. Stakeholders do not necessarily compete fairly because some of them may have more power, authority, status, information and/or resources, and therefore have more opportunities to achieve their desired goals. In policymaking, there may be both direct players who actually play in the game (such as players on a basketball court) and indirect players who do not actually play on the field, but influence the direct players' preferences and strategies (such as the basketball team's manager or coach). A direct player can use the influence of a more powerful, indirect player as part of a strategy against his/her contenders. In the case of the legislation of private education in China, the NPC and State Council were direct players, whereas the CPC, as the ruling party, was an indirect, but more powerful player.

Despite these limitations, this article points to game theory's usefulness in explicating the complex process of creating and implementing educational laws in China. However, the relevance and applicability of game theory as an analytic tool to understand and explain interactions in educational policymaking need to be further tested in various areas of educational policy in different countries because various contexts and systems can shape differently policymakers' preferences, the chemistry of their interactions, and policy outcomes. We urge that more research be done to start developing not only the literature of game theory and educational policymaking (as in many other disciplines), but also useful game-theoretic models of educational policy so that despite its constraints, game theory can provide valuable guidance for making and understanding educational policy.

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