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The Implementation of the Development Strategy of the Tumen River Region: Constriction and Progress

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If the Tumen River region is regarded as a complex system, participated in by several countries and conditioned by various factors, the study of the implementation of the development strategy, according to the basic thinking of system science, can be treated as the evolution of the system from low level to high level. Beginning from the initial state, it advances by breaking through the constrictions time and again, gradually develops into a higher state, and finally reaches a balanced state with great freedom of maneuverability. It can be divided into the following steps:

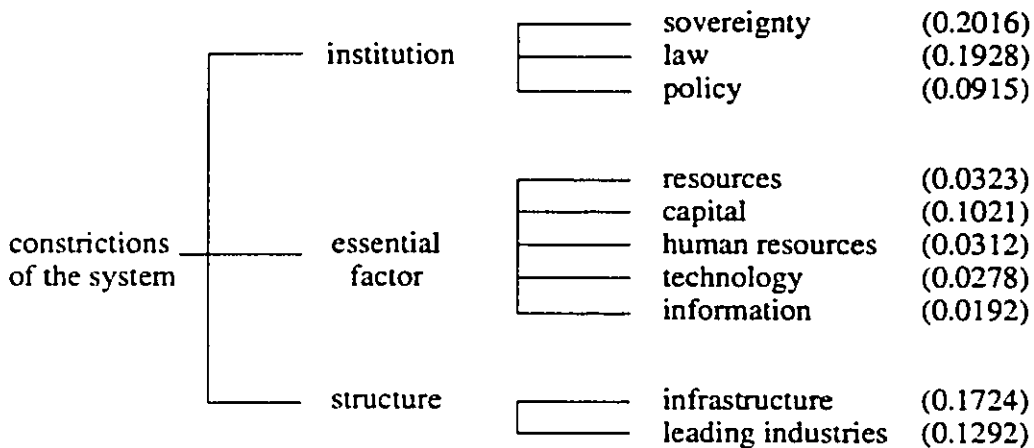
1. Analyze and determine the constrictions that restrict the advancement of the system;
2. Analyze the present condition of the system, pinpoint the characteristics, and summarize them into the "initial stage";
3. Make a study of the strategic goals and summarize them into the "final stage";
4. Divide the process of the advancement of the system into several "intermediary states" according to the different stages of constriction;
5. Recognize the surface of delineation finalized by the constrictions at the end of every state as the surface of constriction of the state which is to be broken through; and
6. Seek out and determine, according to the score of the constriction at different states, the way of making a breakthrough and advancement into a higher state.

The mapping out of the implementation plan of the development strategy of Tumen River region is done in line with the method of systems science and follows the aforementioned steps.

THE CONSTRICTION CONDITIONS OF THE SYSTEM

On the basis of the solicitation and summary of the opinions of experts, the main constrictions of the development of the Tumen River region can be divided into three parts: institution, essential factor, and structure. The ratios of the indicators as determined by thirty Chinese and foreign experts are shown in Figure 18.1. These constrictions, at the same time, reflect the characteristics of the system at different states. The establishment of the indicator system lays an analytical basis for the study of the implementation plan of the development strategy of the Tumen River region.

Figure 18.1 Indicator system of the constrictions of the system



The Initial State of the System

The present situation of the development of the Tumen River region can be summarized as follows: there is great divergence of intention among the countries concerned toward international joint development; there is a difference in the understanding of national sovereignty; and there exist big differences among the laws and policies of different countries. Therefore, joint development in the real sense is non-existent among these countries. The complementarity of resources in this area has not been tapped, and there is a shortage of human resources, technology, and information. The infrastructure is backward, and the leading industries are far from being established. The aforementioned conditions form the initial state of the development of the Tumen River region as a system. We give the constrictions at this stage a score of 100.

The Final State of the System

The goals of the development of the Tumen River region can be set as: the maturity of the minor triangular transnational economic cooperation zone and the emergence in this region of a new pattern with the minor triangular economic zone as the core, the major triangular economic zone as the pivot, and an integration of the

economies of the two triangles. A breakthrough has been achieved in the constrictions of sovereignty, laws, and policies of the countries concerned about international joint development—the complementarity of resources has been tapped efficiently; there is an abundance of capital, human resources, technology, and information in the region; the economy of the region is developing rapidly with finance and trade as the leading industries, and the fine infrastructure of the region provides powerful support. The region has thus become one of the regions of rapid growth in international economy and the economic and trade center of Northeast Asia and this can be regarded as the final state of the system. We give the constrictions at this stage a score of 0.

The Intermediary State of the System

Following the principles of “easier ones first and difficult ones later” and “advancing step by step,” the development of the Tumen River region can be divided into four periods: “two—nation cooperation,” the “three—nation cooperation,” the “minor triangle,” and the “major triangle.” As a result of the marked differences in constrictive conditions, these four periods constitute four states in the evolution of the system.

“Two—nation cooperation” state

1. Definition:

- The state of the system, supported by a loose unity, is formed as a result of cooperation in communications and transportation between two neighboring countries.

2. Characteristics:

- The two countries succeed in keeping clear of disagreements on institutional constriction in sovereignty, laws, and policies and in finding a simple way of getting the plan going.
- The complementarity of resources of the two countries is tapped, with an inflow of foreign and national capital, technology, human resources, and information into the region.
- The improvement of the infrastructure in the region becomes the top priority of the moment and makes outstanding improvement as a result of the inflow of capital; trade and processing industries become the leading industries of the region.

“Three—nation cooperation” state

1. Definition:

- The state of the system is formed as a result of close economic cooperation among three neighboring countries.

2. Characteristics:

- The three countries successfully work out a plan acceptable to all sides, with a resultant breakthrough in institutional constrictions in sovereignty, laws, and policies. Closer cooperation is established in the areas of communications and transportation.

- The complementarity of resources of the three countries is tapped, with an inflow of foreign and national capital, technology, human resources, and information into this region.
- As a result of the inflow of capital, the bottleneck infrastructure in the development of the region begins to improve, and trade and processing industries are still the leading industries of the region.

"Minor triangle" state

1. Definition:

- The three neighboring countries each contribute 330 square kilometers of land as shares. The area is operated by an international limited—liability company, thus forming the state of the system supported by transnational unity.

2. Characteristics:

- An area of a thousand square kilometers consisting of China's Hunchun, Russia's Posyet, and Korea's Rajin is placed into the international limited—liability company separately by the three countries as preferential shares.
- Apart from the preferential shares held by the three countries, ordinary shares of the international limited—liability company (LTD) can be purchased by other countries, regions, organizations, and individuals.
- The LTD sets up a board of directors and management committee to be in charge of the managing of the transnational economic zone.
- A breakthrough is achieved in institutional constriction, and there is stable policy coordination.
- The complementarity of resources of the three countries is efficiently tapped, and international capital flows into the region in large amounts as a result of high profit expectation.
- The satisfactory state of infrastructure in the region guarantees the rapid development of its economy, and finance and trade become the leading industries of the region.

"Major triangle" state

1. Definition:

- Economic cooperation of the three neighboring countries with the "minor triangle" as the core is expanded to cover an area of 10,000 square kilometers. This "major triangle" region constitutes the state of the system. According to what has been previously stated, this state should be regarded as the final state of the system.

THE SYSTEM'S SURFACE OF CONSTRICTION

The surface of constriction refers to the surface of delineation finalized by the constrictions at the end of the evolution of a certain state of the system. Only when a breakthrough is made on the surface of constriction can the system move on to a higher state.

The constriction score of the state of the system, determined by experts, provides a basis for deciding the main components of the surface of constriction.

The First Surface of Constriction

It refers to the delineation of constrictions between the initial state and the "two-nation cooperation" state. Table 18.1 describes the constriction score of the system within the initial state. Since the delineation of constriction is the result of the finalization of constriction at the end of a state, the constriction indicators with higher scores in Table 18.2 can be regarded as the main component of the surface of constriction.

The data in Table 18.1 indicate that the constriction subindicators with the highest scores are sovereignty, law, infrastructure, and capital, in that order. Therefore, the first surface of constriction can be stated as follows:

Table 18.1 Constriction score (100) of the system under the initial state

Major indicator	Subindicator	Score
Institution	Sovereignty	32.57
	Law	16.23
	Policy	4.10
Essential factor	Resources	4.01
	Capital	15.21
	Human resources	3.15
	Technology	1.01
	Information	0.91
Structure	Infrastructure	15.31
	Leading industries	9.51

Table 18.2 The constriction scores of the system under the state of the "two-nation cooperation" (72.51)

Major indicator	Subindicator	Score
Institution	Sovereignty	20.37
	Law	15.34
	Policy	3.07
Essential factor	Resources	2.11
	Capital	10.54
	Human resources	1.26
	Technology	1.20
	Information	1.02
Structure	Infrastructure	12.26
	Leading industries	5.34

- Serious disagreement exists among the countries concerned over sovereignty, and such disagreement is difficult to overcome. For example, a country may think that international cooperation cannot have as a prerequisite the lease of land which concerns sovereignty.
- The laws of the countries concerned have marked differences, and efforts to coordinate and to seek common ground or even compromise all end in failure.
- The infrastructure of this area is in a poor condition that it hinders the development of the economy.
- The inflow of national and foreign capital is small because of low expectation.

The Second and the Third Surfaces of Constriction

The second and the third surfaces of constriction refer respectively to the delineation of constriction between the state of "two—nation cooperation" and that of "three—nation cooperation" and between the state of "three—nation cooperation" and that of the "minor triangle." Tables 18.2 and 18.3 describe the constriction scores of the system under the two states.

The order of constriction subindicators with high scores is still sovereignty, law, infrastructure, and capital. Although the reduction of the absolute value of the indicators mentioned above means the lessening of the degree of constriction, the relatively fixed position of the order shows the stability of their chief constriction position as also shown in Table 18.1. Therefore the two surfaces of constriction with the aforementioned constriction conditions as the main components can be stated as follows:

- The system which has broken through the previous surface of constriction is faced with, at the end of the new state, a new round of powerful restriction by sovereignty constriction. The innovation of the institution carried out by the system for the resolution of disagreement over sovereignty is facing a challenge in the new period of development.
- The constriction of law, which had been partially solved, reemerges in a new form at the end of this state and becomes the major constrictive factor.
- The infrastructure of the area urgently needs further improvement.
- There is very little inflow of national and foreign capital, and the shortage of capital is very serious.

The Fourth Surface of Constriction

The fourth surface of constriction refers to the delineation of constriction between the state of the "minor triangle" and the "major triangle." Table 18.4 describes the constriction scores of the system under this state.

The order of constriction conditions with fairly high scores is policy, leading industries, technology, and capital. This indicates the marked difference between the entrance of the system into this state and the previous state and shows the main components of the fourth surface of constriction which can be stated as follows:

- Policy constriction becomes the major restriction of the state.

Table 18.3 The constriction scores of the system under the state of the "three—
nation cooperation" (50.51)

Major indicator	Subindicator	Score
Institution	Sovereignty	16.18
	Law	8.21
	Policy	2.99
Essential factor	Resources	4.01
	Capital	6.98
	Human resources	1.02
	Technology	0.81
	Information	0.61
Structure	Infrastructure	7.59
	Leading industries	2.11

- The formation of the leading industries in the region and the role of promotion they play constitute the key factors in the success of regional economic cooperation.
- The increase of the proportion of technology in the economy of the region makes the demand for technology more urgent, and there is a relative shortage of technological resources.
- Capital is still one of the difficult problems troubling regional development.

Table 18.4 The constriction scores of the system under the state of the "minor
triangle" (21.78)

Major indicator	Subindicator	Score
Institution	Sovereignty	20.37
	Law	15.34
	Policy	3.07
Essential factor	Resources	2.11
	Capital	10.54
	Human resources	1.26
	Technology	1.20
	Information	1.02
Structure	Infrastructure	12.26
	Leading industries	5.34

ANALYSIS OF "WAYS" OF MAKING ADVANCEMENT THROUGH BREAKTHROUGHS IN CONSTRICTIONS

The analysis of "ways" is the core of this chapter. As previously stated, the key to the evolution of the system is to find a way with "low deal cost" of breaking through the restriction of the surface of constriction. The main components of the surface of constriction are given by the "scores of constriction." Thus, targeting the constriction indicator with high scores in every surface of constriction and adopting appropriate measures to achieve a breakthrough on each and every one of them become the chief contents of the analysis.

Breakthroughs in the First Surface of Constriction

1. *Sovereignty:*

Sovereignty constriction is the most important component in the first surface of constriction. With the growing internationalization of the economies of various countries, the development of large tracts of state land, paid transference of land use rights and other measures have been adopted to attract foreign investment and have been accepted by the overwhelming majority of countries. Meanwhile, there still exists the attitude of combining land ownership and land—use rights under sovereignty and not allowing non—national organizations to overstep this limit. This constitutes an insurmountable barrier for international cooperation in the form of paid transference of land use rights for large tracts of land in the Tumen River region. To overcome this barrier, countries concerned have put forward many plans. The plan put forward by the Democratic People's Republic of Korea is worth mentioning. The proposal holds that foreign capital be used to develop one or more of the ports in the northeastern part of Korea so that there will be an outlet and an inlet for goods from and to China's northeast area, Russia's Far East area, and Mongolia. In this way, arguments over sovereignty can be avoided. But this proposal has a fatal defect because it fails to take into consideration the fact that the large inflow of foreign capital is conditioned on the fact that institutional constriction in the region should at least be close to international practice; hence, the impracticability of the proposal. We hold that there is a simple and practical way to avoid arguments over sovereignty in developing large tracts of land and yet be in accordance with international economic practice—change "area" into "line" and to change "three—nation cooperation" into "two—nation cooperation," thereby promoting cooperation in communications and transportation between two neighboring countries. This will greatly reduce the deal cost at the initial cooperative period. To be more specific, China and Russia or Korea can jointly build railways and highways that will link with the railways and highways of their respective countries. The highly efficient operation of the communications and transportation system will be guaranteed through international agreement. At the same time, small ports will be built at Fangchuang along the Tumen River for the movement of small boats.

Figure 18.2 is a vivid summary of the aforementioned idea of "three points and two lines." We can take Hunchun, Fangchuang, and Posyet as three points and use transportation on the Tumen River and the jointly built railway and highway from Hunchun via Changlingzi to Posyet as two lines and start the Sino—Russian joint

Figure 18.2 Sketch graph of "three points and two lines"



development. We can also take Hunchun, Fangchuang, and Luojin as three points, use the transportation on the Tumen River, jointly use the railway and highway between Hunchun and Rajin as two lines, and start the Sino—Korean joint development. Such an approach changes arguments over sovereignty concerning "area" into economic consultation about "lines" and changes the complicated relations among "three countries" into a simple link between "two countries," thus providing an alternative way of breaking through sovereignty constriction. Actually, the recent progress in the development of the Tumen River region proves the feasibility of such an approach. In early July, China's Jilin province and Russia's Far East area signed six agreements, whose important elements include the joint building of a railway and a highway between Changlingzi and Posyet. It can be seen that such an approach has moved from a period of formulation to a period of implementation. Besides, this approach is also in accordance with usual practice of international joint development, as seen in the multinational development zones of Singapore—Johore, Malaysia—Riau Island, and the Indonesia Triangle, which began with two—nation joint development.

2. *Law:*

At the initial state of the system, the marked difference in law between the countries concerned hampers joint development. We propose that the way to break through law constriction is to sidestep the contradiction in "law" and to promote an "economic" connection, adopting the form of an international limited—liability company, which is common elsewhere in the world, to take charge of the management of joint development of the two countries. Specifically speaking, the investment of the two countries in building (such as a Changlingzi—Posyet railway) and renting installations in communications and transportation (such as China renting Russia's Posyet port) will be turned into shares and, on this basis, a share—holding company will be established with the two countries holding the major part of the shares. The company will exercise effective management over the two lines. As a first step toward international joint development, this approach sidesteps the incompatibility of stipulations in the laws of the countries concerned and at the same time conforms to international practice, thus making it easier for the inflow of foreign capital for joint development.

3. *Infrastructure and capital:*

As with the other two components of the first surface of constriction, infrastructure and capital are closely linked with the previous two components.

- The nature of the breakthroughs in of sovereignty and law constrictions is

institutional innovation in conformity with the incorporation of market mechanism. This innovation will undoubtedly enhance the attraction of the Tumen River region for foreign and national capital. Recently, a few Japanese financial groups have expressed the view that, as soon as an international agreement between China and either Russia or Korea on the building and management of installations of communications and transportation linking the two countries is put into effect, they would immediately start large—scale investment in the Tumen River region. Such an expression of intent verifies the aforementioned conclusion. It can be expected that along with the breakthrough in sovereignty and law constrictions, the capital constriction will be easily overcome.

- The realization of the breakthrough in sovereignty and law constrictions is embodied in large—scale construction of infrastructure. For example, the substance of the “two lines” is entirely in transportation installation. The investment intent of the Japanese financial groups also concentrates on infrastructure. This shows the chain reaction of the breakthroughs in sovereignty, law, and infrastructure constrictions.

Figure 18.3 describes the process of the evolution from the system’s initial state into the state of “two—nation cooperation.”

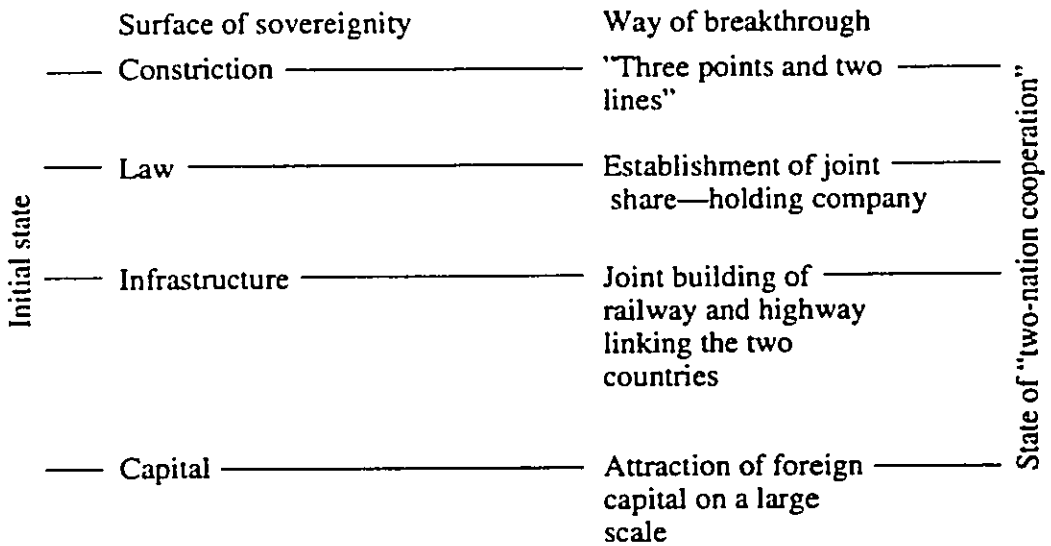
Breakthroughs in the Second Surface of Constriction

Experience in international development shows that in joint development which affects the interests of a number of countries, the “two—nation cooperation” model is easy to begin with but cannot last long. That is because such an approach has sidestepped the contradiction but has not resolved the contradiction. The expansion of joint development on the vertical (time) and horizontal (scope) levels will again bring out the inherent institutional defects. Meanwhile, those countries that did not participate in the cooperation at the initial stage of the development will be encouraged by the demonstrative reward of economic increase as a result of “two—nation cooperation,” and will develop an urge to participate and put their desire into action. To sum up, the need to raise the level of integration of the regional economy cannot be contained. All these factors will lead to a breakthrough in the surface of constriction of the state of “two—nation cooperation,” and the system will enter the state of “three—nation cooperation.” This process, of course, will not take place automatically. The effect of decisionmakers and implementors as the mainstay of institutional innovation is the key to the successful realization of the aforementioned process.

1. Sovereignty:

Sovereignty constriction remains the most important component of the second surface of constriction. We propose that the appropriate way of making a breakthrough is to insist on replacing “area” with “line” and the “three points and two lines” with “four points and three lines,” while pushing for joint development and joint management of installations of communications by Russia, China, and Korea. In this way, international cooperation will be more comprehensive and closer. In addition

Figure 18.3 Evolution from the initial state into the state of "two—nation cooperation"



to Tumen River transportation will be further developed (see Figure 18.2). In this way, since the "line" is still the focus, the difficulty in breaking through the sovereignty constriction is reduced. And the realization of "four points and three lines" will promote the joint development of three countries.

2. *Law:*

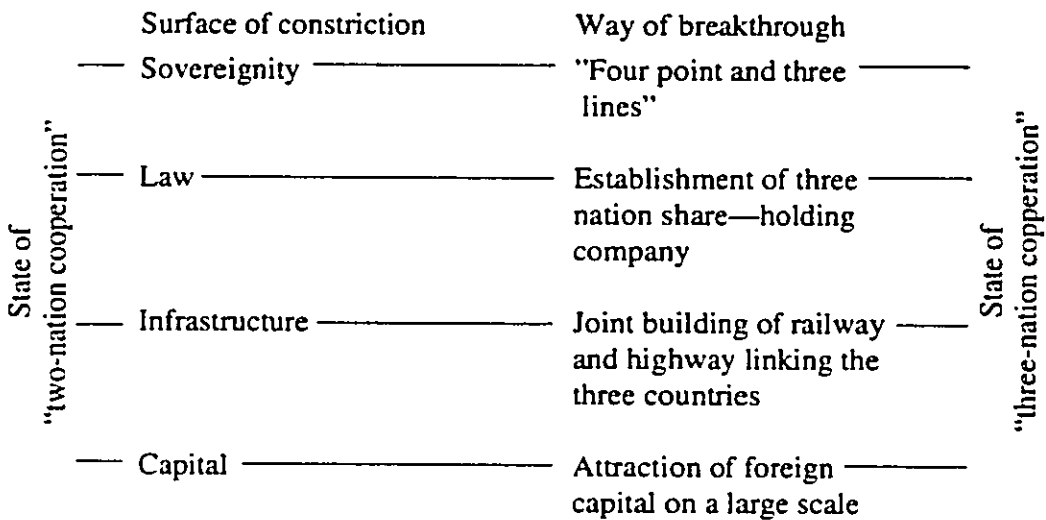
In this stage, the way to break through law constriction should still be the insistence on the use of an economic method in place of a contradiction in law. Specifically speaking, the investment of the three countries in building installations of communications and transportation should be turned into shares and, on this basis, a share—holding company established with the three countries holding the major part of the shares. The company will exercise the function of management over the "three lines." Such an approach will once again sidestep the incompatibility of the legal systems of the three countries and put the more closely—linked joint development of the three countries onto the operational path.

3. *Infrastructure and capital:*

As a result in the breakthrough in sovereignty and law constrictions of the second surface of constriction, the scope of international cooperation is expanded. This will certainly strengthen the confidence of national and foreign investors and raise their return expectation. Therefore, the inflow of national and foreign capital on a scale large enough to break through the capital constriction will become a natural trend. At the same time, since the idea of "four points and three lines" still places emphasis on infrastructure, infrastructure constriction will again break down following the breakthrough in sovereignty and law constrictions.

Figure 18.4 describes the process of the evolution of the system from the state of "two—nation cooperation" into the state of "three—nation cooperation."

Figure 18.4 Evolution from the state of "two—nation cooperation" into the state of "three—nation cooperation"



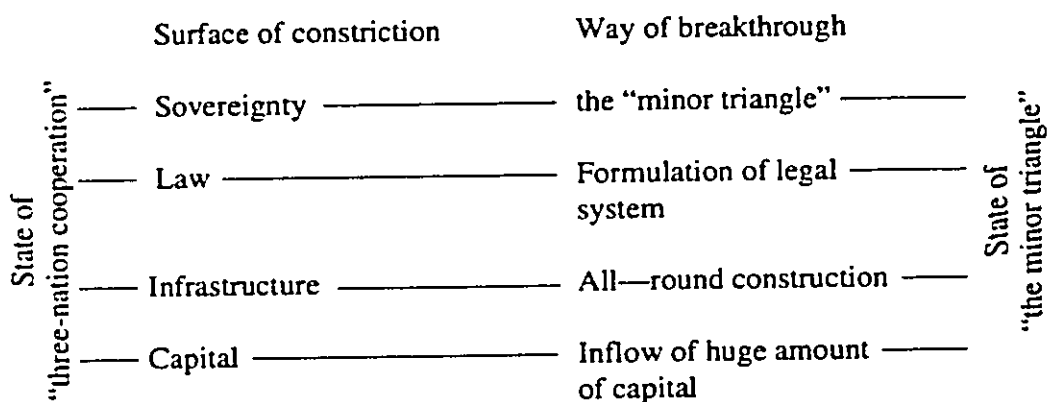
Breakthroughs in the Third Surface of Constriction

Strictly speaking, when the system is in the state of "three—nation cooperation," the genuine basis for international joint development is still absent because any international development that ignores the institutional foundation consisting of sovereignty, law, and other elements can only be transitional and transient. With the passage of time, demand for the establishment of permanent international development will arise and grow stronger and stronger, which will lead in the end to the formulation and realization of ways of breaking through the third surface of constriction.

1. *Sovereignty:*

As compared with the past, the thinking in this period concerning the breakthrough in sovereignty constriction will be entirely new; there will be no more sidestepping, but instead a frontal attack will be launched because the strategy of sidestepping cannot free the system of sovereignty constriction in this period. Besides, the narrow space of the "lines" can hardly hold the large scale of the economy of the Tumen River region of this time. We propose that the way to break through sovereignty constriction is to move from "line" to "area," doing away with the outmoded concept of combining land ownership and land use rights under sovereignty and promoting comprehensive institutional innovation inside the "minor triangle." To be more specific, China, Russia, and Korea will each turn the land use rights of 330 square kilometers of land in the "minor triangle" into shares and form a minor transnational economic cooperation zone which will be run by a transnational limited—liability company. The realization of this approach is possible because, by that time, the development of the three countries will engender a strong demand for

Figure 18.5 Evolution from the state of "three—nation cooperation" into the state of the "minor triangle"



high integration of economy in the Tumen River region. The large amount of capital needed for further development will not be forthcoming unless the degree of regional integration is further enhanced. Besides, after going through the periods of "two—nation cooperation" and "three—nation cooperation," these countries will have accumulated more knowledge and experience in international joint development.

2. *Law:*

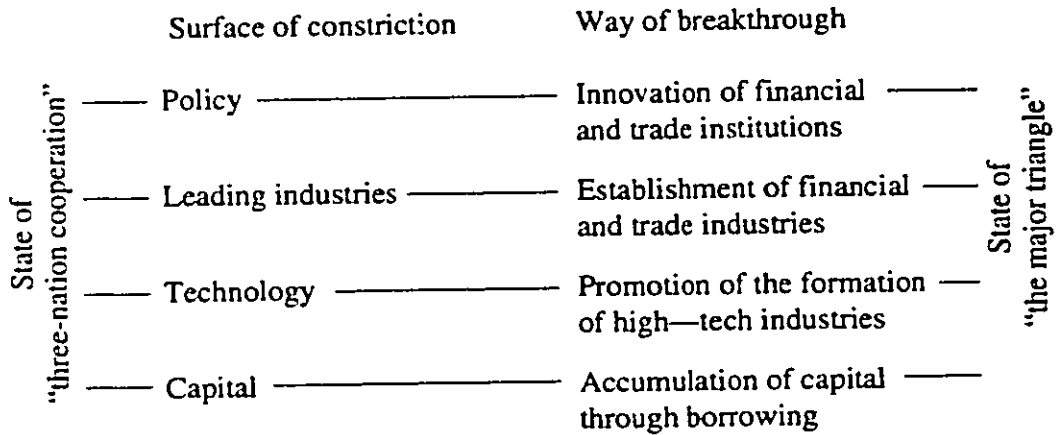
In this period, the way of achieving a breakthrough in law constriction will also be fundamentally different than how it was achieved in the past. The emphasis will be on the comprehensive formulation and implementation of a legal system in the region, because as numerous experiences show, economic cooperation can enjoy permanent vitality only when it is protected by law. To be more specific, "special law of the transnational economic cooperation zone" should be formulated as the basic law of the zone. A series of laws on finance, trade, and investment should also be formulated to guarantee that the operation of the economy in the zone is up to international standards. We project that the countries concerned, after years of international economic cooperation, will, by then, not only have the need but the experience to establish and perfect the aforementioned legal system.

3. *Infrastructure and capital:*

Since the leading industries in the minor triangular transnational economic zone will be finance and trade, the demand for capital will be very great. However, the breakthrough in sovereignty and law constrictions will bring about a great influx of national and foreign capital, thus breaking through the capital constriction. Similarly, the inflow of large amounts of capital will greatly improve the situation of infrastructure in the zone; hence, the disappearance of the infrastructure constriction.

Figure 18.5 describes the process of the evolution of the system from the state of "three—nation cooperation" into the state of the "minor triangle."

Figure 18.6 Evolution from the state of the "minor triangle" into the state of the "major triangle"



Breakthroughs in the Fourth Surface of Constriction

In terms of international joint development in the real sense, if the efforts for making breakthroughs in the previous three surfaces of constriction are considered as providing timely help, then the work in this period can be regarded as perfecting perfection. The constrictions that should be considered in this period are no longer fundamental but necessary for perfecting international cooperation. After making a breakthrough in the third surface of constriction, the system has already laid the institutional foundation for international joint development. Following new constriction indicators there appear new demands.

1. Policy:

Since sovereignty constriction of the system has been eliminated with the breakthrough in the third surface of constriction, the role of policy constriction in the present state moves up. Such a change is not difficult to understand because a policy system which is complete and has competitive power ensures sustained and healthy development of the zone. Once the policy constriction is broken through, the potentiality of regional economy, which already has an institutional basis, will be fully realized. The Tumen River region will display the outstanding characteristics of new types of growth points in the world economy. To make a breakthrough in policy constriction, we should first start on innovation of the financial institution. The key point of this innovation is the issuance of currency that can be freely converted. The issuance of some kind of "Tumen River currency" will link the regional economy closely with the international economy. A perfect trade policy is also an important institution in establishing the characteristic of the free port of the Tumen River region. Also, policies that will ensure the free movement of human resources and information within the region should also be formulated at this time.

2. *Leading industries:*

With the disappearance of the coercive constriction of the system's sovereignty and law, the role of economic connection will stand out. The most important part of this connection is an industrial—linked effect with the leading industries accompanied by regional development. So it is natural that the leading industries rise to become the important component of this surface of constriction. The rapid expansion of the scope of the leading industries is the key element of the "minor triangle" playing the core role, fostering the growth of the economy of the "major triangle." It is also the only path for the system to take from the state of the "minor triangle" into the state of the "major triangle." Since the leading industries of the Tumen River region in this period will be finance and trade, and the way of breaking through the constriction is the formulation of financial and trade policies, the identity of this goal and the complementary nature of the two factors make it possible to achieve a breakthrough in policy constriction and leading industries constriction simultaneously. Thus, overcoming the main obstacle for the system will allow the movement into the state of the "major triangle."

3. *Technology and capital:*

When the system is in the state of the "minor triangle," its economy is already shifting from labor—intensive to technology—intensive. On the arrival of the fourth surface of constriction, the development of high—tech industries becomes an urgent task. There is a serious shortage of technology and capital. As a result of the breakthrough in policy and leading industries constrictions, the Tumen River region will become an international center of finance and trade whose strong function of borrowing and circulating money makes it possible for it to provide enough capital and technology for the development of high—tech industries. The constrictions of technology and capital will thus be broken through.

Figure 18.6 describes the process of the evolution of the system from the state of the "minor triangle" into the state of the "major triangle."

By looking at Figures 18.3 to 18.6 in a connected way, we will be able to grasp clearly the theme and the sequence of ideas as shown by the title "The implementation of the development strategy of Tumen River region: constriction and progress," that is, the system, starting from the initial state, looks for ways again and again of breaking through constrictions, makes progress, and finally enters a high—level state. This also reflects our overall judgment and choice of measures of the developmental process of the Tumen River region: the most important thing is to get going, to move from easy tasks to more difficult ones, to make breakthrough on key points, and to advance consistently.