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## A critical review of regional economic integration in China

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**Abstract.** Under the circumstances of economic globalization, regional economic integration has become the mainstream of current economic development for each country, so China has to pay more attention to it. The critical review on regional economic integration in China can lay a certain foundation and provide experience for the in-depth research. Main contents of regional economic integration are refined according to the previous studies and realities, including the integration of regional economic resource, regional economic entities and regional economic running environment. Efficiencies and inefficiencies of regional economic integration are summarized and analyzed. The combined of two pillars of regional economic integration including market and government are efficiently, and some of the effective measures implemented are also summarized to enhance competitiveness, improve efficiency, and achieve greater economic cohesion. The brief empirical research of west-China practice and prospects is provided to prove above viewpoint..

**Keywords.** Regional economic integration, Process and contents, Efficiencies and inefficiency, Policy means.

**JEL.** O18, R10, R11.

### 1. Introduction

Nowadays, globalization is an undoubted tendency all around the world, which shows the increasing dependence among the countries (Galiakberov et al., 2014). It can be regarded as the certain process that integrates specific economic regions without creating any obstacles by providing free factors of production (e.g. capital, technology, labor and human resources etc.), which enables the targeted country to trade with others around the world (Fathipour et al., 2014). We can clearly know that, economic globalization is not just a terminology but a reality (Gao, 2006). Under the circumstance of economic globalization, regional economic integration has become the mainstream of current economic development, especially in China. Generally, regional economic integration denotes the process serving for several economic entities with similar economic behaviors and that still appears under the background of global economic dynamics (Atik, 2014). Nowadays, the “world map” has changed with several regional economic unions have been created (e.g. European Union, EU; North America Free Trade Area, NAFTA; Asia-Pacific Economic Community, APEC) (Leite-Monteiro et al., 2003). In the meanwhile, several countries have experienced the increasing demands for growth, leading them to be a mature union for both economic and political in the long-run term (Adom et al., 2010). Therefore, it is essential to make

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a critical research on the regional economic integration, and this paper will mainly focus on China.

From the theoretical point of view, the review on regional economic integration in China can enrich the confusing term of the regional economic integration, laying a certain theoretical foundation and providing experience for the in-depth research on regional economic integration. From the practical angle, under the circumstances of economic globalization, regional economic integration has become the mainstream of the current economic development, so it is necessary to pay more attention to this subject. The review on regional economic integration will enable us understand how to achieve regional development and enhance its competitiveness to develop China's regional economic cooperation and adapt to the world economy. In addition, the research on regional economic integration also has a large impact on the development of China's regional economic policy.

Brief concepts description has been provided in this paper firstly. Due to the different motivations, principles and angles, there exist many different definition with respect to "regional economic integration". Hence, in this paper, it is important for people to understand what is "integration" and what is "economic integration" before define the concept of "regional economic integration". To start with, we discuss the definition of "integrate". Specifically, "integration" first appeared on the geology, coming from the Greek word and later to expand, which has been widely used to the research of sociology and economy (Wang, 2008). The definition of integration is ambiguous, which has been understood as "unification" or "cooperation" by many scholars, while both of them failed to express the feature of interdependence and tendency clearly (Deng, 1999). Moreover, the definition of integration is different with that of mixture, convergence and cooperation, respectively. Specifically, mixture denotes melting as a whole; convergence indicates the process to reach and cross the certain targeted point while cooperation denotes the formal or informal extensive communication. Moreover, integration focuses on making a consensus during the process of interaction and possible developments and allows the existence differences for the entities under the certain consensus (Deng, 1999). Hence, we need to grasp these feature of integration when discuss the problem of regional economic integration.

Secondly, introduce "economic integration" from "integration". It has not had an uniform definition with respect to economic integration. Balassa pointed out that economic integration denotes different economic entities melting as a union by breaking the certain economic obstacles and removing the limitations on trading of goods and flows of production factors, which enables to converge the market of both goods and production factors as a whole. Moreover, economic integration describes the melting targeted economic regions can employ their own advantages, cooperate with others and enhance the development of regional economy (Wang, 2007). Generally speaking, the participants of economic integration are mainly geologic proximity countries or regions while economic integration has already enlarged its border to cross the regions by economic globalization, regional development and the application of modern information technology (Wang, 2011).

Finally, we define the concept of "regional economic integration". It mainly focus on the certain region. One of the most representative definitions was pointed out by Balassa, considering regional economic integration can be seen as a process or an condition. With respect to process, it includes the specific measures aiming to remove the discrimination among countries while condition denotes the disappear of the discrimination among countries. He thought that regional economic integration include the extensive form from the existence of trade relationship to the completely economic union. In conclusion, regional economic integration means the optimization of the entity elements and operation circumstance in

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regional economic system through the innovation of government management system, breaking the obstacles of administrative divisions, removing the local protection (Wang, 2007), to realize the maximum benefits of shared resources by reducing trading cost in the region (Wang, 2008), finally to facilitate the industrial division, economic growth and common development among the targeted regions/countries (Chen, 2006). Only if the regions can obtain more benefits, can they have the motivation to the economic integration (Guo et al., 2006). Regional economic integration is a self-organized process with multi-component and systematic coordinated change, which is a collaborative concept. Regional economic integration includes not only the economic integration in a large scale across countries (e.g. NAFTA, EU, APEC etc.), but also the economic integration across the districts inside the certain country, which mainly includes the provincial economic integration (e.g. Yangtze River Delta, Pearl River Delta, Jingjinji in China etc.), interurban economic integration (e.g. Changzhutan, Urban Agglomeration of Zhongyuan in China etc.) and the economic integration among the cities that have similar economic development and geologic proximity (e.g. Chengyu and Xining Lanzhou in China etc.) (Cheng et al., 2014).

Based on the existed research of regional economic integration from both home and abroad, the scope of research is extensive and various. However, most of them focus on the history of regional economic integration, the theory of regional economic integration (e.g. Customs union theory, Large market theory, Economic integration theory based on modern trade theory, Metropolitan theory etc.), the mode of regional economic integration (e.g. Special preferential tariff zone, Integration of individual commodities, Free trade zone, Customs Union, Common Market, Economic union, Monetary Union and Economic and political union etc.), the dynamic of regional economic integration (the dynamic for both internal and external) and the empirical analyze on the integration organization of NN, SS and SN, respectively, which lacks the systematic and completed analyzes in China, especially about the general process, main contents and the efficiencies and inefficiencies of regional economic integration. Hence, this paper aims to fill this gap, conducting the further research on the basis of the existed research results.

This paper mainly focus on China. It will reviews the general process and main contents of regional economic integration, which includes the integration of regional economic resources, regional economic entities and regional economic running environment, exploring the efficiencies and inefficiencies of regional economic integration in China according to the previous studies and realities. Then, two pillars in China`s regional economic integration: market and government are discussed, and some of the effective measures that have been and are being implemented are also summarized in order to enhance competitiveness, improve efficiency, and achieve greater economic cohesion of regional economic integration. Finally, the brief analysis of west-China practice and prospects is provided aim at increasing theoretical significance of this paper.

## 2. General process and contents of regional economic integration in China

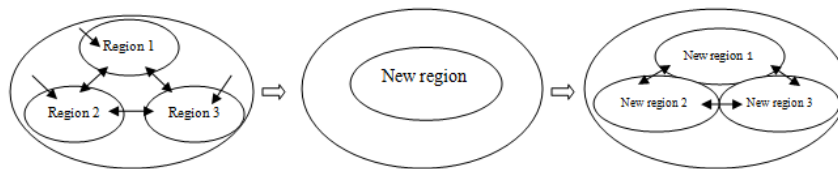
### 2.1 General process

In the context of economic globalization and the market economy, each region has carried the power of regional economic integration. Regional economic integration can improve productivity, competitiveness and efficiency (Fathipour et al., 2014) in order to get rid of the economic development dilemma of it own and gain an advantage in competition with other regions. In the joint efforts of internal and external power, there will be a trend and requirement of consolidation among

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regions. Regional economic integration mainly occurs among regions that have similar performances and common economic objectives (Atik, 2014). They seek the "intersection" of their own interests, to explore the correlation of various factors of regional economy. By coordinating the integration of economic resources, economic entities and economic running environment, it actively changes or adjusts the relationship among components, eliminating the factors hindering the economic and trade activities in order to form a unified and open market environment and then achieves regional economic integration and optimization. Functional integration of the initial stage is an outcome mainly pushed and guided by spontaneous market forces, reflecting the inherent requirements of economic development of the regions. With the deepening of regional economic integration, it needs to institutionalization and legalization the functional integration of the primary stage through the government guidance by signing the agreement, building specific integrated management organization and makes a clear institutional arrangements so that the results of functional integration have been consolidated and improved (Gao et al., 2009). Normalized regional economic integration is able to promote regional trade, and thus integration organizations want to pursue a broader economic integration (Development Institute (China Shenzhen) public policy research group, 2005), so the new region integrates and coordinates through a greater range and a higher level, ultimately toward the direction of the development of economic globalization (see Graph 1).

The general process of regional economic integration in China mainly have three features: First, synthesizes the dispersion parts to a entire region; Second, eliminates discrimination and differences among regions and achieves the free movement of goods and factors of production; Finally, emphasizes coordinating the macro-economic policy.



**GRAPH 1:** *The general process of regional economic integration in China*

**Source:** Chen, C.Y., & Liu, H.L. (2003).

### 2.2 Main contents

The main contents of the regional economic integration in China mainly include the integration of regional economic resources (science and technology resources, information resources and logistics resources), regional economic entities (industry, market and infrastructure) and regional economic running environment (system and mechanism) (Zhou, 2007). The integration of regional economic resources is able to excavate, consolidate, transfer and reorganize idle resources or resources that not achieve the optimal allocation by means of the market or the government in order to achieve a reasonable combination and make full use of resources, so as to maximize the overall efficiency. The integration and optimization of regional economic entities and regional economic running environment enables regional economic resources elements such as logistics, information, technology and other input and output flow more smoothly and orderly, so that make economic structure reasonable and achieve the ideal state of the regional economic integration.

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### *2.2.1 The integration of regional economic resources*

#### a. The integration of science and technology resources

It refers to a specific regional context, the spatial extent and time range, oriented by market mechanism, rational using and effectively allocating human, financial, material and other technology resources to enhance the degree of association among the various elements, so that achieves dynamic adjustment, complement and interaction in the process of market competition, so as to achieve the optimal allocation of the state, resulting in the overall dynamic effects of aggregation (Liu et al., 2007). The integration of science and technology resources is to promote science and technology resources in the region to achieve full sharing, through the promotion of marketization and industrialization of scientific research institutes and universities, to further integrate and develop research resources of universities and corporates. It also can gather sufficient resources by government research alliances, technology and capital alliance, capital and industry alliances, cross-regional alliances and other models, thus promoting positive cooperation among different resources subjects, in order to improve the efficiency of science and technology resources and promote regional economy changing from resource-dependent to innovation-driven. Technological resources management system, science and technology resources sharing mechanism, research institutes coordination mechanism and scientific research cooperation incentive mechanism are things that must be scrupulously designed and effectively solved in the integration of science and technology resources.

#### b. The integration of information resources

It refers to increase the degree of regional informatization and keep smooth information flow among the economic subjects by establishing a information resources shared network within the region, aiming at meeting the needs of information resources sharing. Modern economic development determines the position and role of information integration in regional economic integration is growing. Information integration requires the integration of communications facilities and the key is to break the information blockade and obstacles to smooth the flow of information. It can improve the information transfer mechanism, establishing regional information exchange network, developing comprehensive or specialized common information exchange platforms, constructing information network platforms that cover the whole integrated regions, establishing regional social information service system in line with the international norms, in order to achieve sharing and integration of regional information resources (Wang, 2007).

#### c. The integration of regional logistics resources

It is the effective breakthrough of the integration of regional resources and able to make the logistics information of operators flow smoothly and achieve sharing of enterprise information resources, so that logistics become a bridge linking among different business entities and effectively reduce internal transaction costs. The integration of regional logistics resources requires a comprehensive and systematic understanding of the value of created demand of the stakeholders in value chain, restructuring logistics operations and organizational structure according to the social division of labor concept. And make it to the electronic, integrated, networked and automated direction, forming a modern and efficient logistics system, aiming at reducing logistics costs and improving the degree of resource utilization, and then achieve collaboration and win-win situation in the value chain.

### *2.2.2 The integration of regional economic entities*

The first is the integration of industry. It has become a common sense among the integrated regions (Editorial, 2004). It refers to seek a long-term competitive advantage, taking enterprise as an object of the integration, re-allocating the

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production factors across space, geography, industry and ownership, adjusting and building a new capital organization, forming leading industries and corresponding industrial structure according to the law of industrial development (Zhou, 2007). In other words, the integration of industry is the flow of resources among industries and recombination tends to rationalize the industrial structure. If the direction of the integration of industry is to form a horizontal division of industry clusters and a vertical division of industry chain, so the contents of it is the market integration of industrial structure and industrial organizations. Industry integration should select a macro and overall perspective, seizing the opportunity of global industrial restructuring, giving full play to regional advantages and economic advantages according to each region's natural endowments, infrastructure and industrial base, accelerating the optimization and adjustment of regional industrial structure, strengthening the division of labor and complementarity among industries (Wang, 2007).

The second is the integration of market. Market is the software for regional economic integration and the degree of improvement of the market system is an important indicator of the level of regional economic modernization. Only a unified, efficient, orderly and mature factor market can able to realize the coordinated development and integration of regional economy (Chen et al., 2003). Regional market integration must nurtures and integrates capital markets, technology markets, labor markets and equity markets, pushing each market linkages through the use of modern information technology, forming consortiums of various markets, and thus promotes the formation of regional market integration on the basis of fully developed markets.

The third is the integration of infrastructure. Infrastructure is an important element of an entity within a regional economic development and also the hardware basis of regional economic integration. Raising, building and sharing transportation, information network and other infrastructure is to provide material support for mobility of factors of production in the region and socio-economic activities. Integration of infrastructure should take into account the status and needs of the entire region's economic development, planning, implementing and coordinating uniformly not only inter but also intra-regions. And also make full use of existing infrastructure in order to maximize the economic benefits (Wang, 2007).

### *2.2.3 The integration of regional economic running environment*

The integration of regional economic running environment in China mainly includes system integration. System integration means the integration of the specific operation of the market economy system, including not only the coordination of the formal rules (e.g. market economy management system, legal system and credit system), but also coordinated ideology of enterprises. We should establish and improve the system of rules that can promote the normalization of the market order, so that the economic benefits of redistribution in different groups tend to be reasonable. And it also needs to improve social security system, controlling loss social resources effectively. Moreover, the integration of regional economic running environment also includes mechanism design, namely establishing an effective regional coordination mechanism, establishing authoritative organizations that can implement unified, coordinated and effective competition rules, to ensure the effective conduct of regional economic integration.

## **3. Efficiencies and inefficiencies of regional economic integration in China**

### *3.1 Efficiencies*

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### *3.1.1 Generate agglomeration effects and economies of scale*

The agglomeration of regional economic integration is the highly aggregated of specific flow of human resource, goods, capital, technology and information in the certain region to play a role in the economies of scale and economies of scope. A high degree of aggregation is not only the driving force to strengthen regional aggregation, but also the effective protection to develop regional growth poles. With respect to the microscopic body, the agglomeration effect not only reduces the cost of production and transaction, but also obtains the certain economic factors such as talents, goods, capital, information, and technology easily, which enables the enterprise to create more output with minimal investment by achieving agglomeration benefits and associated benefits as well (Wang, 2008). Moreover, economies of scale mainly associate with cost inseparability, the profession and expansion of scale factor, Large-scale resources, improvement in production technology and Learning effect (Zhao et al., 2012). Regional economic integration enables to build an integrated market while the expansion of the free market can decrease the cost to enable the enterprise to acquire economies of scale. When the economic strength of each sub-region has reached the certain level, regional integration could behave more intense effect of economics to scale, which increase the requirements for the regional economic integration in depth. Proceed the economies of scale through agglomeration effect can be achieved by three path.

#### a. Allocation effect

After completing the regional economic integration, the original border effect has been removed, the transaction effect among sub-regions can be reduced significantly. Prompt the original enterprises tend to agglomerate to the certain region, which has large market, potential purchasing power, economic factors and good basis of economic development. The certain allocation effect also prompts the redistribution of industrial layout and increases the economies of scale of industry (Viner, 1950).

#### b. Accumulation effect

After the regional economic integration, more investment are absorbed into the accumulated region and spread into each sub-region of the integrated region, which triggers the accumulation effect. As the different economic development level for the sub-regions while the certain accumulation effect tends to be different for each sub-region, which has been testified in Northern American and Europe (Barrios, 2003).

#### c. Location effect

Under the assumption of imperfect competition and economies of scale, based on the consideration of productive cost and transaction cost, the enterprise tends to choose the region, which has low price for production factor and large market. Moreover, economies of scale requires the agglomeration when considers the enterprise location. After the regional economic integration, the intra-regional economic activity will agglomerate into one or a few areas, producing large agglomeration effect.

### *3.1.2 Promote economic growth and improve competitiveness*

Regional economic integration can be a significant driving force for economic growth in China. It can promote free trade within the region, allocate resources effectively, increase the investment to promote economic growth and improve competitiveness.

#### a. The aspect of trade

Regional economic integration can reduce obstacles of inter-regional trade, which create favorable conditions for the expansion and deepening of market capacity. The free trade inside the region enables to eliminate the bad product and encourage to expand its reproduction, which promotes the production division and

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specialization among the sub-regions. Specifically, each sub-region enables to apply their comparative advantages by producing the high-profitable products with the limited production resources to improve the overall competitiveness of the region. As the regional trade has been promoted by regional integration, each economic organization pursues a wider range of regional integration to promote the regional economic growth. On the contrary, the growth of regional economy improves the openness among regions. Both reinforce each other.

### b. The aspect of resource allocation

Resource allocation directly affects the quality of the region's economic growth. Resource allocation enables to affect the quality of economic growth by affecting the selection of economic growth mode as well as the quantity and structure of resource allocation. Regional economic integration can allocate the resource within the region with rationality, improve the use value of resources, develop regional operating efficiency, affect the mode of economic growth and improve the competitiveness of regional economy.

### c. The aspect of investment

Regional economic integration enables to reduce the cost of trade goods, guide both supply and demand to turn to trade goods. Moreover, both the relative demand of capital and its yield can be increased because of the enlarge of market as well as the continuous decrease of risk and uncertainty. The increase of yield can increase the quantity of available capital and investment, which builds the cornerstone of regional economic growth.

### 3.1.3 Risk sharing of economic shocks

Regional economic integration is the certain process of regional economic interdependence and close integration procedure, which makes the regional economy to be integrated and enhance the risk-sharing capability of the integrated region. As we all know, high-level regional integration can diversify the risk and increase the capital mobility significantly (Kumar et al., 2014). It enables to remove the "Border Effect", reducing the uncertainty for both large region and its corresponding sub-regions, enhancing the risk carrying capacity of the integrated region. Moreover, regional economic integration has the significant positive effect on the business cycle of each sub-region, which can diversify the risk of economic crisis (Barrios et al., 2003). While the crisis diversification can only be effective when the targeted regions are relative independent and the central government can apply the insurance instruments to against these shocks excellently (Leite-Monteiro, 2003).

Moreover, regional economic integration can reduce local protectionism, promoting the integration of intra-regional regimes and the process of economic globalization, which provides extensive influence on the regional economy.

## 3.2 Inefficiencies

### 3.2.1 Collision with the administrative regime

As it is the local interest for the preference of different regions, its policy behaves the presenting the introverted nature. The introverted policy resource denotes inside a certain administrative the strengthening internal policy resources as the center of the administrative power and the external characteristics. Administrative monopolies tend to make policy resources beyond market resources, which become a strong resource-led local economic development. In order to compete for the advantageous resources, different administrative divisions tend to boycott mutually. Hence, it is difficult for each region to communicate with each other without the completed regulation, denoting the difficulty to play the overall effect of regional integration.

### 3.2.2 The convergence of industrial structure



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Nowadays, it is prominent for the similarity of industrial structure during regional economic integration, leading the competitive relationship instead of the coordinated, lacking the reasonable division for both vertical and horizontal, suppressing the application of overall linkage effects, which brings about the waste of resource distribution to a certain extent. The convergence of industrial structure not only suppresses the reflection of regional advantages, but also strengthens the industry marginalization. This convergence leads to the waste of resource, limits the economies of scale of the enterprise, undermines the inter-regional economic cooperation, which goes against to the relationship of division and cooperation among regions.

### 3.2.3 Widening the wealth gap

There exists the imbalance of acquiring the economic profits during regional economic integration as the wealth gap among targeted sub-regions, which restricts the sustainable economic development to a certain extent (Wu et al., 2014). If the certain organization includes both developing and developed countries, the developed countries will possess the leading position through their advantages on capital, technology and market and so on, which enable to gain more benefits from the regional economic integration than that of developing countries. Moreover, before the regional integration, the developing country can acquire the required products outside the specific organization with a lower price while after the regional integration, the developing countries have to purchase the products from the developed partner with a higher price, cause the deterioration of the trade terms. Besides, the economic integration means the reduction or elimination of tariff barriers, denoting the original tariff revenue has been transferred from the developing countries to developed countries, causing the developing countries has to pay the bill for the negative transfer payments. Hence, the wealth gap between developing and developed countries will be enlarged with the deterioration of circumstance for both investment and trade.

In addition, there are still some inefficiencies on economic integration: regional economic integration will lead to the transfer of industries, denoting the certain industries with high energy consumption and high pollution transferring to the poor regions, which cause the negative influence on the ecological environment. By the way, it mainly refers to relatively homogeneous partners and relatively rich partners. Because of low cost, low limit and high yield (Castro et al., 2014), there exists less regional economic integration in the true sense between rich partners and poor partners.

## 4. The proposed measures to deepen regional economic integration in China

### 4.1. Two pillars

#### 4.1.1. Market

Inter-regional business and market formed by spontaneous economic ties are the foundation (Li, 2004) and the fundamental driving force of regional economic integration in China. The market mechanism impacts elements mainly through competition, the price mechanism and the supply and demand relationship. It has unique role in rational allocation, efficient utilization, economic and technical contact and other aspects. In addition, the capital operation, property transactions and a combination of a variety of forms among enterprises are the dominant force of regional economic integration and the integration can complete spontaneously rely on the market. Therefore, no market for the foundation, any government in terms of ideas and measures are meaningless talk.

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However, when the market failure, such as it does not provide public goods or it bring repeated construction due to disorderly competition, government is able to intervene and regulate the regional economic mainly through macroeconomic policy and economic leverage, to make up for market mechanisms to promote the rationalization of the regional economic structure.

### *4.1.2 Government*

For China, regional economic integration should be combined with the operations of government intervention and coordination, relying entirely on spontaneous business and market contact cannot effectively achieve the objective of economic integration. This is not only due to the inherent profit-driven feature of business and market, any individual corporate behavior and market behavior are impossible to concern about whether the entire regional economic can achieve coordination and best allocation of resources, but also because it is inevitable for many individuals to be limited and distorted due to obeying the overall objectives of regional development in the regional integration process. Therefore, in order to achieve a harmonious regional integration, a healthy market unification and a fair competition among enterprises, it needs the active support and intervention of government level (Li et al., 2008).

Regional economic integration in the power of government is to create an institutional environment, mainly including rules and contracts of regional economic cooperation, which are impossible to realize only through the market forces. Therefore, what government need to do is to push it to the high-class functionality and space on the basis of the close ties between the business behavior and the market behavior.

### *4.1.3 Interaction of market and government*

Market forces and government forces in different regions are playing different roles and these two forces are not mutually exclusive, moreover, they have to work in an area. Market is the bottom-pulling power of regional economic integration and government is the top-down driving force of it. Indeed, regional economic integration is the joint action of the two mechanisms that both have advantages and disadvantages. It should interact and complement each other so as to achieve the goal of regional economic integration development.

Therefore, the government and the market are two hands to achieve regional economic integration in China. Government is more to complete the conversion of its own functions, establishing an open and fair market environment, increasing transportation, communication and other infrastructure, accelerating regional cooperation, providing a full range of services, acting as the role of a good night watchman (Li et al., 2008).

## *4.2 Effective measures*

### *4.2.1 Integrated mechanism*

#### a. The operating mechanism

Design and innovation on regional economic integration system and operational mechanism should change the spontaneous economic ties of regional business and market into a higher level of consciousness of the economy. In order to achieve the goal of true economic integration, the region should formulate some necessary policies and measures, to provide institutional norms and organizational guarantee for regional economic integration. Such a system should be a multi-level built, including multiple levels of government, industry, business and so on, which plays a role in achieving balance and security.

#### b. The interest coordination mechanism

The economic integration needs the integration of the interest, therefore, regional economic integration should put the distribution of interest as the main core issue to consider. The essence of building communities of interest is to

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determine the system design of the region of the various stakeholders to share the benefits. Ways to build interest coordination mechanisms are diverse, which can be unified in a specific area of financial or can be scaled according to the regional tax sharing, which should be designed according to the different interest targets. Different regions should proceed to eliminate discrimination of different economic entities and promote the fairness of interest among the various economic subjects. In short, we must implement integration from the concept to the real interest, however benefit-sharing must have a reliable system design.

### *4.2.2 Integrated planning*

The so-called regional economic integration, in itself it means to the development of the entire region of the overall planning and coordination. From the overall regional development, considering the regional division of labor, regional distribution, regional industry, regional development and all the resources within the region through more effective planning and coordination of configuration and full utilization, minimizes the transaction costs in the region and achieves the maximum benefit of the public resources (Li et al., 2013). The unity of regional planning requires to break the regional division led by the existing administrative divisions, which needs the overall planning and overall arrangement of the function of economic zone beyond the boundaries of administrative divisions.

### *4.2.3 Integrated institutions*

Regional economic integration of different regions have their own development purposes. Different areas are often due to different administrative bodies to produce conflicts of interest or conflicts of fragmentation phenomenon; therefore, establishing a platform for coordinating bodies is necessary. Establishing different levels of management organizations and public platforms coordinating bodies can coordinate different administrative bodies within the region, minimizing barriers of inter-regional constraints and reducing transaction costs, reducing the disorderly competition, promoting regional economic integration (Zhang, 2009). Coordinating institutions should follow the principle of mutual benefit, balancing the interest among the parties, achieving fair competition and win-win cooperation. In addition, the coordinating institutions should not just stay in the non-institutionalized stage but should establish institutionalized economic integration and coordination mechanism, to assume the coordination of regional economic integration and promote the deepening of its functions.

### *4.2.4 Integrated market*

At the market level, with the power of the market to promote regional economic integration on the basis of a unified competition rules. The higher the maturity of the market economy, the stronger the correlation of economic ties among regions. Free capital flows and the market mechanism are the basis for regional economic integration and the segmentation of the market is not conducive to the further deepening of regional economic integration. Therefore, it should eliminates obstacles factors of production flows through the integration of internal market, breaking administrative barriers within the region and self-protection, sharing the common market, to realize the organic integration of the regional economy. We should promote the use of modern information technology, networking the various elements of the market, forming the union of various markets, fostering the integration of consumer markets, capital markets, technology markets, labor markets and equity markets and promoting the formation of a unified regional market on the basis of the full development of the local markets.

### *4.2.5 Integrated infrastructure*

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The improvement of the supporting infrastructure, namely the construction of networked and open infrastructure system is the premise guarantee to promote regional economic integration deepening. It is beneficial for the market and business in the region to achieve resources sharing and complementary advantages, thus improving efficiency of resources allocation, and also can helps to enhance the overall attractiveness of the area to attract more talent and resources. Regional transportation system and regional information network are two main aspects of infrastructure construction. Construction of regional transportation system needs to be strengthened to connect infrastructure of all regions, forming a well-developed transportation network in order to achieve fast and low-cost flow of elements. Construction of regional information networks needs to establish a integrated information network platform covering the entire region that includes a regional center region as the leader and other areas in the region as the center, improving information delivery mechanism, establishing the appropriate information service system, to achieve information sharing and information flow unimpeded.

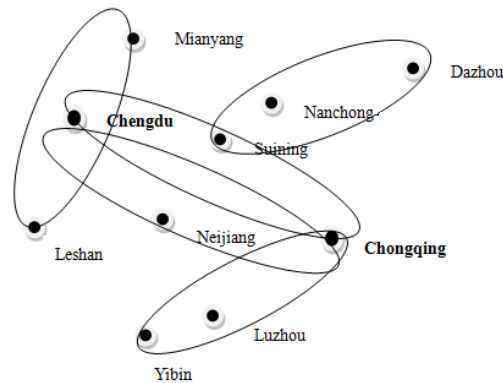
### 5. West-China practice and prospects

Regional economic integration has become an important method for regional cooperation and development among China. Following the Yangtze River Delta Economic Zone, the Pearl River Delta Economic Zone and the Bohai Economic Zone, the Chengdu-Chongqing Economic Zone, the Pan-Pearl River Delta, the Guangxi Beibu Gulf Economic Zone and other emerging economic zones continue to grow, leading to the deepening of regional economic integration. We know that, the Yangtze River Delta Economic Zone, the Pearl River Delta Economic Zone and the Bohai Economic Zone are three major economic growth poles in China, but all of them are settled in southeast coast of China. However, in the western inland areas of China, Chengdu and Chongqing have great opportunities for economic integration and development based on resource endowments, geographical location, industry, transportation systems, policies and history and culture. For this reason, many scholars call the Chengdu-Chongqing Economic Zone“the fourth economic pole of China”. Currently, the Chengdu-Chongqing Economic Zone is not mature enough than the Yangtze River Delta, the Pearl River Delta and the Bohai Economic Zone, but from the point of national strategic layout, the strategic position of it cannot be replaced (Lin et al., 2006).

#### *5.1 The development status of Chengdu-Chongqing economic integration*

Chengdu-Chongqing economic zone is located in the upper reaches of the Yangtze River basin, and it is the most densely populated area and the most developed area in agriculture and industry in western China. As an important economic, trade and technology center, the region has the necessity and possibility for economic integration. In 2005, Chengdu-Chongqing economic zone was formally included in China's "Eleventh Five-Year Plan" and a series of policies and measures were implemented gradually and continuously in order to promote the deepening of economic integration. In 2011, “Chengdu-Chongqing Economic Zone regional planning” was formally launched. It aimed to coordinate regional development space layout according to environment carrying capacity and development foundation, relying on the center cities, the Yangtze golden waterway and the main land transport route, to form a "dual-core and five-belt" spatial pattern, to promote the coordinated development of regional economy. (see Graph 2).

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**GRAPH 2:** *Dual-core and five-bands*

Dual-core includes Chengdu and Chongqing; Five-belt includes Cheng-Sui-Yu, Cheng-Nei-Yu, Cheng-Mian-Le, Sui-Nan-Da and economic belt along the Yangtze River.

### *5.1.1 The strengths of Chengdu-Chongqing economic integration*

Overall, the economic integration of Chengdu-Chongqing economic zone have combined benefits of economic factors, the late-mover advantage of economic growth, the economic advantages of cluster size and the mingled geopolitical advantage (Luo et al., 2005). Moreover, a special advantage of economic integration in Chengdu-Chongqing economic zone is that it has two big cities, and the spatial distance between them is only 300 km. This rare "dual-core" structure can act as a "dual-core" leading role between two cities. Chengdu and Chongqing have highly complementary in economy. Chengdu has obvious advantages in technology, finance, commerce, culture and education, which play a crucial role in radiating and leading the small cities in Chengdu plain.

However, Chongqing has advantages in industry, especially in manufacturing sector. And it is the transportation hub and trading port of southwest China that can connect with the Wuhan urban agglomeration in east and close to Nan-Gui-Kun in south, which can become a hub among southwest, central and southern China. This "dual-core" once evolves into "growth axis" that can drive the economic development of cities on the axis. The economic integration of Chengdu-Chongqing economic zone is better able to give full play to the advantages that include better material basis of economic conditions, relatively developed factor market and relatively liberal policy environment, effectively gathering resources, technology, talent and projects to form a high level of regional economies.

### *5.1.2 The dilemmas of Chengdu-Chongqing economic integration*

#### a. The inconsistent of administrative divisions and economic divisions

Chengdu-Chongqing area existed as a relatively complete geographic area for a long time, but still has yet to grow further as an economic region. Chengdu-Chongqing Economic Zone belongs to both Sichuan province and Chongqing municipality, so the development of it was also subject to a series of constraints result from unconformable administrative divisions and economic divisions. The existence of local interests makes Chengdu-Chongqing area cannot jump out of the development model that take administrative economy as the main part.

#### b. Low level redundant construction and industrial structure isomorphic

The similar industry planning and resource endowments in Chengdu-chongqing area can cause a certain degree of low-level redundant construction and industrial isomorphic. In addition, due to the fragmentation and different administrative regions affect local governments to maximize their own interests, the industrial development within the region are often self-contained and lack of reasonable and effective division of labor, resulting in low-level redundant construction and

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industrial isomorphic, making efficient regional economic integration more and more difficult (Luo et al., 2005).

c. Low level of overall economic development and weak economic self-organization capacity

Due to various reasons of economy, politics, history and the formation mechanism, compared with the Yangtze River Delta, Pearl River Delta economic zone, economic advantages and characteristics of the industrial system are not yet clear. The scales of industry chain and industry cluster are shorter, and the industries with a strong competitive are less. In addition, the number of cities and towns along the Chengdu-Chongqing traffic axis are numerous but the scale is small and the level is similar, so it is difficult to form an intermediary role between Chengdu and Chongqing. Due to the level of traffic axis between two regions is not high and the scale of the points on the axis are small, the economic self-organization capacity between Chengdu and Chongqing is weak (Dai, 2004).

### *5.2 The prospects of Chengdu-Chongqing economic integration*

In order to promote regional economic integration deepening in Chengdu-Chongqing area, it must focus on the coordination of economic self-organization and governmental organization, integrating and complementing in the economic and socio-cultural activities, to form appropriate factor market, industry structure, infrastructure and others related to economic integration. "One center, one base, three areas" is the future direction of the Chengdu-Chongqing Economic Zone, and also the main goal of regional economic integration. "One center" means an important economic center in the western region. Strengthen Chengdu, Chongqing and other regional central cities, giving play to support capabilities for economy by infrastructure, enhancing the contribution to economic growth by technological innovation, enhancing gathering functions and leading role of the elements, raising the level of opening, to become a important growth pole in China (Jin et al., 2011). "One base" means modern industrial base. It refers to undertaking industrial transfer from home and abroad, upgrading industrial structure, enhancing industrial competitiveness and forming a high level of industrial chain and industrial cluster in west China. Moreover, "Three areas" means the area to construct inland open, the area to balance urban and rural development and the area for ecological security protection.

## 6. Conclusions

The paper mainly discusses the general process of regional economic integration firstly, which seeks their own interest in common and excavates regional economic relevance of various elements, eliminating regional differences and achieving the free movement of factors gradually to achieve regional economic integration and optimization. And then new regions through the integration need a wider, higher level coordination, ultimately towards the direction of the development of economic globalization. Main contents of regional economic integration are refined according to the previous studies and realities, including the integration of regional economic resources (science and technology resources, information resources and logistics resources), regional economic entities (industry, market and infrastructure) and regional economic running environment (system and mechanism).

Efficiencies and inefficiencies of regional economic integration are analyzed. Efficiencies are summarized as follows: generating agglomeration effects and economies of scale; promoting economic growth and improving competitiveness; risk sharing of economic shocks. Inefficiencies are summarized as follows: collision with the administrative regime; the convergence of industrial structure;

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widening the wealth gap. The combined of two pillars of regional economic integration including market and government are efficiently. The brief analysis of west-China practice and prospects can effectively prove above viewpoint.

But there still exists some disadvantages in this paper, for example the theoretical analysis is not deep enough and the empirical research is unsubstantial, so it should be constantly replenished and strengthened in further studies.

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