

Review of the Cross-strait Information Industry Cooperation Research

Abstract. This paper reviews the results of the Cross-strait information industry cooperation research recently, and gives commands on some of the major achievements, with advice on the advantages and disadvantages of both sides. This paper gives purpose to attract more valuable comments for promoting the level of research on the Cross-strait information cooperation research, and offers advice to strengthen the cooperation.

Streszczenie. Przedstawiono możliwości przemysłu wykorzystującego techniki informacyjne typu cross-strait. Przedstawiono możliwości zastosowania tych technik w kooperacji przemysłowej. (**Przegląd możliwości przemysłu wykorzystującego techniki informacyjne**)

Keywords: Cross-strait Information Industry Cooperation research review.

Słowa kluczowe: techniki informacyjne, cross-strait.

Introduction

Information industry is the collectively of infrastructure and industry sector which meet the goal of social information consumption, promote and support the services, production, transmission, distribution and provision of information content or information. Generally, Information industry can be divided into three categories: the information content industry, the information content of support industries, and the information services industry. As a focus supporting new industry in China, information industry plays an increasingly important role in China Modernization. In the early 90s of last century, the Cross-strait information industry cooperation started. With the coming era of big exchanges and cooperation, there will be a new climax on the information industry cooperation, whose practice inevitable requires a profound theory and research. So, this paper reviews the results of the Cross-strait information industry cooperation research recently, and gives commands on some of the major achievements.

Overall of the research on Cross-strait information industry cooperation

Research Scale

In the mainland, there are not many professional organizations and articles on Cross-strait information industry cooperation. The author looks up Chinese Academic Journal Database, Chinese major newspaper database, Repository Database and other databases, found that only less than 30 records related. But in Taiwan, merely the website of "MIC" has more than 100 records of commands and reports after year 2000.

Research Level

In the mainland, the results are mostly presented by journal articles and dissertations, and the contents mostly divide to three parts: problems, causes analyze, and suggestions. In Taiwan, there are more way to present the results, such as academic papers, research reports, data modeling and data analysis. Especially, many of the research reports are informative, data integrity, precise and appropriate analysis, whose conclusions are reliable and highly specific and operational.

Research Methods

In the mainland, the research methods on Cross-strait information industry cooperation are ordinary, with literature and comparative methods take the most part. In Taiwan, there are variety of methods, and focus on field survey and data analysis. For example, Li Xiuling, a Taiwan scholar, writes the book < *The division analysis and strategy advice of cross-strait information industry on global strategy* > (

MIC(Market Intelligence Center), 2002, 11, 30), in which uses field survey method, including visiting and surveying Taiwan enterprises' headquarters in Taiwan and their mainland factories, and participating the shows and seminars. It also uses some other methods to research, such as literature survey, by collecting data and information on related newspapers, websites of industry and business on both mainland and Taiwan, also research reports published by professional consulting firm such as IDC, Dataquest; and the method of Statistical analysis, by counting and analyzing Large amounts of data; and methods of comparative and SWOT analysis, with lots of charts in it.

The situation of the research on Cross-strait cooperation in various fields of information industry.

The theory on the information industry cooperation

Hu Hanhui, Xing Hua point, in there article < *Theory of Industry Merge and Implication on Development of Information Industry of China* > (China Industrial Economics, 2003, 2), that because of the features as Penetration, promotion, doubling, Network and systematic of IT, the development of information industrial integration takes an accelerating trend. Viewing on the point of industrial integration theory, first, it is necessary to vigorously develop the high-tech, and promote the integration of information technology; second, the industrial integration provides opportunity for the development of information services industry; last, it ought to develop new manners to manage information industry, whose content change from the strict market permit to functions such as maintaining the order of market and protection of fair competition. Li Wanchu, on his dissertation < *Study on the Rule and Pattern of Information Industry Development* > (Wuhan university, 2005), said that, on the path of information industry development, our country should combine the advantage of innovation oriented and comparative oriented, consist on combining learning-across model and knowledge strategies, and interact between the upper and lower; in the industrial structure, we must hold the Information Equipment Manufacture Industry as the core, assisting with content production and services and information infrastructure building, to highly promote information industry; on industrial organization, we should insist on a strategy of combining promoting competition and upgrading the industrial concentration; on industrial layout, we should insist on the two driving force that combining international industry transfer and the mobilization of private investment and Cultivating industrial development, meanwhile outstanding industry cluster and

insisting specialization on industry regional development and market innovation; in the technology innovation strategy choice, we should insist on technological and market drivers drive combination, do across strategy, Intellectual property rights and standards strategy and soft with hard strategy; in industry trade competition, to take an open absorption strategy and walk out strategy.

On complementary advantages between Cross-strait

< *Prospects analysis on cross-strait information industry cooperation* > (Technology and Industry Across the Straits, 2005, 1) said that there are different advantages and disadvantages between Taiwan and mainland. After years' growth, China's information industry has a better development foundation, a broad market and a huge development potential. In Taiwan, after three times of economic restructuring, its information industry has a reasonable industrial structure, be good at business and management, has a rich experience on participating international competition and a flexible financing access, develop quickly for technology, equipment, market even funds supporting by developed countries such as USA and Japan. In the paper < *Study on Fujian and Taiwan information high technology industry cooperation* > (TAIWAN RESEARCH QUARTERLY, 2000, 3), Lin Shiyuan said that, in the development of the information industry, Taiwan takes a development research and application research-basic research mode, while China takes a basic to application to development research model. Fujian has an advantage in basic research, while Taiwan in product R&D. In < *Development and cooperation opportunity of Fujian and Taiwan information industry* > (Technology and Industry Across the Straits, 1999, 1), Huang Songen pointed out that in the world, the information industry roughly divides into three types, that are development leading, investment leading and production leading. Then Taiwan's is investment leading, and the mainland's is production leading.

On Existing problems

Lan Qingxin, in his article < *Study on win-win strategy and Docking mechanism of cross-strait information industry depth cooperation* > (Technology and Industry Across the Straits, 2007, 3), pointed out that, the excessive reliance on preferential policy limits the promotion of industry cooperation by Taiwanese capital; the lack of economic and trade cooperation mechanism hinders improving industry cooperation level; Taiwan-owned enterprise still lack of deep cooperation with Chinese enterprise, though there is a large scale on cross-strait's high and new technology industrial cooperation, the depth is not enough. In January 2002, Mi Hong considered in the article < *The information industry's cooperative mode between Taiwan and Fujian at the 21st century's beginning* > which published on < Pacific Economic Review > that, the problem of Fujian information industry are obvious lack of technical talents; low investment in technology development. Others, the combination of science and technology economy and cooperation among industries, universities and research institutes is defective tightness; the industrial supporting is not perfect; the industry chain is not completely; and the external environment of enterprise development needs further improvement. Otherwise, about Taiwan, Zhang Jianmei also pointed out, in his article < *An analysis of electronic and informational industry's development and cooperation between Jiangsu and Taiwan* > (ASIA-PACIFIC ECONOMIC REVIEW, 2004, 2), that the information industry development had the following questions: lack of complete and Independent industrial

technology system; having defects in industrial structure; high-tech industry are mostly small and medium size; the layout is mainly hardware production but weak in software independent R&D and semiconductor design; technology talents, especially high level research and development ones are in short supply; lack of infrastructure and so on. In a word, because of interference caused by forms of ownership, ideological differences and Political factors, the information industry cooperation has serious obstacles in mutual trust and gap of management concept and company culture, and for a long time stays in a low level that getting benefits from each other, so hard to form deep integration cooperation.

The influence of mainland's industry competitiveness on Taiwan information industry

Gao Hongxiang, a Taiwan scholar, made a detailed study on mainland's industry competitiveness and said in his report < *Analysis on China's information industry competitive* > (MIC, 2003, 12, 31) that, on the guidance of mainland market change technology policy, and also on conditions of restrictive measures such as matching foreign currency control, buy-in proportions required and sale in domestic market quota and preference such as enterprise income tax relief, the international leaders continued expansion the bases in the mainland for the huge demand of China market. After years developing, mainland information industry has been formed three big areas as North China that product mobile, East China that product laptop, LED display and semiconductor, and South China that product computers and consumer electronics. The mainland also has become the world's third largest information equipment producer. According to this, the author suggests the Taiwan authorities and Taiwan industry strengthening overall planning, positively introducing foreign technology talents and doing financial liberalization so as to continually lift industry environmental competitiveness. Meanwhile, encourage Taiwan information industry going westward to participate in the competition, and keep activities with high added value such as marketing, R&D, financial and decision-making remaining in Taiwan, and adopt preferential measures to encourage the core industry suitable for Taiwan development.

Li Xiuling, in her research report < *The division analysis and strategy advice of cross-strait information industry on global strategy* > (MIC, 2002, 11, 30), pointed out that, Taiwan information industry previously made profits relies on processing by cheap labor force costs, but with the accession to WTO on both sides and the cross-strait contacting frequently, Taiwan has been unable to continue maintaining competitiveness only by OEM, it's necessary to strengthen the design, development and marketing etc, to maintain its comparative advantage to mainland.

On cooperation measures

Lan Qingxin, in his article < *Study on win-win strategy and Docking mechanism of cross-strait information industry depth cooperation* > (Technology and Industry Across the Straits, 2007, 3), thought that, the government should create an equality competitive environment for mainland local enterprises and Taiwan owned enterprise, and promote both to set up the benign interaction and cooperation production system with value chain as the core, then accelerate the establishment of information industry depth fusion mechanism, whose core is based on joint-stock cooperation, Taiwan enterprises listing in mainland market and risk capital operation. Next, speed up the process of venture investment in mainland by introducing into the venture investment and management team from

Taiwan. Last, strengthen senior talents' cooperation and interchange by hiring Taiwan professional managers. Lin Shiyuan thought that, the strategy of joint cross-strait information industry together should be like this: cross-strait information industry should run cooperatively but not dispersedly; in the research, development and technology transfer respect, strengthening Technology Park cooperation, to form a circle just like Fujian-Hsinchu-Silicon-Fujian. Huang Song'en, in the article < *Development and cooperation opportunity of Fujian and Taiwan information industry* > (Technology and Industry Across the Straits, 1999, 1), pointed out that, I) the cross-strait cooperation should continue to expand civil academic, technical exchange and strengthen professionals association; II) determine important cooperative IT projects that interested by both sides, organize power, open up channels, impel scientific research institutions, schools and enterprise on both sides to play their respective advantages, work dividedly and cooperatively, develop jointly, so as to realize industrialization; III) learn the successful experience of Hsinchu science and technology industry park, promote the idea that building high-tech development zone cooperated by both sides in Fujian province; IV) speed up establishing the risk investment funds and standard risk investment mechanism for the information industry in Fujian province; V) make encouraging policies for talent exchange of Fujian and Taiwan.

Research on building experimental area for cross-strait information industry cooperation

The building of the experimental area of cross strait cooperation in information industry has already been investigated in Jiangsu, Guangdong, Chongqing and Fujian province etc. However, few theory research achievements were reported. Political advisors presented as Chen Mingyi proposed the building of the experimental area of cross-strait cooperation in information industry during 2009 political consultative conference of the National People's Congress, which spiked the attention of relevant authority.

Conclusion

In general, the study is still in its infancy, for the studies in the mainland are macroscopic, which emphasized on the necessity and significance. Few efforts have been made on study of the regularity of the information industry development or the innovation of the cross strait fusion, neither with the practicable suggestion or policy. Moreover, studies in Taiwan most focus on the investigation environment and the market prospect, and were poor in the researching achievements of the cross trait. There are still many problems to be settled that I) the comparison between the cooperation of information equipment manufacturing industry, software industry and IT services industry etc.; II) the evaluation of the cross-trait mode; III) the innovation of the cooperation framework; IV) the internal relations in the cooperation system.

The information industry in mainland and Taiwan is strongly complementary with each other. The key is how to grasp the development discipline of the information industry on both sides, according to the general layout of our country's information industry, choose a high level of cooperation way not only meeting the overall request of national information industry development strategy but also having individual advantages and characteristics.

The cross-strait information industry needs innovation more than simple cooperation on information equipment manufacturing industry. The innovation includes two meanings: I) cooperative innovation of information equipment manufacturing technology; II) cooperative innovation of software industry, electronic industry and

business information service industry. The cooperation should put the first in priority position, while the second in the top priority.

The information industry technology innovation is an open cooperative innovation, as the new technology emerging in the form of technology clusters. A single enterprise's single technical breakthrough can not meet the development requirement of the industry and adapt the systematic requirement of the information technology. Only the information industry clusters innovation can make the cross-straits occupy a higher and higher position in the international information industry structure, and own more and more rights.

The related businesses on both sides should not only pursue higher technology, but also cooperate with technology demanders and users, whose feedback ought to be realized timely, so as to making the R&D more suitable to the market. The specific method is: formatting the industry chain that based on domestic demand positively; using both sides, especially the huge market and user group in mainland, to promote technology innovation; strengthening the cooperation of the industrial chains, for R&D department should cooperate with production department and marketing department; enterprises' development funds should take pretax deduct to encourage enterprises to increase R&D investment.

Cross-strait information industry cooperation innovation is the Chinese national win-win cooperation vision in the information age. It's a big career, and has a great future.

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