ADB

ADB Project Document

TA–9036: Strategy for Liaoning North Yellow Sea Regional Cooperation and Development

Technical Report 5: Relevant Domestic and International Experience in Designing and Implementing Regional Cooperation Programs

December 2017

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Contents

Abbreviations

ADB – Asian Development Bank
ASEAN – Association of Southeast Asian Nations
BRI – Belt and Road Initiative
DOF – Department of Finance
EA – Executing Agency
FTZ – Free Trade Zone
GHG – greenhouse gas
IA – Implementing Agency
ICT – information and communication technology
ICTI – Internet Content, Technology, and Infrastructure
JMEPA - Japan–Mongolia Economic Partnership Agreement
LCEBDP - Liaoning Coastal Economic Belt Development Plan
LPDF – Liaoning Province Department of Finance
MDGs – Millennium Development Goals
MOC - Ministry of Commerce
MOFA - Ministry of Foreign Affairs
NDRC - National Development and Reform Commission
NEA – Northeast Asia
NSCP – North-South Corridor Plan
NSR – New Silk Road
OBOR – One Belt One Road (see also BRI above)
PFRIL - Provincial Financial Research Institute in Liaoning
PRC – People's Republic of China
RCI – Regional Cooperation and Integration
SDGS – Sustainable Development Goals
SME – small and medium-sized enterprise
SOE – State Owned Enterprise
TA – Technical Assistance Plan
TIRC - Transports Internationaux Routiers Convention
WTO – World Trade Organization

I. Executive Summary

1. This study is part of a series of Technical Reports intended to support a proactive agenda for economic renewal in Liaoning Province. The analysis below offers an extensive review of policy experience and research on Regional Cooperation Initiative (RCI's) and their past, present, and potential contributions to economic growth for Liaoning Province. Based on this evidence, an analysis of the challenges facing Liaoning, and drawing upon relevant precedence elsewhere, the report presents recommendations for Liaoning policy makers to leverage RCI for economic revitalization.[1] Regional cooperation and integration on all levels, including international, inter-provincial, and intra-provincial level, offer enormous potential for Liaoning to revitalize and sustain inclusive growth for its economy.

2. At the national level, the PRC's accession to the World Trade Organization (WTO) opened new horizons for technical and managerial innovation across China's economy. In the same way, RCI can sustain economic renewal in Liaoning. What we see in today's global economy is a process of supply chain decomposition, where RCI distributes is distributes market opportunities, production tasks, technology, and skill development across an international matrix of intermediate suppliers. Liaoning province can be said to have benefitted from linkages like this during China's heavy industrial development phase, but our review of evidence suggests Liaoning needs to redouble its commitments to external engagement if it is to sustain innovation and overcome its present difficulties.

3. Based on relevant experiences of other regions' in the PRC and elsewhere, more determined RCI is essential for Liaoning and the surrounding area to achieve greater economic growth through restructuring, diversification, and commitments to higher productivity and human capital development. Liaoning retains many important advantages in terms of geography and resource endowments that can support a variety of ambitious existing RCI initiatives. There are already many opportunities for Liaoning to seize to participate in and promote RCI, including existing national strategies and established mechanisms for coordination on all levels of RCI. These are discussed in more detail below,

[1] More detailed recommendations will be presented in a strategic report that synthesizes the lessons of all five Technical Reports in this series.

but what is needed generally is more institutional commitment to external partnership in the following seven areas:

1. Economic Structure
2. Attracting Foreign Trade and Investment
3. Managing Foreign Trade and Investment
4. Redundant Construction and Overcapacity
5. SOE Management
6. Port Management
7. Demographic Trends

4. Events the last decade clearly show that going it alone, or resisting economic change, will only further isolate Liaoning's economy and deny opportunities to its people. A single province of China cannot resist the forces of national and global economic modernization without losing its primary growth drivers – investment and talent. The dramatic economic adversity of recent years demonstrates that the Liaoning government cannot itself replace the financial and human capital lost to an exodus of investors and skilled workers. The only realistic option is to create conditions that will attract such assets back. Doing that in a credible way will require a disciplined examination and far reaching reform of current practices, weeding out policies that undermine competitiveness, innovation, and institutional adaptation in both the public and private domains. Judging from the magnitude of recent declines in investment and other economic prospects, it is clear that the most ambitious and sustained reforms will be needed to return Liaoning to its former economic strength, realize its great economic potential, and secure sustained prosperity for all its people.

II. Introduction

5. Regional integration has been a potent catalyst for economic growth across the Asian region, particularly when more advanced economies are linked through supply chains to lower and middle-income neighbors. In the East Asian region, supply chains have proliferated to an extent and at a rate unimagined decades ago. The role of private capital flows in this process has been essential, and we shall see that investment behavior has exerted a decisive influence on patterns of regional production and trade. An important implication of the resulting supply chain decomposition is that the global network of value creation and income linkages is much more extensive and complex, than would be suggested by bilateral trade statistics alone. For this reason, the significance of existing multilateral ties, as well as the gains from a more liberal trading environment, may be seriously underestimated.

6. These developments contrast with manufacturing intensive, individual export platforms in the early stages of Asian post-war emergence. In recent years, intra-Asian trade as come to dominate across a remarkably diverse and dynamic mosaic of private commercial linkages that link the region's economies. These linkages are generally incorporated in global networks or supply chains, where tens, hundreds, even thousands of intermediate product linkages are realized through bilateral deliveries across provincial, national, and regional boundaries. The result is a remarkably diffuse network of economic activity, coexisting with and often transcending official domestic planning, as well as bilateral and multilateral diplomacy and trade negotiation. As this system has grown in scope and complexity, well beyond the administrative capacity of individual enterprises, local and national governments, it relies for its existence on price mediated market interactions and a liberal trade an investment climate. With better understanding of this complex web of linkages, policy makers can see both the rewards of Regional Cooperation and Integration (RCI) and the importance of policies that facilitate it.

7. In Asia, RCI has advanced very rapidly and pervasively as more advanced Asian economies re-allocate production to less advanced ones. A primary mechanism for this process is distributing supply chains, where foreign trade partners and investors in the region create or promote new nodes of production in different localities, with local firms beginning as intermediate contractors and eventually producing and marketing their own brands. The result has been replication of industries and technology transfer around the region at an unprecedented date. Policy makers are all levels should not isolate themselves from this process, but strive to understand and embrace the many opportunities it presents for technical and economic progress.

8. The present study is part of a series of technical reports delivered as part of the ADB's Technical Assistance program 9036: Strategy for Liaoning North Yellow Sea Regional Cooperation and Development. TA 9036-PRC. In this Technical Report, we evaluate the importance of regional supply chains for more sustained and inclusive economic growth in Liaoning province. In particular, we identify opportunities for Liaoning to leverage regional economic integration and share the benefits of productivity and innovation among its trading partners.

9. It is well known that the PRC's accession to the WTO opened new horizons for technical and managerial innovation across China's economy. In the same way, RCI can sustain economic renewal in Liaoning. What we see in today's global economy is a process of supply chain decomposition, where RCI distributes is distributes market opportunities, production tasks, technology, and skill development across an international matrix of intermediate suppliers. Liaoning province can be said to have benefitted from linkages like this during China's heavy industrial development phase, but our review of evidence suggest that it needs to redouble its commitments to external engagement if it is to sustain innovation and offer a new generation of economic opportunity to its people. The Technical Reports in this series are intended to support this proactive agenda for policy renewal.

III. Literature Review

10. Although there is a vast body of academic and policy writing on RCI, relatively few studies have addressed this subject with respect to Liaoning. We have examined everything available in Mandarin and English and summarize their salient findings in this section by RCI-related topic.

A. Industrial Structure and Innovation Capacity

11. Liaoning has been heavily reliant on a single industrial structure. Reliance on the second sector (manufacturing) hovers above the national average while development of the services industry lies below the national average. As of 2015, Liaoning's services sector accounted for 46.2% of GDP[2], below the national average of 50.2%.[3]

12. Policies rolled out by the provincial government have not focused enough on light industry and the service industry. Chinese academics (e.g. Meng: 2016) have proposed the government promote the "light" transformation of heavy industry by relying on surplus agricultural products and industrial raw materials resources to develop light industry, while transferring industrial technology from eastern coastal areas to upgrade Liaoning's industrial sectors.

B. Domestic and Inbound Foreign Direct Investment

13. Liaoning's foreign direct investment (FDI) flows chiefly stem from the real estate and manufacturing sectors. However, FDI flows have been steadily declining, chiefly due to manufacturing businesses shifting to Japan and Southeast Asian nations, and a decline in real estate FDI from Hong Kong, Liaoning's chief FDI source (Yang: 2016). From 2014 to 2015, FDI flows fell 34.4% to 5.19 billion USD. In 2015 in particular, 70 million USD went to the primary industry, 1.45 billion USD to the secondary industry and 3.67 billion USD to the tertiary industry.

14. Specifically, the manufacturing industry absorbed 1.21 billion USD of FDI; real estate, 2.7 billion USD; transportation, storage and posts sector, 300 million

[2] Liaoning Statistical Yearbook 2016.

[3] China Statistical Yearbook 2016.

USD; information transmission, computer services and software sector, 40 million USD; and leasing and commercial services, 170 million USD.

15. Liaoning stands to benefit from increased FDI, especially in cases of joint ventures. Javorcik (2003) has shown that positive productivity spillovers take place in firms with shared domestic and foreign ownership – not fully owned foreign investments – and take place through backward linkages. A more recent analysis by Li and Tan (2011) showed that FDI plays a particularly important role in industry clusters in the equipment manufacturing industry; however, industry clusters themselves are not what attracts FDI into Liaoning equipment manufacturing in the first place.

C. Regional Cooperation Generally

16. A number of recent studies (e.g. BaiL 2015) suggest that GTI needs to be upgraded to an independent international organization to develop substantial cooperation projects. In addition, after consolidating cooperation in Great Tumen area, GTI can incorporate other countries such as Japan in the future. Cui (2016) suggests that GTI can be the platform to connect China's new national strategy One Belt One Road with national strategies of other member countries.

17. There have been numerous of studies on regional cooperation in Northeastern China. All emphasize (e.g. Chen and Zhang: 2004) that regional cooperation in this region is necessary given that other regional cooperation in China, namely Yangtze River Region and Pearl River Delta Region, have been highly successful and contribute much to national GDP, and that Northeastern provinces are facing similar difficulties in economic development. However, the regional cooperation also faces difficulties, such as the similarity of industrial structure in provincial economies in the Northeast, slow urbanization and lack of leading cities like Shanghai in the East and Shenzhen in the South, administration system and competition between authorities of provinces.

18. A study by Lui et al (2009) shows that although BER is supposed to be an economic region, it is more like a geographic concept than an economic concept because of the low level of economic cooperation and integration in the region, due to primary restriction factors including weakness of the internal exchange and the relation and low degree of market opening. Very recent analysis by Liu (2017) suggests that intergovernmental cooperation in BER has significantly promoted the regional economic cooperation and economic development; however, the cooperation also faces the challenge from the regionalism in development.

19. Issues and difficulties in the development of Liaoning Coastal City Belt are highly related to regional integration among the Belt. Wei and Fung (2011), for example, point out that the issues include the homogeneous industrial structure, superficial integration and lack of cooperative mindset, regionalism and widespread competition of dumping, short-term utilization of land and environmental issues. It also suggests that the government should promote the integration of industrial structure, development planning, market system, infrastructure, port construction, and environmental protection.

20. Research by Lin (2009) suggests that the development of Liaoning Coastal City Belt should drive the development of inland areas in Liaoning and be a part of a more comprehensive and coherent provincial integration plan. The study shows that difficulties in integration include regionalism in local government and flaws in special structure; however, there are also opportunities in the national and global background including national and international cooperation initiatives.

21. In a very recent and detailed econometric study, Ye (2017) shows how a Free Trade Zone (FTZ) can promote significant improvements in labor productivity. Among Liaoning's FTZs, the one in the east has been shown to have a remarkable positive effect on labor productivity, while the FTZ in the central and western regions has little effect on the improvement of labor productivity. The study also suggests that the economic effect of FTZ is in align with the regional economic openness. The study recommends governments to replace preferential policies with an emphasis on institutional transformation and innovation in FTZ, and to introduce industries which can lead the regional economy while planning for the industrial structure in FTZ, especially considering that the new and high technology industries and high value-added producer services industry will form a positive technology spillover.

D. Liaoning's Free Trade Zones

22. The Liaoning FTZ commenced operations on April 10, 2017. Within 13 business days, 730 businesses were established, exceeding the 674 businesses established over the past 31 years (more detailed evidence is available in Yang:

2017). Consultations at the FTZ service center reached 10,646. The registered capital of the 730 businesses so far totals 7.31 billion yuan ($1.06 billion). Of these businesses, foreign invested businesses accounted for nine, with registered capital of $84.92 million. 16 businesses have over 100 million yuan in registered capital, which accounts for 46 percent of total registered capital. These newly-registered businesses are mainly involved in trade, technology, commercial services, logistics and financing sectors.

23. In addition, economic partnerships will be formed between Liaoning and Jiangsu, Jilin and Zhejiang, Heilongjiang and Guangdong province, according to a circular issued by the cabinet (see Yao: 2017 for details). The goal is to learn from successful state firm reforms in coastal provinces and encourage companies in coastal areas to help reform state firms in the northeast. Authorities in the northeast will also learn from coastal provinces how to develop private firms and build a business-friendly environment. Areas of cooperation include infrastructure projects spanning ports, railways and highways, in addition to cooperating on manufacturing and services sectors. On an intra-national level, cooperation will also be set up between cities such as Shenyang and Beijing, Dalian and Shanghai, Changchun and Tianjin, and Harbin and Shenzhen.

24. The Shanghai FTZ was used as a learning experience for the Liaoning FTZ, with the following results (China News: 2017):

- Port development plays a critical role in optimizing the foreign trade environment and cultivating the core competitiveness of the regional economy.

- Electronic ports simplify clearance procedures and reduce business costs. Cloud computing, big data, integration of information resources in port logistics should also be used to provide personalized services for enterprises.

25. Overall, the two cities created 27 areas for future cooperation in six key fields, including innovating institutional mechanisms, improving urban functions, industrial development, and boosting entrepreneurial spirit. Shi et al (2017) show that, compared with other domestic FTZs and foreign FTZs, Liaoning FTZ has several advantages: Liaoning has the geographic advantage that it is the only province in Northeastern China that both borders other countries and has a coast and is located in the center of Northeastern Asia; Liaoning has well-developed ports on its coast, which is part of the Bohai Economic Rim and also part of the 21st Century Maritime Silk Road; Liaoning as an old industrial base has rich economic and industrial resources, especially in equipment manufacturing industry. To utilize its advantages for further development, the study suggests that Liaoning should integrate itself more actively into One Belt One Road and cooperation in Northeastern Asia, through leveraging the resources in equipment manufacturing industry, creating a favorable business environment, and attracting talent.

1. Problems with Liaoning FTZ development

26. Recent research by Liu and Zhang (2017) points out that the administrative system has been an obstruction for Liaoning FTZ's further development, especially in institutional innovation. Problems include lacking mindset for institutional innovation, separated and scattered administrative authority which constrains the ability of substantial and overall reform, and the tendency of fragmentation and homogenization in the industrial layout of the three areas. This perspective reinforces the findings of He and Zhang (2016), who discuss some challenges and issues for ongoing FTZ development in China. Problems of ambiguous and overlapping management systems, limitations on innovation capacity, partial and inappropriate assessment and incentive mechanisms which focuses only on the number of institutional innovations and results in results in the vicious comparison and abnormal competition between the FTZs, in which the FTZs hide their innovative ideas from each other instead of cooperating in joint innovation.

IV. Baseline Assessment

27. This section evaluates initial conditions in Liaoning as these are relevant to the opportunities and challenges of more determined commitments to growth through RCI. The leading issues in this area relate to unbalanced economic structure, redundant construction, overcapacity, SOE and port management deficiencies, and adverse trends in trade, FDI, and provincial demographics.

A. Economic Structure

28. Dominated by legacy heavy industries such as machinery and mining, Liaoning province has long struggled to keep up with rapidly growing provinces in the coastal area. Although the central government has been helping Liaoning to make the transition from state-owned heavy industries to light industries and services, Liaoning is finding it difficult to harness employment opportunities and economic growth.

29. The recent collapse in Liaoning's economic indicator makes its future more dimmed. Liaoning province, once the leading economy of China, registered a -2.5% real GDP growth rate in 2016, with its economic output shrinking 23% in nominal terms, according to National Statistics Bureau. This made Liaoning the only province that experienced a negative growth in 2016. Meanwhile, Liaoning's government fiscal revenue has also declined by as much as 33.4 percent in 2015. At the same time, its government fiscal expenditure was 9.1% less.

Table 1: Gross Domestic Product in Liaoning Province

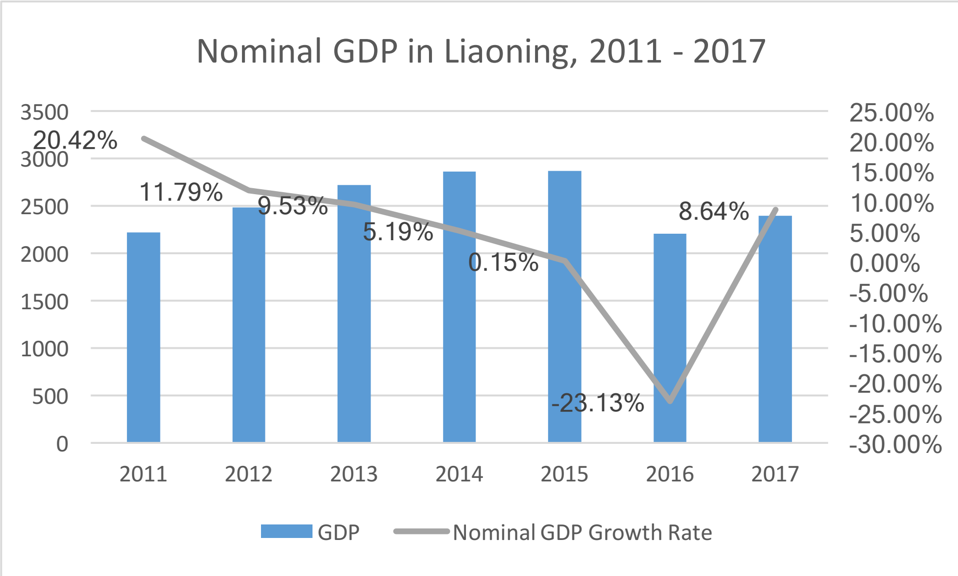
(RMB Billions, 2011-2016)

Year	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**
GDP	2222.7	2484.6	2721.3	2862.6	2866.9	2203.7	2394.2

Unit: 100 Billion Yuan

Source: National Statistics Bureau

Figure 1: Lowest Economic Growth Rate in Modern History

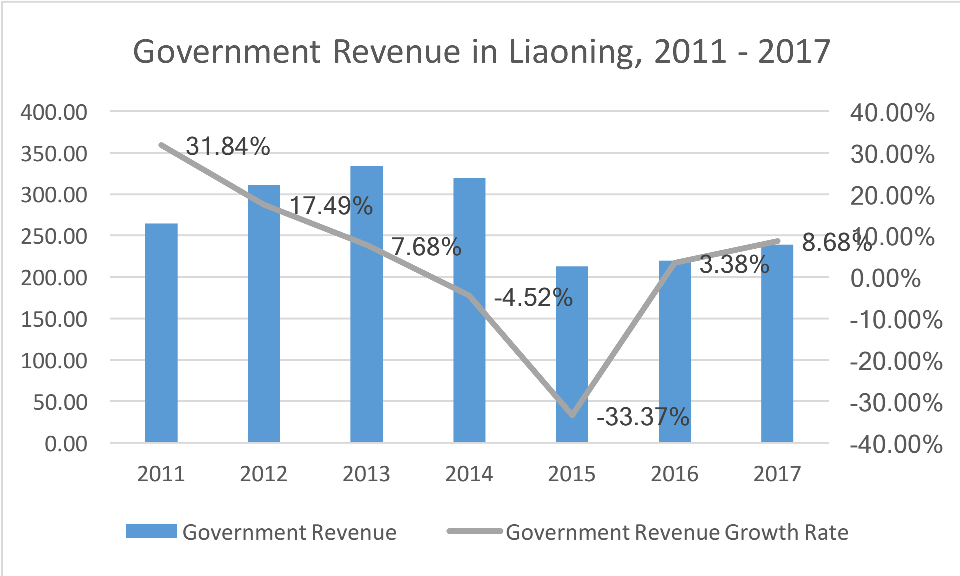


Source: National Bureau of Statistics

Unit: Billion Yuan

30. According to statistics, from 2008 to 2012, Liaoning's economic growth was higher than the national average by around 3.3%. Although its growth slowed down from 2012 to 2014, it was still higher than the national average level. Entering 2014, Liaoning's economic growth started to turn below the national average. In 2016, things became worse for Liaoning as its GDP growth rate turned negative to -2.5%, far below the national average level of 6.7%, which ranked bottom among all the provinces and autonomous regions in the country. Although Liaoning’s economy has been warming up and recently published data shows that Liaoning’s real GDP increased 4.2% in 2017, its growth rate is still 2.7% lower than the national average.

Figure 2: A Huge Drop for the Government Revenue

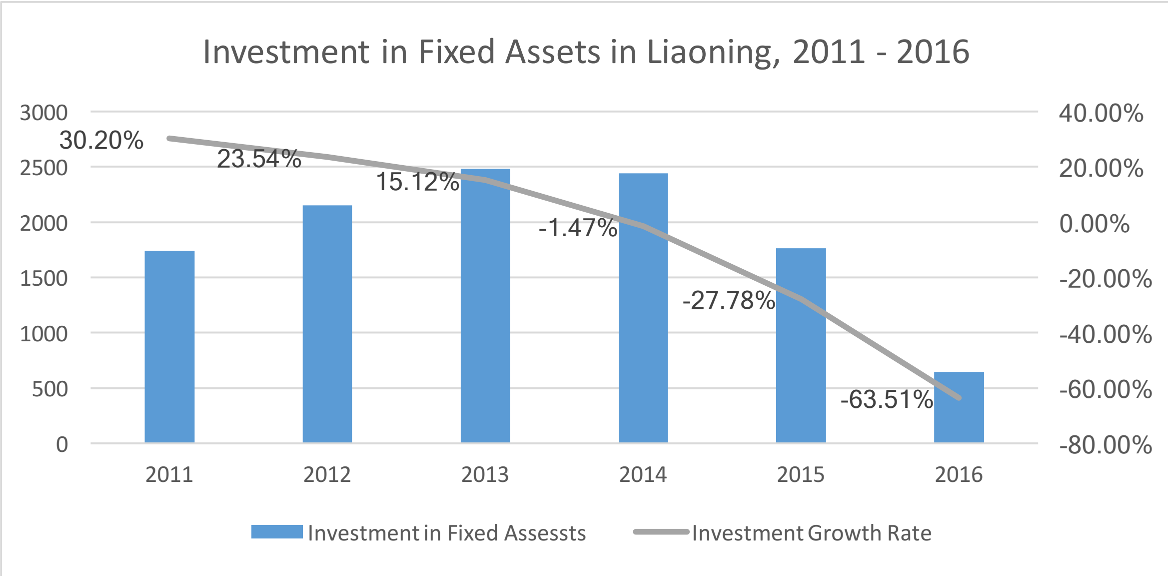


Source: National Bureau of Statistics

Unit: Billion Yuan

31. Macroeconomic data suggest that 2014 was an unusual year for Liaoning in terms of its economic development. In this year, Liaoning's aggregate economic growth trended below the national average and its government revenue actually began to fall. In 2013, Liaoning's fiscal revenue reached an apparent peak of 334 billion yuan. By 2014, however, revenue had fallen to 319 billion yuan, nearly 5% lower than the previous year. By 2015, the speed of the revenue decline was accelerating. With total provincial fiscal revenue of 213 billion yuan, Liaoning experienced a 33.4% annual drop in public income, unprecedented in modern times. Although revenue recovered slightly the following year (2016) to 220 billion yuan, it was still much lower than the trend that had been established before 2014.

Figure 3: A Sharp Decline in Fixed Asset Investment



Source: National Bureau of Statistics

Unit: Billion Yuan

32. In part because of budgetary constraints, but also driven by more systemic institutional problems, the adverse fiscal revenue cycle is mirrored in Liaoning's fixed asset investment. In 2014, fixed assets investment in Liaoning showed a significant slowdown and begun to fall, modestly at first (-1.5%), but accelerating rapidly. In 2015 and 2016, aggregate fixed asset investment in Liaoning Province dropped -27.8% and -63.5%, respectively. From 2014 to 2016, in just three years, investment in fixed assets in Liaoning dropped by a startling total of 74%, from 2443 billion yuan to 644 billion yuan.

1. Understanding the Economic Decline in Liaoning

33. The primary reason for the sudden and significant drop of Liaoning's economy in 2016 was official attempts to undo the effects of previous over-reporting growth for the period from 2011 to 2014. However, the root cause for the region's current predicament lies in more fundamental structure problems with its economy.

34. Since the beginning of the economywide reform and opening up, China's industrialization progressed rapidly, especially in the early stages with heavy industry. This contributed to dramatic early growth for the province's economy, but has also imparted a legacy of structural imbalance because of over-reliance on capital-intensive heavy industry. Today, manufacturing still has the highest share of Gross Provincial Product (GPP), while the proportion of tertiary industry remains far below that of more dynamic provinces.

Table 2: Industrial Structure of Liaoning, 2011-2015 (percentage shares)

Year	Primary Industry	Secondary Industry	Tertiary Industry
2011	8.6	54.7	36.7
2012	8.7	53.2	38.1
2013	8.1	51.3	40.6
2014	8.0	50.2	41.8
2015	8.3	45.5	46.2

Source: National Bureau of Statistics

35. Known as the "Eldest Son of the Republic" and the "Eastern Ruhr", Liaoning was one of the first provinces in China to industrialize, with substantial external investments starting in the so-called Manchukuo Period. Despite wartime damage, Liaoning retained significant infrastructure and a skilled labor force. As a focal point of investment in the early Five Year Plans, industrial development accelerated in the decades after liberation, facilitated by the presence of iron and energy deposits in the province. This combination of historical advantages made Liaoning the leading province for heavy industry. The proportion of heavy industry in the province's economic activity rose as high as 80%, while the scale of emerging industry has been relatively small. In Shenyang, for example, the 2015 proportion of heavy industry among all medium to large industrial enterprises was still 80% in Shenyang, 10 percentage points higher than the national average. In addition, 90% of the biggest enterprises in the city were traditional industries, while the number of companies that belonged to the more innovative emerging categories (such as electronic products, aerospace equipment, etc.) accounted for less than 5%.

36. For the first decade of the new millennium, the traditional enterprises in Liaoning rode the tides of a WTO-induced national manufacturing and infrastructure development boom. The scale of domestic and foreign demand expanded very rapidly across the PRC economy, absorbing industrial capacity of all kinds. This dramatic and broad-based aggregate expansion concealed the structural imbalance and lack of diversification within the provincial economy. However, moderating aggregate growth since 2010 has not been as uniform, as demand patterns have shifted toward higher technology products and services. In place of fast and relatively uniform expansion fifteen years ago, we now see more moderate growth comprised of fast growing demand for tech and services, falling demand for primary industry, and average growth for the rest. Meanwhile, high investment on fixed assets does not necessarily increase employment when they investments are in labor saving technologies. Although Liaoning government is on its way to perform a major structure transformation, more effort will be needed to promote economic diversification toward more labor-intensive industries and higher value, skill-intensive services.

B. Attracting Foreign Trade and Investment

1. Foreign Trade to and from Liaoning

37. Liaoning's foreign trade is mainly conducted through the Port of Dalian. Major export items included primary products such as agricultural and fisheries products, raw materials (metals, minerals, oil), automobiles, auto-parts and machine tools. Major import items in Liaoning included steel, electronic parts, rubber and tubes.

Table 3:Liaoning Province's Foreign Trade, China 2006-2015

Year	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Value of Export	283.2	353.3	420.5	334.4	431.2	510.4	579.5	645.4	587.6	508.4
Value of Import	200.7	241.5	303.8	294.8	375.5	449.2	460.4	497.4	552.0	452.5
Total Export-Import Volume	483.9	594.8	724.3	629.2	806.7	959.6	1039.9	1142.8	1139.6	960.9
Balance of Trade (Export - Import)	82.5	111.8	116.7	39.6	55.7	61.2	119.1	148.0	35.6	55.9
GDP (Liaoning)	1167	1468	1968	2227	2726	3441	3936	4394	4660	4615
Foreign Trade Dependence (Liaoning)	41.5%	40.5%	36.8%	28.3%	29.6%	27.9%	26.4%	26.0%	24.5%	20.8%
Foreign Trade Dependence (National)	64.0%	61.2%	55.7%	43.2%	48.7%	48.1%	45.2%	43.3%	41.0%	35.7%

Source: Liaoning Province Yearbook 2016

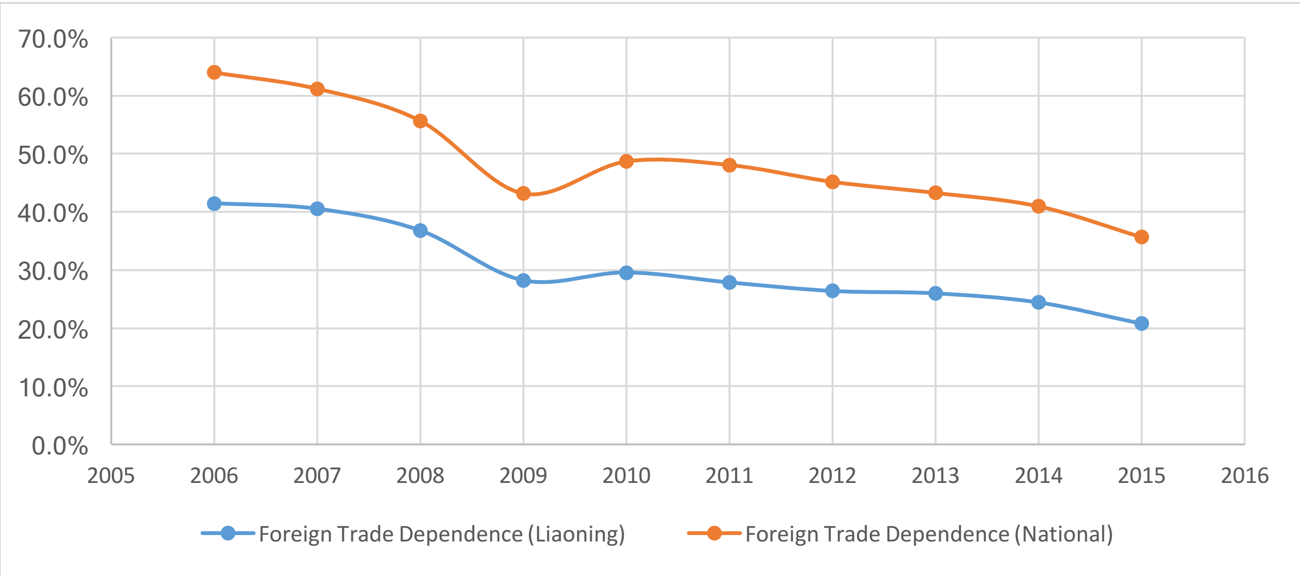
Unit: 100 Million Dollars

38. From the above data, we can see that Liaoning has maintained a trade surplus in the past ten years, and its import and export volumes have been increasing in general. In 2013, Liaoning's total export-import volume and trading difference both reached their peak. However, we can also find two years with declining data, 2009 and 2015.

39. In 2009, Liaoning's import dropped 3.0% while its export dropped 20.5%, comparing with the former year. Meanwhile, its total export-import volume decreased 13.1%. Decline in this period was mostly caused by global financial crisis.

40. In 2015, Liaoning's import dropped 18.0% while its export dropped 13.5%, and its total export-import volume experienced a 15.7% decrease. Reasons for the decline in this year is more complex. Market slowdown of the electromechanical industry, rising labor costs, overcapacity in the steel industry, falling oil prices and falling prices of other commodities (such as iron ore and coal) all contributed to the problem, which created a huge negative impact to the electromechanical industry, steel industry and oil industry in Liaoning. It also reflects that the

Figure 4: Foreign Trade Dependence in Liaoning versus National Average



Source: Liaoning Province Yearbook 2016, National Statistics Bureau

41. As shown in the figure above, the foreign trade dependence in Liaoning has been decreasing in the recent ten years, dropping from 41.5% in 2006 to 20.7% in 2015. Besides, its foreign trade dependence rate has always been 15% to 20% lower than the national rate. This shows that the importance of foreign trade in Liaoning's overall economy has been gradually decreasing, and the dependence of Liaoning on the international market is weakening. The main reason for this phenomenon is that after the global financial crisis in 2008 and the European debt crisis in 2010, the external demand was not strong. And most of the enterprises in Liaoning shifted their focus from the international market to the domestic market.

42. In 2015, the top export commodities in Liaoning were electromechanical products, steels, agricultural products, high-tech products, clothing and accessories, refined oil, aluminum, crude oil, auto parts, textile products, etc. Among them, electromechanical products accounted for 38.5% of all the exports, steel exports accounted for 11.4%; agricultural exports accounted for 9.4%, and high-tech exports accounted for 9.1%.

43. Meanwhile, the top import commodities in Liaoning were electromechanical products, crude oil, agricultural products, high-tech products, auto parts, xylene, natural gas, iron ore, coal and lignite, etc. Among them, electromechanical products accounted for 29.3% of all the imports, crude oil accounted for 22.5%, agricultural products accounted for 12.1%, and high-tech products accounted for 10.3%.

44. Because of geographical proximity, Liaoning province maintains very close trade ties with Japan, South Korea and Russia. In 2016, Liaoning exports to Japan, South Korea and Russia stood at 83.5 billion yuan, accounting for 29.4% of the total exports. At the same time, imports from Japan, South Korea and Russia stood at 75.0 billion yuan, accounting for 26.1% of the total imports.

Value of Imports and Exports between Liaoning Province and Japan, Korea, Russia (2014-2016)

	Export			**Import**			**Total**		
Year	**2014**	**2015**	**2016**	**2014**	**2015**	**2016**	**2014**	**2015**	**2016**
Japan	592.72	524.84	516.01	325.96	260.70	324.50	918.67	785.55	840.51
Korea	330.65	281.14	266.21	256.73	259.89	262.71	587.38	541.03	528.92
Russia	72.44	57.88	52.45	76.82	130.05	162.56	149.26	187.93	215.02

Unit: 100 Million Yuan

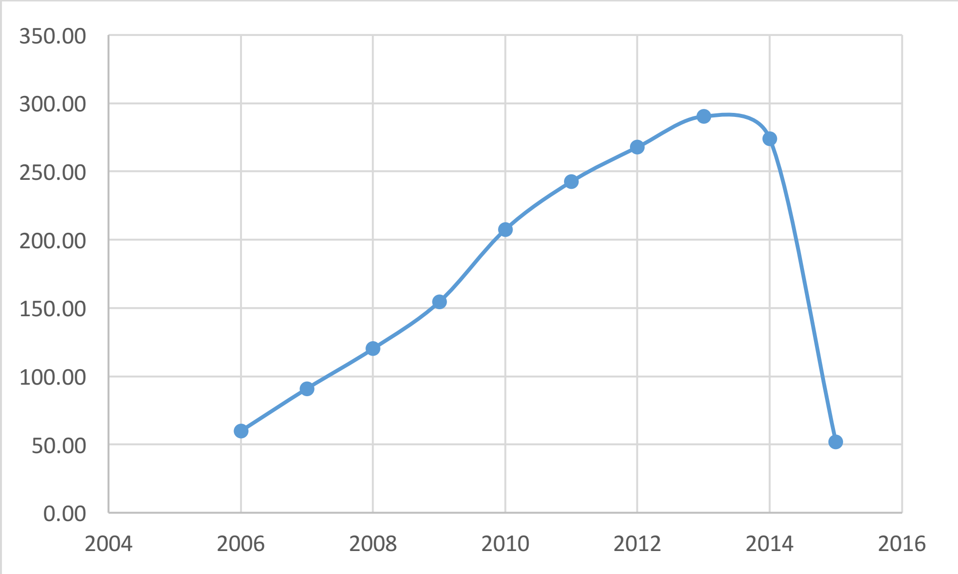
Source: Dalian Customs District People's Republic of China

2. *Foreign Direct Investment in Liaoning*

FDI in Liaoning Province, China 2006-2015

Year	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**
FDI	59.85	90.97	120.19	154.44	207.50	242.67	267.93	290.40	274.23	51.85
GDP	1167	1468	1968	2227	2726	3441	3936	4394	4660	4615
FDI Dependence	5.13%	6.20%	6.11%	6.93%	7.61%	7.05%	6.81%	6.61%	5.88%	1.12%

Figure 5: A Precipitous Drop - FDI into Liaoning, 2006 - 2015



Source: Liaoning Province Yearbook 2016

Unit: 100 Million Dollars

45. From the table above, we can see that in the last decade, inbound FDI to Liaoning has registered a dramatic decline. From 2006 to 2013, it grew steadily with an average annual growth rate of around 20%. In 2006, the FDI in Liaoning was only $6.0 billion, while it peaked at $29.4 billion in 2013, experienced an almost fivefold increase in seven years. And during these eight years, the FDI dependence rate remained relatively stable, ranged from 5.13% to 7.61%. However, in 2014 and 2015, Liaoning experienced a huge drop on its FDI. Especially in 2015, the FDI dropped from $27.4 billion dollars directly to $5.2 billion dollars, even less than the amount ten years before. And the FDI dependence rate also dropped to 1.12% in the same year. How to attract FDI becomes a very important task.

46. In terms of distribution of FDI among different industries, the utilization of FDI in Liaoning is concentrated in the second and the third industry. The industry that uses the most foreign capital is manufacturing, followed by real estate. In 2014, for example, the second industry used 51.7% of the FDI while the third industry used 46.8%. To be more specific, the proportions of FDI used in different industries are as follows: manufacturing industry accounted for 47.5%; real estate accounted for 18.2%; transportation, storage and postal industry accounted for 7.7%; information technology and software industry accounted for 4.9%; leasing and business the service accounted for 3.8%.

47. In terms of the source of foreign investment, Asia takes up the largest share and Hong Kong has been in the first place for years. In recent years, the investment from Hong Kong takes up about 50% of the total foreign investment in Liaoning, followed by Japan and South Korea, takes up about 15% - 20% in total. Then the United States, Singapore and Taiwan account for about 10% of the total foreign investment.

C. Managing Foreign Trade and Investment

1. Relatively Small Scale of Foreign Trade

48. Comparing with the total volume of its economy, Liaoning's scale of foreign trade is relatively small. And the foreign trade dependence in Liaoning has always been lower than the national level. For nearly 10 years, foreign trade dependence in Liaoning has been 15% to 20% less than the national average. In 2015, among all the 31 provinces and autonomous regions around the country, export volume of Liaoning ranked tenth, while its import volume ranked ninth, far less than coastal provinces like Guangdong, Jiangsu, Zhejiang, etc. Its import and export volume is only around 1/10 of Guangdong's, according to the statistics from China's Ministry of Commerce. To sum up, Liaoning has a relatively small scale of foreign trade with limited contribution its economic growth.

2. Too Many Low Value-Added Commodities for Export/Import

49. Among Liaoning's import and export commodities, the proportion of high technology and new technology products is low. Liaoning's export commodities are mainly steels, simple mechanical and electrical products and other labor-intensive products, while its import commodities are mainly mechanical and electrical products, crude oil, agricultural products and other natural resources. Most of Liaoning's foreign trade relies on simple products with little technology and low value-added. Only 10% of the commodities Liaoning imports and exports belong to high-tech products. Therefore, the structure of import and export commodities in Liaoning needs to be optimized

3. Imbalanced Volume Among Cities

50. Most of Liaoning's import and export volume and foreign investments are concentrated in two cities, Dalian and Shenyang. Foreign trade and foreign investments in other regions is much less, especially in the northwest part of Liaoning Province. In 2014, the total value of import and export for Dalian was 64.5 billion US dollars, while the total value of import and export for Shenyang was 15.8 billion US dollars. 67.5% of the total foreign investments to Liaoning was also used up by these two cities. In comparison, the value of import and export for Fuxin was only $361 million in the same year, which is only about 0.5% of Dalian. Only $250 million foreign investment was directed to Fuxin and Chaoyang, which only accounts for 2% of Dalian's foreign investment. It can be seen that the gap of foreign trade between different cities in Liaoning province is very wide, and the regional development is quite unbalanced.

4. Imbalanced Foreign Investment Among Industries and Source Countries

51. Distribution of foreign investment among industries is also quite unbalanced in Liaoning. The foreign investment in Liaoning is mostly concentrated in the second industry and the third industry, while investment in the first industry is very small. Among all the foreign investment, nearly 70% is in the area of manufacturing and real estate. Little money is invested in technology intensive industries like information technology and computer software. The proportion of investment in agriculture, forestry and animal husbandry is the smallest, which is only about 1.5%. As a result, foreign investment in Liaoning has a relatively large social cost. Many of the projects invested caused much pollution and consumed a lot of energy, while others belonged to the end of the industrial chain. Capital invested in the local real estate industry also helped create the real estate bubble. This was extremely detrimental for upgrading the industrial structure in Liaoning.

D. Redundant Construction and Overcapacity

52. In recent years, with the slowdown of investment, export and consumption growth, most industrial products in Liaoning are facing the problem of overcapacity. It is not only affecting the quality and efficiency of economic operation, but also preventing Liaoning from successful economic transformation and industrial upgrading.

53. Generally speaking, a capacity utilization rate of around 80% to 85% is a reasonable level. However, the capacity utilization rate in Liaoning is only around 70% to 75%, which is lower than the national average level of 78%. The problem of overcapacity is quite obvious in Liaoning’s pillar industries. In the steel industry, shutdown of production line happens quite frequently, especially for small factories. In the equipment manufacturing industry, because Liaoning’s product structure doesn’t match with the international market demand, orders for equipment manufacturing companies have declined for more than 20% in general. For the petrochemical industry production release, the oversupply of bulk chemicals is also becoming a severe problem.

54. Product structure matters a lot. On the one hand, there is little or no excess capacity in high-tech companies. On the other hand, enterprises with out-of-date technology and low value-added products often have obvious overcapacity problem. Unfortunately, most companies belong to the latter category in Liaoning. Take Shenyang Machine Tool (SMTCL) as an example, as the world's largest machine tool manufacturer, its main products still remain as low-end and middle-end products, competing in a market that is close to saturation with very low profit. On the contrary, its competitors in Germany and Japan are mainly focused on high-end CNC machine tools, with their imports to China growing every year.

55. This widespread problem of overcapacity is causing big trouble for enterprises. It not only makes it difficult for enterprises to manage their production and operation processes, but also further decrease their willingness to invest. This may further discourage Liaoning's industrial investment and put a downward pressure on the overall economy. So how to solve the problem of overcapacity is very crucial for Liaoning’s revitalization.

E. SOE Management

56. After nearly four decades of reform and opening up, most systems and mechanisms established during the planned economy period in China have evolved to fit today’s open market system. However, state owned enterprises(SOEs) are still playing a major role in the country’s economy, with most natural resources and superior opportunities in product and financial markets. Overall SOEs play a very complicated, both beneficial and conflicting, role in the economy and in their relationships with local enterprises and governments.

57. Many problems have emerged in SOEs in China recently, overcapacity, poor corporate governance and low labor productivity, to name a few. This situation is especially difficult in Liaoning. First of all, majority of SOEs in Liaoning belong to steel and coal industries, which are currently experiencing an economic downturn. Secondly, private sector in Liaoning doesn't have the ability to support mixed ownership reform. Thirdly, the historical problems, such as placement for laid-off workers, are difficult to solve.

58. As of 2016, Liaoning province's 1,751 SOEs accounted for 47% of the province's total corporate assets. Although they have greatly helped form the foundations of Liaoning's economy, they have also brought negative effects for the development of market mechanisms. In many cases, they occupy a dominant position in the market and form monopolies for certain resources and markets. During the process of developing an industry or implementing a policy, SOEs are often the first to take advantage of the resources, and draw resources away from the private sector. When the macroeconomic situation changes, SOEs are also likely to be protected by certain policies to remain dominant in some relatively competitive industries.

59. Currently, Liaoning's SOEs are struggling with their rising debts and declining demand from the market. This is also having a disproportionate effect on the local economy, depressing government revenues and making it harder to diversify. Liaoning announced 746 bankruptcy cases between 2008 and 2014, involving 315 million employees, with an average of 420,000 per company. More than three-quarters of them were SOEs. According to IMF, in 2015, Liaoning has among the largest group of companies with assets less than liabilities, which are also referred to as "Zombie Companies".

60. Therefore, accelerating the reform of the SOEs, with full consideration about their responsibilities on the provincial social-economic development, will be very crucial for Liaoning's reform in the future.

F. Port Management

61. Liaoning ports have played vital roles in Northeast Asian trade. In particular, Dalian port was China's seventh-busiest container port in 2016, handling 9.58

million TEU; its operations include a 450,000 ton crude oil terminal, the largest in the world, a 400,000 ton iron ore terminal, and an automobile terminal that handles 100 percent of foreign-traded vehicles in northeast China (see e.g. Mooney: 2017).

62. In recent months, however, ports in Liaoning have been saddled with various issues. In particular, Dandong Port, which lies at the North Korean border, had been a nexus of trade between China and other Northeast Asian nations, with annual throughput rising to 200 million tons in 2016 from 120 million tons in 2012 (Dong and Dong: 2017). However, three factors have raised significant challenges. Port activity has slowed down both due to China's overall economic slowdown, and to curtailed exports of refined oil and frozen exports of liquefied natural gas following increasingly stringent UN sanctions. Additionally, debts have mounted as the port has developed an artificial deep-water seaport at the mouth of the Yalu river; privately-owned port operator Dandong Port Group Co. has 46.5 billion yuan of liabilities, and ultimately defaulted on a 1 billion yuan bond in fall 2017 (Port Technology: 2017).

63. To improve management of such port-vicinity industry clusters, the Liaoning provincial government signed an agreement with state-owned maritime and transport conglomerate China Merchants Group in June 2017 to establish Liaoning Port Group (Port Technology: 2017). China Merchants Group, which had bought a 21% stake in Dalian Port in 2016, is to take a controlling stake in the new port group (Dong and Dong: 2017). The agreement integrates operations of Dalian and Yingkou ports, with potentially further mergers between Dandong, Jinzhou and Huludao into one integrated ports platform. Liaoning Port Group stated it would complete mixed-ownership reform by the end of 2017, and fully integrate other port management entities in Liaoning province by the end of 2018 (Chen: 2017). This consolidation of port operations along provinces falls in line with central government policy of restructuring the national economy by continuing to streamline and merge SOEs, with the ultimate goal of improving management, reducing competition, promoting economies of scale, and avoiding overlap of provincial port resources. This consolidation may place Liaoning ports on a more equal footing with Japan's Sanwan Sea, Germany's Hamburg port, and ports in Singapore. On a more global scale, this development of infrastructure links in Northeast China will also lay the groundwork for establishing a planned China-Japan-South Korea free trade zone going forward (Mooney: 2017).

G. Demographic Trends

1. Outflow of Talented Young People and An Aging Population

64. Low birth rate and fertility rate in Liaoning has led to an alarming aging society in the region, making it difficult to recover from economic slowdown. China's 2010 sixth national census shows birth rates in Liaoning was 1.03 percent, far below the national average rate of 1.5 percent and even lower than those in Japan and South Korea. Meanwhile, its total fertility rate was 0.74, ranked lowest among all the provinces except Beijing and Shanghai. Besides that, the median age for the Northeast region was 43 in 2015, which was 5 years higher than the country's average. 20.6 percent of Liaoning's population is 60+, 4.5 percent higher than the country's average. At the same time, only 11.42 percent of the population is 0-14, which means there is likely to be a lack of labor force in the future.

65. In addition to an aging society, there is the outflow of the province's labor force, which is bringing the population figure down. In 2015 and 2016, the resident population in Liaoning has decreased 90 thousand and 46 thousand respectively. Outflow of young talents is becoming a trend, according to a 2016 graduate employment report from Northeastern University in Shenyang and Dalian University of Technology, only about a quarter of university graduates in Liaoning chose to stay and work in the province, while the rest were mostly attracted to developed areas such as Beijing, Shanghai, Shandong and Guangdong provinces, where they can have more opportunities and a higher salary.

66. This demographic change has a severe impact on local economies. In order to change the situation, introducing new policies to retain the talent in Liaoning province is a very urgent issue.

V. Review and Assessment of RCI-related Issues and Policies

67. This section examines recent history of Liaoning's experience with RCI, including the role central government revitalization initiatives. From this basis, discussion will be extended forward to opportunities for participation in emerging initiatives, including national programs such as the "New Silk Road Economic Belt" and "21st Century Maritime Silk Road," as well as a variety of other PRC domestic, regional, and global commercial initiatives.

68. Three geographic perspectives on RCI are presented, reflecting different dimensions over which regional policy is promoted, namely the international, inter-provincial, and intra-provincial level. For each initiative discussed, an overview of the general cooperation mechanism and Liaoning's individual participation will be discussed.

A. International Level

1. Silk Road Economic Belt and 21st Century Maritime Silk Road

69. Silk Road Economic Belt and 21st Century Maritime Silk Road, or the One Belt One Road Initiative is a national strategy initiated by the central government since 2015, which aims at promoting international economic cooperation in the region. Liaoning's strategic role in this initiative is stated in the state circulate *Vision and Actions on Jointly Building Silk Road Economic Belt and 21st-Century Maritime Silk Road*, "we should give full play to Inner Mongolia's proximity to Mongolia and Russia, improve the railway links connecting Heilongjiang Province with Russia and the regional railway network, strengthen cooperation between China's Heilongjiang, Jilin and Liaoning provinces and Russia's Far East region on sea-land multi-modal transport, and advance the construction of a Eurasian high-speed transport corridor linking Beijing and Moscow with the goal of building key windows opening to the north."

70. There is huge potential for Liaoning to participate in this initiative. Among the 67 countries along the One Belt One Road, 66 are trading with Shenyang, which exports goods to 66 countries and imports goods from 46 countries. Last year, from January to November, Shenyang exported $1.236 billion to countries along the One Belt One Road, accounting for 31.7% of the city's total exports. Shenyang and the countries along the One Belt One Road have newly signed 22 foreign contracting projects with a total contract amount of $334 million, accounting for 28.6% of the city's total. Eight projects have been invested in seven countries, including India, Pakistan, and Oman, with a total investment of $85.7 million, with three projects each over $10 million.

2. Liaoning's engagement and achievements

71. The government work report adopted at the sixth session of the 15th National People's Congress of Shenyang put forward that Shenyang would implement a more active opening-up strategy, that Shenyang would actively integrate into One Belt One Road, improve the port and streamline the customs procedures, actively create "Shenyang port" and airport economic zone as hubs for opening-up, explore long-term operating mechanism for trains connecting "Shenyang-Manchu-Europe", "Shenyang-Manchu-Russia". Emphasis can be seen on construction of infrastructure, namely ports and transportations, and further trade integration.

72. According to officials in Liaoning government, Liaoning had made huge progress in constructing the three transportation channels which connect "Liaoning-Manzhouli-Europe", "Liaoning-Mongolia-Europe", "Liaoning-Bering Strait-Europe" by improving the infrastructure connection and network. Furthermore, Liaoning has developed numbers of overseas investment projects in countries along One Belt One Road, the investment in and the trade with which account for an important proportion of total overseas investment and total trade of the province.

73. Liaoning Pilot Free Trade Zone (FTZ), officially launched on 1 April 2017, is a provincial project launched by the central government, which forms part of the third batch of government-endorsed pilot FTZs, in a bid to expand opening-up and revitalize the Northeast region. According to the plan, the free trade zone will be built into a trade park with high-end industries, convenient investment and trade facilities, improved finance services, and highly efficient supervision methods within three to five years. Covering an area of 119.89 square kilometers, the free trade zone contains three districts in the cities of Dalian, Shenyang, and Yingkou.

74. According to the *Overall Plan for the China (Liaoning) Pilot FTZ*, as approved by the State Council, Liaoning FTZ should place institutional innovation as the core, draw up replicable and elsewhere-applicable experiences as basic requirements, to accelerate the reform of the market-oriented system and mechanism and actively promote the structural adjustment, to build a new engine for raising the overall competitiveness of the northeast old industrial base and the level of opening up. Main tasks include the transformation of government functions, further reform in investment, transformation and upgrading of trade, innovation and opening up in finance, structural adjustment in the old industrial base, and opening up and regional cooperation in Northeast Asia.

75. Liaoning FTZ has launched several packages of policies, presented in official documents including *Initial List of Policies in Shenyang Area of Liaoning FTZ* and *China (Liaoning) Pilot Free Trade Zone Regulations (draft for comment)*, including Negative List, Single Window, one-stop administrative permission, combining the licenses and other actions to simplify the registration procedure and promote the investment.

76. By the end of 2017, there were 21,641 newly registered enterprises in the Liaoning pilot FTZ, with a registered capital of 313.19 billion RMB. There were 274 foreign enterprises with a registered capital of US$5.27 billion, 519 enterprises whose registered capital exceeded 100 million RMB. Compared with other new FTZs, by the end of 2017, Liaoning FTZ has the most newly registered enterprises and the most newly registered capital. 99 innovative policies developed in other FTZs have been implemented in Liaoning FTZ and Liaoning has newly developed 29 innovative policies, of which 13 were recognized as the first in the country.

3. China-Northeast Asia Expo

77. The China-Northeast Asia Expo (CNEA Expo) is a nation-level exhibition for international cooperation in Northeast Asia approved by China's State Council, hosted by the Ministry of Commerce, the National Development and Reform Commission and the government of Jilin province. It is co-sponsored by several departments in central government as well as the local governments of Liaoning, Heilongjiang, and Inner Mongolia autonomous region. The expo is held annually in early September in Changchun, Jilin province.

78. CNEA Expo focuses on exhibitions, economic and trade cooperation, conferences and forums and cultural exchanges. CNEA Expo has been held 11 times since 2005, and the High-level Forum on Economic and Trade Cooperation in Northeast Asia has been held during 9 of these expos.

79. According to the official press release, at the 11th CNEA Expo which was held in September 2017, over 10,000 exhibitors and visitors coming from 116 countries and regions around the globe attended the expo. The number of high-ranking officials was double that of the previous year. Over 186 senior executives from Chinese branches of Top-500 companies and multinationals, along with 33 senior managers from top Chinese companies and 40 financial institutions and agencies were in attendance this year. The foreign trade volume reached $ 837 million, an increase of 4.5 percent year-on-year, with export and import orders totaling 689 million and 139 million, respectively. The domestic trade volume amounted to $374.64 million, up 6.8 percent over the previous year. A total of 235 contracts worth of 224.3 billion yuan ($34.26 billion) were signed during the expo, ranging from automobile and auto parts industry, the petrochemical industry, the agricultural products processing industry, the equipment manufacturing industry, pharmaceuticals industry, and health and service industry. Since the expo started in 2005, it has generated trade deals valued at more than $8 billion.

4. Greater Tumen Initiative

80. The Greater Tumen Initiative (GTI) (originally known as the Tumen River Area Development Programme) is an intergovernmental cooperation mechanism among four countries in the Greater Tumen Region: China, Mongolia, Republic of Korea and Russia, initiated and supported by the United Nations Development Programme (UNDP) since 1995; DPRK was one of the initial members. GTI focuses on the priority areas of transport, trade and investment, tourism, agriculture, energy, with the environment as a cross-cutting sector.

81. The core decision-making institution of the GTI is the Consultative Commission which is composed of Vice-Ministers from the GTI member governments. The Commission convenes annually to discuss key policy issues and cooperation projects among the GTI members and hosts joint sessions with strategic partners as well as local governments.

82. In addition, GTI works closely with other countries in Northeast Asia to promote further economic cooperation in the region, and hosts both the Northeast Asia EXIM Banks Association as a regional development financing mechanism, and the Local Cooperation Committee in support of cooperation initiatives among local governments in Northeast Asia. The 5th GTI International Trade and Investment EXPO was held on 21-24 September 2017 in Donghae City, Gangwon Province of ROK. The 4th GTI Environmental Board Meeting was held on 16 October 2017 in Beijing. The 10th GTI Tourism Board Meeting, co-organized by GTI Secretariat the Ministry of Culture, Sports and Tourism of ROK and hosted by Gangwon Province, was held on 31st August 2017 in Pyeongchang Alpensia Resort, ROK.

B. Inter-provincial Dimension

1. Four Northeastern Provinces and Region Chief Executive Consultation Mechanism

83. Suggested in Several Opinions of State Council on Further Implementation of Strategy for Revitalizing Northeastern China and Other Old Industrial Bases issued by the State Council in 2009, the Four Northeastern Provinces and Region Chief Executive Consultation Mechanism was officially established in 2010 on the first Joint Cooperation Meeting of Chief Executives of the Four Northeastern Provinces and Region.

84. The Four Northeastern Provinces and Region Chief Executive Consultation Mechanism is composed of the Joint Cooperation Meeting of Chief Executives, the meeting of secretary-general, and the daily work contact office. The Joint Cooperation Meeting had been held four times annually from 2010 to 2013. Several agreements on inter-provincial cooperation in Northeastern China were signed at each meeting.

2. Bohai Economic Rim

85. Bohai Economic Rim (BER) is the economic region surrounding the Bohai Sea, including areas in Liaoning, Hebei, Shandong, Beijing, and Tianjin. This region has undergone major economic and infrastructural changes and is an emerging economic powerhouse of Northern China, rivaling the Pearl River Delta in the south and the Yangtze River Delta in the east as one of the three economic regions in China.

86. Joint Meeting of Mayors for Regional Cooperation Surrounding Bohai, the cooperation mechanism in BER, has been held 15 times from 1986 to 2011; 40 cities in the region have become its member. Agreements have been signed and regional cooperation organizations have been created under this mechanism in many areas, including transportation, ports, energy, technology, industry, etc.

3. Cooperation Between East and Northeast Provinces

87. State Council issued a circular on March 17, 2017, to promote cooperation between east and northeast provinces. Authorities and State-owned enterprises (SOE) in the Northeast region are asked to incorporate Eastern region's experience into their reform to build a business-friendly environment. Leading capital in Eastern China will be encouraged to take part in SOE reform and invest in high-quality projects in northeast provinces through public-private partnerships (PPP). According to the circular, one-on-one partnerships will be formed between Liaoning and Jiangsu province. Ties of cooperation will also be set up between cities of Shenyang and Beijing, Dalian and Shanghai.

88. Based on the partnership, a symposium was held in Dalian on September 3, 2017, on cooperation between Shanghai and Dalian. On the same day, Shanghai and Dalian also held a signing ceremony for the cooperation and economic and trade talks and cooperation projects. More than 110 companies from Shanghai and Dalian, contracted projects of 57 related to modern agriculture, new energy, biological medicine, wisdom, ports and logistics, finance, urban construction from several aspects, such as cultural tourism investment of more than 170 billion yuan.

C. Intra-provincial Dimension

1. Liaoning Coastal City Economic Belt

89. As *Liaoning Coastal City Economic Belt Development Plan* was approved by the State Council in 2009, Liaoning Coastal City Economic Belt has then been recognized as a national strategic program. At the core of the Belt is the Five Spots in a Line, first suggested by Liaoning government in 2005, which consists of five industrial parks on the coast and the Coastal Highway in Liaoning. Liaoning Coastal City Economic Belt was the last coastal region in China that had not been developed as a whole in a planned way at that time.

90. In 2008, seven cities on the coast formed Liaoning Coastal City Economic Union as a regional cooperation organization with governmental administrative functions. Joint Meeting of Mayors in Liaoning Coastal City Economic Union has been held, at which cooperation agreements were signed. For example, Cooperation Agreement on Tourism Integration in Liaoning Coastal City Economic Union was signed at the Meeting in 2011 to promote the integration of tourism industry.

D. General Conclusions

91. After reviewing the current initiatives and relevant literature, this section will discuss our general findings regarding the current situation of RCI for Liaoning, including the significance of RCI for Liaoning, opportunities for Liaoning for RCI, and issues of Liaoning's RCI.

1. Significance of RCI for Liaoning

92. From the review of current initiatives and Liaoning's participation and achievements in RCI on every level including international level, inter-provincial level, and intra-provincial level, it is obvious that Liaoning's active participation in RCI on every level is significant and necessary for Liaoning to get out of the economic stagnancy and achieve further development.

2. Necessity of RCI

93. In the baseline assessment, we have learned the current situation of economic stagnancy of Liaoning and of the whole Northeastern China region. From the experience of the most rapidly developed regions in the country, namely the Yangtze River Delta Region and the Pearl River Delta Region, it is clear that economic development in current days highly depends on RCI on many levels, including interregional, intraregional, and international level.

94. Furthermore, Liaoning is not the only province facing this issue of insufficient RCI. As part of the Northeastern Old Industrial Bases, Liaoning shares similar difficulties and demands with neighboring provinces, Heilongjiang and Jilin. Inter-provincial cooperation in this region is necessary for each of the province and the region as a whole for higher level cooperation.

95. Thirdly, as reviewed above, RCI requires series of fundamental reform and innovation, which is also required for the general development of Liaoning's economy. Thus participation in RCI can be an opportunity for Liaoning to systematically resolve some long-standing and thorny problems in favor of sustainable development of local economy.

3. Liaoning's advantages in RCI

96. Meanwhile, Liaoning has many advantages and huge potential in promoting and participating in RCI on all the levels. First, Liaoning has the geographic advantage. Liaoning is the only province in Northeastern China that both borders other countries and has a coast and is located as a transportation hub in

Northeastern Asia, which is a huge advantage for RCI on the international level in Northeastern and Eastern Asia and also on the inter-provincial level in Northeastern China. Regarding the national strategy One Belt One Road, among the 67 countries along the One Belt One Road, 66 are trading with Shenyang, which exports goods to 66 countries and imports goods from 46 countries. As a coastal province, before the Liaoning Coastal City Economic Belt Development Plan was officially established, Liaoning was the last coastal region in China that had not been developed as a whole in a planned way.

97. Second, Liaoning, as one of the old industrial bases, has well-developed infrastructures for transportation on all levels of regional cooperation, including rails, highways, and ports. Furthermore, Liaoning has rich economic and industrial resources, especially in equipment manufacturing industry. Although reform and transformation of old industrial structure and old way of production are necessary for revitalization and sustainable development, these resources can also be utilized deliberately to constitute Liaoning's comparative advantage compared with other regions in China.

4. RCI Opportunities for Liaoning

98. Undoubtedly, governments on every level have noticed the significance of Liaoning's participation in RCI and have initiated abundant policies and strategies to promote RCI on every level. From the review of current initiatives, it is clear that there are enormous opportunities for Liaoning to further participate in RCI.

a) Favorable national strategy as background

99. As analyzed above, the national strategies of One Belt One Road, Pilot Free Trade Zone, and others, have been playing significant roles in promoting Liaoning's RCI and Liaoning's economic development on all levels as a strong support.

100. One Belt One Road as one of the three main national strategies, along with Yangtze River Economic Belt and Coordinated Development of Beijing, Tianjin, and Hebei Province, involves tremendous resources on both national and international level. Liaoning's advantages, as analyzed above, would allow Liaoning to hugely benefit from this historic opportunity to both promote its participation in RCI and achieve enormous economic development.

101. The other main national strategy, the Coordinated Development of Beijing, Tianjin, and Hebei Province, can also be expected to benefit Liaoning's integration to the inter-provincial regional economy as one of the main economic engines in Bohai Economic Rim.

102. Liaoning Pilot Free Trade Zone as one of the third batch of FTZs and the first FTZ in Northeastern China, has already attracted numerous investment both from domestic enterprises and foreign enterprises in the past 2017, which is among the best in the third batch of FTZs. It has also promoted institutional innovation and reform.

103. Liaoning Coastal City Economic Belt, RCI on the intra-provincial level, was also upgraded to a national strategy, would further serve as the engine of economic growth in the province.

b) Abundance of platforms on each level of cooperation

104. In addition to national strategies as background, cooperation platforms and mechanisms have been developed on each level of RCI.

- For international cooperation, there exist the Greater Tumen Initiative and related organizations for governmental cooperation and China-Northeast Asia Expo for economic cooperation.
- For inter-provincial cooperation, there is the Four Northeastern Provinces and Region Chief Executive Consultation Mechanism under which many agreements and organizations on inter-provincial cooperation have been formed.
- For intra-provincial cooperation, Liaoning Coastal City Economic Union was formed to promote cooperation and integration in Liaoning Coastal City Economic Belt.

5. Challenges to RCI for Liaoning

105. However, our review of current issues and policies suggests that there are significant problems and difficulties undermine opportunities for Liaoning to pursue RCI along all three dimensions. General problems, which are correlated with one another, include:

a) Local Protectionism and Competition

106. As pointed out in many studies on several initiatives on diverse levels of cooperation, local protectionism prevailing in many local governments on diverse levels is one of the main hindrances to genuine regional cooperation. According to the literature, such local protectionism can be seen in provincial governments in inter-provincial cooperation and municipal governments in intra-provincial cooperation.

107. Local protectionism may stem from an underestimation of the significance of RCI, lack of cooperative mindset, and a deep-rooted sense of competition. Local protectionism leads to ineffective and inefficient cooperation, governments withholding information from each other, and low-end market competition such as providing enterprises with simple benefits to attract investment instead of designing innovative policies. Low-end market competition may also lead to ignorance of sustainability in development, especially in terms of environmental protection.

b) Lack of Adequate Planning

108. Despite all the coordinating mechanism existing, lack of overall planning is another hindrance pointed out by various literature in the cooperation of Northeastern provinces, cooperation in Bohai Economic Rim, cooperation in Liaoning Coastal City Economic Belt, cooperation within Liaoning Pilot FTZ, etc. Several administrative authorities in the region may separately plan their industrial structure, branding strategy, infrastructure construction, etc.

109. Lack of overall planning in RCI leads to fragmentation and homogenization in the industrial structure which counteracts the benefits of complementary advantages and even encourages unnecessary competition and conflicts, as well as inefficiency in many aspects.

c) Inadequate Cooperation Mechanisms

110. Many cooperation and coordination mechanisms for RCI remain on a superficial level, which partly led to the lack of overall planning. Although many documents and agreements are signed at the meetings, the implementation and the results are merely recorded, reported, or assessed. Furthermore, meetings which constitute a significant component of some cooperation mechanisms such as Joint Cooperation Meeting of Chief Executives of the Four Northeastern Provinces and Region, Joint Meeting of Mayors for Regional Cooperation Surrounding Bohai, and Joint Meeting of Mayors in Liaoning Coastal City

Economic Union, have not been held for several years recently, and their official websites have not been updated soon after the mechanisms were established or the meetings were no longer being held.

d) <u>Insufficient Institutional Reform</u>

111. Insufficiency of institutional reform, which is recognized to be crucial to Liaoning's economic development in general, remains to be a hindrance to Liaoning's participation in RCI. Especially in Liaoning Pilot FTZ, institutional obstacles, showing up as excessive government intervention in the market, ambiguous or overlapping sphere of administrative authorities, etc., have negative effects on attracting investment and implementing innovative policies. Same in other RCI and in general economic development, more institutional reform should be adopted.

VI. Recommendations for Strategic Initiatives

112. The section distills the foregoing historical and forward looking discussion into a series of actionable policy recommendations for new RCI initiatives and related commitments that can contribute to revitalizing sustained and inclusive growth for Liaoning Province. Emphasis is on measures that are feasible, incentive-compatible for both public and private sector actors, and harmonious with central government domestic, regional, and global initiatives. Recommendations encompass the following seven general categories of provincial policy, all of which have already been identified as leading challenges.

1. Economic Structure
2. Attracting Foreign Trade and Investment
3. Managing Foreign Trade and Investment
4. Redundant Construction and Overcapacity
5. SOE Management
6. Port Management
7. Demographic Trends

A. Rebalancing economic structure

113. To better support the industrial subsector of the services sector, Shenyang can emphasize exporting labor-intensive services, which can fall under agriculture, hospitality, or mining. To this end, Shenyang's Hushitai Economic and Technological Development Zone, which focuses on agricultural products processing, can take the lead.

114. Liaoning should direct increased resources towards R&D efforts. Developed nations typically spend 2-3% of their GDP on R&D expenditures; while evidence from Fan and Watanabe (2006) indicated that, during China's peak growth of 9% from 1991 to 2000, R&D expenditures nationwide remained at 1.1% in 2001. The manufacturing sector can develop further via increased R&D into sensors, management systems, and industrial software, all of which are pegged as key technologies to develop under the Made in China 2025 initiative.

115. Northwestern cities, such as Tieling, Chaoyang and Fuxin, can experience increased economic growth via active rural-urban integration with Shenyang and cities along the coastal belt.

116. Coastal cities, such as Dalian, should play to their strengths in tourism, consulting, and information services.

B. Increasing Foreign Direct Investment into Strategic Sectors

117. To better attract and/or direct FDI into the strategic sectors, the government can consult the 2013 Catalogue of Advantage Foreign Investment Industries in Central and Western China to find Liaoning's 18 advantage industries.

118. For example, development and production of key parts of medical equipment falls under one of the 18 industries listed. By further attracting FDI into the medical equipment manufacturing industry Liaoning can play to its strengths and boost its involvement and commitment to the Made in China 2025 (MC2025) blueprint, which lists biopharmaceuticals and advanced medical products as one of ten key industries. FDI into this industry is supported by the central government; the National Development and Reform Commission has already stated its intent to draft policy that will grant foreign investors the same treatment as domestic companies regarding the delivery of MC2025 (see Dai:2015).

119. R&D expenditures as a part of GDP and FDI flows are linked. As shown in four Central and Eastern European nations, an increase of R&D expenditures in GDP results in a substantial increase in FDI. Liaoning's provincial government could draft policy supporting greater R&D expenditures in its 18 advantage industries and Made in China 2025 industries such as medical equipment, power equipment, and automated machine tools.

120. It would do well to strengthen the institutional environment in a manner that draws its level of quality closer to that of the source country's institutions, as this can significantly increase FDI flows (Bellak et al: 2016). The creation of such a business environment dovetails with the following section.

C. Promote a more open, competitive, and transparent business environment in the Liaoning Free Trade Zone

121. Liaoning should use the newly approved Liaoning FTZ to facilitate investment and trade to the maximum extent. This can in five decisive ways.

- Pushing a comprehensive upgrade of sea, land and air transportation
- As the “negative list” shortens, lift restrictions on investment in high-end manufacturing to allow further opening up
- Form a comprehensive, streamlined and efficient management system for the administrative committee and continuously improve the business environment of the FTZ
- Let the construction process of the free trade zone itself create more development opportunities in the fields of commerce, trade, finance and professional technical services.
- Eastern provinces, such as Jiangsu Province and Shanghai, can continue to serve as blueprints for success in managing FTZs.

D. SOE Management

122. The challenges of effective SOE management are numerous and diverse, but from the perspective of this study, we recommend three areas for strategic state enterprise reform:

- Liaoning SOEs should continue to follow national policy blueprints calling for determined consolidation of SOEs through mergers and acquisitions.
- Non-core SOE assets should be disposed of for the benefit of the market economy and responsible fiscal management.
- SOEs should pursue mixed ownership reform, increase employee incentives, and expand job-training programs for laid-off workers so that they may participate in industries that fall under the Made in China 2025 purview.

E. Demographic Initiative

123. To strengthen Chinese entities' ability to attract and retain talent, the Liaoning provincial government can consider a comprehensive human capital development strategy, including the following initiatives:

1. Build small business incubators and design venture funds in universities and institutes to promote entrepreneurship.

2. Give incentives for college graduates who are employed in Liaoning province, such as cheap public rental, preferential housing loans, reduce student loans, etc.

3. Encourage employers to offer higher salaries, stock shares or sales commissions to talented individuals, particularly junior workers with superior educational attainment.

4. Liaoning can invest in and redesign higher education by either creating new majors, further developing relevant existing majors, or optimizing the vocational education system. It can optimize the vocational system by integrating information technology and a curriculum that employs hands-on training via virtual and/or simulation methods. Such a method has been successfully implemented in Romania, and can be applied to Liaoning universities as well.

F. Additional Recommendations

124. **Connect to the Belt and Road Initiative (BRI)** - Given its unique geographical location, goods from Southeast Asia and the southeastern part of China can be shipped to Liaoning (Dalian) and transported by rail to Russia, Central and Eastern Europe, and beyond. This can cut journeys from around 35 days by sea to just 15 days. Liaoning should seize the opportunity of Belt and Road Initiative in the following ways:

125. To further improve its port and inland transportation infrastructure by developing a more complete sea-rail multimodal transportation system. By cooperating with Jilin and Heilongjiang, Liaoning can help build the China-Mongolia-Russia Economic Corridor under the Belt and Road Initiative.

126. By making full use of its coastal ports, Liaoning can also promote maritime trade with neighboring Russia and Korea. Besides developing export-oriented industries by taking advantage of its favorable location, Liaoning can also encourage the local companies to go global by investing more in countries involved in the Belt and Road Initiative.

127. Bohai Rim Integration and Cooperation - The Rim connects Beijing, Tianjin, Hebei, Liaoning, Shandong, Shanxi and Inner Mongolia, and has been labeled as one of China's economic growth poles. In a September 2015 circular (Xinhua: 2015), the State Council called for:

- Infrastructure mega-projects to establish inter-regional transportation, energy, water resources and information networks
- Collaboration towards decreasing air pollution and improving the nearshore marine environment
- Increased industrial cooperation
- Greater role of the market in determining resource allocation
- Urban-rural integration

128. The Bohai Rim faces a number of significant challenges, including production overcapacity, administrative barriers, resource waste, and excessive competition over cooperation. Involuntary unemployment is also very high. Addressing these may require the provincial governments to cooperate on reducing information asymmetry, better allocating resources, and matching insufficient labor market services with higher demand. Port Management

129. Beyond streamlining operations and reducing redundancy, Liaoning port-vicinity industry clusters can meet both a new growth front and public health challenges by tackling ever-present environmental challenges. Pollution levels in ports across China are unmonitored and unregulated; this contributes significantly to the over 1 million annual air-pollution related deaths across China (NDRC: 2016). To move away from Liaoning's history as China's early industrial capital, with production has been rooted in energy and pollution intensive industries, it is advised to impose and enforce emissions regulations across port-vicinity industry clusters. Furthermore, increasing investment in both clean energy and production will support job creation, as will the building of industrial parks in port-vicinity industry clusters that are driven by eco-friendly growth models.

130. To increase trade facilitation in port-vicinity industry clusters, several additional steps can be taken, including expanding RMB cross-border use, enhancing the single window for trade method, and engaging in further overall supply-side structural reform.

VII. Conclusions

131. This report is based on an extensive review of policy experience and research on RCI's past, present, and potential contributions to sustained economic growth for Liaoning Province. Based on this review and our own analysis of the challenges and opportunities facing Liaoning, and drawing upon relevant precedence elsewhere significance, we presented above a brief set of recommendations for Liaoning policy makers. [4] Regional cooperation and integration on all levels, including international, inter-provincial, and intra-provincial level, overs enormous potential for Liaoning to revitalize and sustain inclusive growth of this economy.

132. Based on relevant experiences of other regions' in the PRC and elsewhere, more determined RCI is essential for Liaoning and the surrounding area to achieve greater economic growth through restructuring, diversification, and commitments to higher productivity and human capital development. Liaoning retains many important advantages in terms of geography and resource endowments that can support a variety of ambitious existing RCI initiatives. There are already many opportunities for Liaoning to seize to participate in and promote RCI, including existing national strategies and established mechanisms for coordination on all levels of RCI. These are discussed in more detail above, but what is needed generally is more institutional commitment to external partnership.

133. Events the last decade clearly show that going it alone, or resisting economic change, will only further isolate Liaoning's economy and deny opportunities to its people. A single province of China cannot resist the forces of national and global economic modernization without losing its primary growth drivers – investment and talent. As we have seen dramatically in recent years, the Liaoning government cannot itself replace the financial and human capital lost to an exodus of investors and skilled workers. Their only real option is to create conditions that will attract such assets back. This will require a critical examination and disciplined reform of current practices, weeding out policies that undermine competitiveness, innovation, and institutional adaptation in both the public and private domains. Judging from the dramatic adversity of current

[4] More detailed recommendations will be presented in a strategic report that synthesizes the lessons of all five Technical Reports in this series.

conditions, it is clear that the most ambitious and sustained reforms will be needed to return Liaoning to its former economic strength, realize its great economic potential, and secure sustained prosperity for all its people.

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