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The Developmental Chronicles of China's Northeast

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INTRODUCTION

After the opening up and reform period of the late 1970s, China's Northeast, the once so-called "Manchuria", has gradually become the Chinese version of a "rust belt", which, ironically, is a term initially coined in order to describe the U.S.'s industrial declining area in the northeast of the country. This Chinese region is economically outdated compared to the special economic zones and other coastal areas, and it is oppressed by the presence of many decadent state-owned enterprises, by a high level of unemployment and of brain drain, and by lack of openness, innovation and new technologies. Nevertheless, at the beginning of the 19th century this area was the crux of the first real form of industrialization in Eastern Asia, and its huge amount of resources and economical potential even drew both Russia and Japan's expansionist interests. Essentially, Manchuria's economy once had a critical role in the geopolitical competition among various countries in the Far East, and later it also became the industrial backbone of Mao's China. Despite this, after China's opening to the outside world, its economy has become the representation of an obsolete, mediocre economical system and its historical inheritance has little by little lost its importance. Since the beginning of the new millennium, however, the central government was forced to deal with the declining condition of the Northeast region and hence tried to restore the economic situation of this area with new "revitalizing" policies.

Therefore, this thesis aims at analyzing and exposing the reasons why the Northeast has become one of the most backward regions of China after the opening up and the introduction of the Chinese "socialist market economy". Moreover, it will be investigated whether the situation in the area has effectively been changed by the plans enacted by the government from 2003 on.

In the course of the last three decades or so, many studies have been conducted on the so-called "Northeast Phenomenon", which is the name given to the circumstance of deterioration that began to characterize the region since the beginning of the opening up. What was discovered in these studies was that, over time, the national industrial base status together with the one of source of resources of the Northeast have actually been like a double-edged sword. Indeed, on one hand they

represent the main advantages of the region and also its hallmarks, but unfortunately on the other hand they have also turned into the main underlying problems which are undermining its success nowadays. Indeed, the issues that are currently stopping the Northeast from becoming a developed and advanced area economically are still the same ones that the region has been dragging on for over a century. This is why it was necessary to analyze the whole economic history of China's Northeast.

From the mid 1800s until today, this region has been through a lot and has thus matured a unique history of economic development.

In the first chapter it is substantially explained how Manchuria was created. It all began with the Treaty of Tianjin of 1858, through which the British obtained the permission of building the port of Newchwang, which in turn officially opened the then uncontaminated region to the outside world. Then, during the last decades of the century both Russia and Japan developed by degrees a big interest in the region because of its economic and political potential. Thus, these two countries, amidst others, gradually began to acquire concessions of important strategic areas from the decadent Chinese dynasty. Among all projects, maybe the most important one was the creation of the Manchurian railway system, which was forecasted to substantially improve the region's economic system. After the Russo-Japanese War (1904-1905), the strong presence of Japan in Manchuria became reality. In that period, the Japanese began to build the industrial system that was going to make Manchuria great. Afterwards, the Qing Dynasty fell, and the new governments of Zhang Zuolin and then Zhang Xueliang in the Northeast region also contributed to the construction of Manchuria's competitive advantage through many innovative economic projects. Later on, Japan began its conquest of Manchurian territories in 1931, and the well-known Puppet State of Manchukuo was founded. In the first few years of colonial rule, Japan experimented a “controlled economy” in Manchukuo, but then with the outbreak of the Second Sino-Japanese War in 1937 the long-term industrialization project in Manchuria was no longer Japan's priority. From that moment on, Manchukuo was forced to basically only provide resources for Japan’s war against China. Just like the Soviets did before them, the Japanese suffered the disease of “investment in grandiose projects” in Manchuria and at the same time they weren't flexible enough in diversifying their objectives. Besides, their wartime strategy left Manchuria with a half-built heavy industrial system. Anyway, by the end of 1945 the Manchurian heavy industrial system was undoubtedly a fascinating example of

Japanese empire building. Not surprisingly, after the end of the war the Northeast became the center of postwar struggle among the Chinese Nationalists, the Chinese Communists, the Soviet Union and the U.S., as they all wanted to take over the industrial state built by the Japanese in Manchuria.

Next, the second chapter deals with the Maoist era and hence how China's Northeast developed from 1945 to 1976. At the end of the war, the region was occupied by the Soviets who helped China and the U.S. to free China from the grip of Japan. Stalin, however, wanted some sort of compensation or "war trophy" for such effort. As a result, between the end of 1945 and 1946 several industrial machineries, inventories of finished products and raw material stockpiles were stolen and transported from Manchuria to the USSR. Thus, when the Chinese were able to take back Manchurian territories, they found out that the region's cutting-edge heavy industrial system had been greatly damaged. During the civil war, both the Nationalists and the Chinese Communists enacted some form of restructuring of the industrial system of the Northeast, especially since it was basically the only one present in China at the time. After the founding of the People's Republic of China in 1949, the new leadership recognized the Northeast as the number one priority. As a result, the Manchurian industrial structure was changed during the First Five-Year Plan period from the military-industrial structure built by the Japanese to an industrial base which was going to drive the whole nation. The restoring and the upgrading of the north-eastern industrial base was also assisted by 57 projects supported by the Soviet Union. Nevertheless, just when the Northeast was about to reach the same level of economic stability of the Manchukuo's days, if not better, the "honeymoon" between China and the USSR suddenly ended, and unfortunately at the same time the Great Leap Forward occurred. The 1960s were initially characterized by industrial adjustments of the Northeast's system that in reality were like putting a band-aid on a broken leg, and then the Cultural Revolution portrayed the rest of the Maoist era.

The third chapter begins describing how the Northeast has become one of the most decadent regions in China in the first 20 years after the reform and opening up. After the Third Plenum of 1978, reforms and open-door policies regarding industry were conducted much more cautiously compared to the ones regarding the rural sector. However, during the 1980s state-owned enterprises (SOEs) began to show their low efficiency and in essence all their problems came to a head. The Northeast was the oldest industrial base of China, and thus it was filled with SOEs. As a result, the

region suffered a lot on one hand of the initial lack of reform policies and on the other of the competition brought by the changing economy in the country. Afterwards, in the 1990s the already unstable situation of the region was further shocked by the implementation of reforms regarding the state-owned economic system. After that, in 2003, the central government decided to take charge of the situation and to promote the "revitalization plan for China's Northeast". The plan definitely had some positive results, and the so-called "old industrial base" was able to achieve some forms of renovation in the following years. For example, the tertiary sector which before was basically nonexistent was built and promoted both at the central level and the local level. Moreover, the macro layout of the region was modernized, and many interesting projects were enacted in different areas of the Northeast. In addition, in order to better show different forms of reform and innovation of the region, four major north-eastern cities, i.e. Shenyang, Dalian, Daqing and Jilin, are described in detail, as they represent four different paths of revitalization which are strongly connected to their previous economic history.

Last but not least, the fourth chapter initially displays an assessment of the results of the revitalization plan, and also unveils what issues are causing the arrest of a further development of the region. Indeed, around 2013 the Northeast region has once again experienced a period of economic downturn, which some scholars named the “new Northeast phenomenon”. After that, some possible suggestions for a genuine change of the Northeast's economy are exhibited. In addition, there is an analysis of the role of Russia in the developing process of the region in the last two decades that shows how this foreign country could once again help China restore the area just like it did in the 1950s. Finally, some interesting and promising projects that have been implemented in the last few years are pointed out, especially how the Belt and Road Initiative together with the establishment of a Free Trade Zone in Heilongjiang province could lift the whole Northeast up again. In the end, within the conclusions there is the exhibit of three recent studies regarding the first effects of the COVID-19 pandemic to some companies in Jilin province, to the overall agricultural system of Heilongjiang province and also to some small-medium enterprises of Liaoning province.

Therefore, over the course of the last 150 years or so, the Northeast passed from being the safe-guarded "original land" of the Qing Dynasty, to a land contested among different foreign powers, to a puppet-state ruled by Japan, to the driving industrial base of the whole Maoist economic system,

and finally, to one of the most declining Chinese regions. Through this analysis I think it was properly shown how the peculiar history of the Northeast strongly affected not only its evolution over time but also its development nowadays. As a matter of fact, since the very first day of construction of the north-eastern industrial base, and hence of its whole economic system, a deeply dysfunctional series of events has begun. Indeed, it all begins with good plans and good intentions, the investment of huge amounts of money, and the building brick by brick of the project. But then at a later time conflicts of every nature appear (such as uprisings, wars, occupations, famines, neglect, etc.), funds end up, and the final result is either an incomplete or a substandard product that will certainly need some kind of renovation in the near future. Thus, at the founding of the RPC, the industrial base of the region had actually already been through a lot of stages of building and dismantling and was basically going through a never-ending process of construction. After that, during the Maoist era the actual efforts concerning the maintenance of the industrial base were not enough, and policies like the Great Leap Forward and the Cultural Revolution certainly did no good. After Mao's death, the lack of regard of the Northeast's problems together with the government's reluctance to reform and "let go" all of its state-owned enterprises finally made the region decadent and outdated. Generally speaking, every heavy industry based industrial system and all the ones based on non-renewable resources are destined to fail over time. However, the peculiar way the north-eastern industrial base was developed and treated over time definitely didn’t slow down this process. The Northeast has thus been dragging the same old problems over decades that mainly concern the large proportion of heavy industry, the dominance of state-owned enterprises, the extreme dependence of the region on both its energy resources and large-scale investments, the lack of innovation and the tendency towards negligence, the low degree of opening up. The hope for the future is that further substantial reforms equipped with the ability of undermining these long-standing problems will be implemented in China's Northeast.

前言

19 世纪初，在东北地区诞生了中国历史上第一种真正意义上的工业化形式，其巨大的资源和经济潜力甚至吸引了俄罗斯和日本的殖民主义前来瓜分利益。在新中国成立初期，东北是全国最早被解放的地区。从此以后，东北便成为了中国最重要的重工业基地，它的经济处于全国领先水平。但是，改革开放以后，东北地区的经济则出现了增长相对滞后的情况，其在全国的经济地位也开始呈下降趋势。关于这点，近年来学术界多采用来自美国的“锈带”概念来描述东北的经济发展情况。事实上，从八九十年代开始，中国的经济发展重心便开始转向以经济特区为先导的东南沿海一带。也就是说，东北三省并没有被纳入国家战略规划，这导致其对外开放步伐较慢，并且东北工业基地早已呈现出产业老化和资源枯竭的趋势。为此, 自千禧之年以来，东北老工业基地的振兴便成为了全国关注的重大课题。为了实现东北经济的腾飞，在 2003 年，东北地区振兴战略正式启动。

因此，本论文的目的是分析东北经济滑坡的原因。同时，也旨在评价政府颁布的各项举措是否有效地改变了东北地区的局势。

三十年以来，权威媒体、政界和学界对东北地域发展所面临的困境展开了持续性的调研，先后提出了“东北现象”的概念。东北的问题主要包括涉及其地域全面发展的一系列根本性问题。的确，东北地区数十年来一直面临着同样的问题。所以，为了正确分析东北经济快速滑坡的原因，有必要重新梳理和审视东北经济在新中国国民经济发展中的历史地位、发展历程和发展方式。

从上世纪 80 年代中期直至今天，东北地区经历了重大变化，因此这个地区有着独特的经济发展历史。本论文第一章主要介绍了“满洲”的发展史。清代初期，东北这一清朝龙兴之地被满清政府封禁，因而得不到开发。后来，第二次鸦片战争时期，清政府被迫签订《天津条约》。此条约让英国人获得了建立营口港口的许可。所以，营口港口正式被开辟为对外通商口岸。此后，东北地区便开始对外开放了。后来，19 世纪末期，由于东北地区的经济和政治潜力，俄罗斯和日本都对满洲产生了兴趣。从那时起，两国便逐渐开始争相控制满洲这一重要的战略地区。结果是，俄罗斯帝国建设了满洲的铁路网，日本成为了满洲最重要的出口国。日俄战争以后，由于日本获胜，中国被迫同意放弃部分满洲的领土。清末以后，张作霖和张学良为东北地区的现代化建设作出了卓越贡献 。在 20 世纪 20 到 30 年代，二人作出了鼓励农业生产 、扶持民族工业、推动经济发展并加强基础设施建设、鼓励出口、发展对外贸易、推进军队现代化建设、提高国民素质等重大政治举措。与此同时，日本从侧面上也促进了满洲的经济和贸易发展。自那以后，东北迅速成为全国最具活力的新兴地区。再后来，1931 年日本打下东北地区以后建立了“满洲国” ，在此殖民统治期间经济增长较快。可是，1931 年，九一八事变爆发了，中国开始了长达十四年的抗战，作为日本殖民地区，

满洲国一度被迫为日本对华战争提供经济支持。一边，像苏维埃一样，日本人在满洲国实行了大量的“投资项目”；另一边，由于日本的战时策略，战后在东北地区遗留了许多尚未完善的重工业体系。却是，时至 1945 年，东北的重工业体系无疑十分具有吸引力。为此，战后有众多列强意图攫取东北地区。

第二章　本章主要讨论毛泽东的功绩。战后，苏维埃最初占领了东北地区，因为他们帮助中国驱逐了在东北的侵华日军。然而，斯大林却想要谋取某种战利品。所以，1945-1946 年间，几台工业机器、成品库存、工业原材料等从东北运输到了苏联。因此，东北的新锐工业体系被严重损坏了。后来，国共内战时期，无论是国民党人还是共产党人，都设法试图修复东北工业体系。中华人民共和国成立以后，东北地区成为国家重点建设的工业基地 ，并在“一五”时取得了巨大成就，为新中国工业体系的建设奠定了坚实的基础。那时，国家为推动工业化，接受了苏联援建的 156 项重点工程。值得一提的是，在众多重点工程中，有 58 项落户东北。如此表明，在新中国成立后的第一轮大规模投资中，东北地区是最受重视的地区之一。按照当时国家计委 、国家经委的设想，东北工业基地到 1960 年前后就基本能够建成。为此，“二五计划”实施期间，东北就不再是投资的重点地区了。但是，“大跃进”运动从实际上改变了国家的最初设想 。遗憾的是，“大跃进”的实际执行的结果却是“力不从心, 难以为继”。“大跃进”运动中, 重工业特别是钢铁工业畸形膨胀, 导致了国民经济失调。并且，在 1960 年中国和苏联结束了合作关系。所以，“大跃进”运动的失败所带来的经济危机波及全国。 为此，东北被迫开始了长达 5 年的经济调整期。与中国其它地区相比 ,东北地区经济矛盾更为尖锐，更需要得到调整。在 1961 年, 政府开始了国民经济的战略性调整 。那时东北地区的工业调整经历了一个曲折、复杂的过程。无论如何，东北地区在 1965 年末就已基本实现了工农业的恢复。但是，东北工业却没能迈上一个新的发展台阶，加之东北工业整体设备革新 、技术改造等工作未能提上日程。因此，东北整体工业技术水平逐渐同天津 、上海等先进地区拉开了距离。最后，从 1966 年到 1976 年，文化大革命描绘了中国的经济和社会风貌。

第三章 本章揭露了东北地区在改革开放后是如何成为中国的“锈带”的。1978 年，邓小平在十一届三中全会筹备会议上发表讲话。此后，中国便迎来了改革开放的新时代。起初，比起农业政策，有关工业的政策要谨慎得多。到 1980 年，国有企业的生产能力开始表现出效率低下的问题。由于东北地区是中国最古老的工业基地，因此那里拥有众多国有企业。同时，东北工业中的矛盾和问题不断地累积和沉淀, 由此成为改革开放后东北地区经济落后的主要原因。另外，东北三省没有被纳入国家新战略规划，中国经济体制也由计划经济向市场经济转型，企业间的竞争机制、价格竞争等都为东北工业体系带来了严峻的挑战。为此，当时东北地区和其工业产业呈现出“老牛拉破车”的局面。在 20 世纪 90 年代，有关国有企业的新改革付诸实施，人们开始被东北持续不稳定的局势所震惊。的确，在东北三省出现了所谓的“东北现象”。21 世纪初，中央政府意识到了东北需要某种振兴战略。因此，2003

年，国务院发布了《关于实施东北地区 等老工业基地振兴战略的若干意见》，标志着东北地区振兴战略正式启动。东北振兴的目标就是将东北的发展置于国家发展的战略高度，消除不利于经济发展和加快体制创新的一系列因素。振兴战略实施十年以来，政府有针对性地出台了若干扶持政策，实现了东北地区经济社会的全面发展。为了更好地展示东北地区不同形式的改革和创新，本章详细描述了东北的四个重要城市：沈阳、大连、大庆和吉林的改革和创新模式。这些城市根据其从前的经济发展历程，为我们展现了四条不同的振兴之路。

第四章　本章首先显示了对振兴计划结果的评估，揭示了导致东北地区发展进一步停滞的问题。的确，2013 年以后，东北地区再次经历了一个经济下滑的时期。有的学者们把那时候的东北问题称为“新东北现象”。这是因为 2014 年和 2015 年主要经济指标不理想，经济增长呈现出“断崖式下跌”。于是，面对“新东北现象”，国务院进一步积极推动东北老工业基地的发展方式。“新东北现象”的出现表明了东北经济发展的关键结构、体制与机制障碍未得到根本解决。因此，东北振兴的关键仍在于解决东北工业体系的核心问题。不少研究指出，东北政府所主导的重化工业，逐步在地区经济发展中形成一系列结构性问题，同时导致了地区经济发展的严重体制和机制障碍。东北三省工业经济下行原因的共性方面就是：在东北地区重化工业比重大，高新技术产业发展滞后；国有经济占据主导，民营经济比重过低；东北地区过度依靠投资拉动；创新体制和能力不足；对外开放度低及结构性问题导致缺乏改革动力。因此，本章里提出了一些有关真正改变东北经济的可行性建议。最重要的几项建议为：首先要优化政府服务并打造良好营商环境；二是加速对外开放步伐；三是进一步深化和加快国企改革、推进市场化和大力鼓励民营经济的发展；四是促进科技创新和培育技术创新生态系统。此外，本章还讨论关于远东地区的俄罗斯和中国近几年的合作关系。实际上，也许俄罗斯可以像上个世纪 50 年代时那样再次帮助中国恢复东北地区的经济。另外，在本章中还指出了最近几年实施的一些有趣且充满活力的项目，特别是“一带一路”和在黑龙江省建立自由贸易区的政策。这两个新政策很有可能会推动东北的进一步发展。最后，结论里有三项有关新冠肺炎所带来的效应的研究。第一项研究阐述了吉林省 336 家企业的情况，第二项则讨论黑龙江的农业发展概况，第三项概述一些辽宁省中小企业的情况。

笔者认为，上述类型的分析可以有效地表明东北的独特历史不仅对它的工业化的长期演变产生了巨大影响，也对目前的发展起到了至关重要的作用。实际上，从东北工业基地第一天建设开始，一系列功能失调的活动也相继层出不穷。起初这一切都以合理的计划为基础并有着明确的目的，大量的投资和项目也逐步开始付诸实际。但是之后，除了资金短缺之外，各种冲突都相继出现（例如 暴乱、战争、占领、灾荒等）。这些问题最终导致东北工业基地基础薄弱发育不良。确实，从 19 世纪代中期到 1949 年，东北的工业基地经历了一段似乎永无止境的建设过程。毛泽东时代，对于工业基地实际进行的定期技术维护还不够完善，建设过程中也并没有考虑到技术创新问题。此外，“大跃进”和“文化大革命”的政策更没有为东北工业体系带来发展。毛泽东去世后，政府对“东北现象”的漠视以及国有企业的初步改

革僵化，最终使东北工业变得老掉牙且落后。一般来说，随着时间的推移，每个以重工业为基础的和所有以不可再生资源为基础的工业体系注定会走向失败，而东北工业基地虽然有着独特的开发方式和经过，但却是因为管理不善从而加速了它的衰落。因此，东北几十年来一直存在着同样的老问题，这是“东北现象”的出现及历史发展导致的必然性。对于东北地区，未来的希望是，大力在中国东北实施进一步的实质性改革，以消除这些长期存在的问题，将东北区域的经济社会发展问题提高至中国新时代发展的总体战略高度上，以实现发展模式的转型和创造性的转换。

FIRST CHAPTER

THE CREATION OF MANCHURIA'S POWER AND MANCHUKUO'S TIMES

1. What is "Manchuria"?

The region that people nowadays simply call "China's Northeast" has been labelled with different titles through the centuries. Looking from the Chinese point of view, for most of the imperial period it was simply known by the names of the various tribes who inhabited it. On the other hand, before the 18th century, Western knowledge of this area was extremely limited: the area was known simply as part of the "Chinese Tartary", the prevalent term used for all Chinese territories. For centuries "Tartary" was the general name for the unknown territories of Central and Inner Asia. In 1737, Louis XV's geographer Jean-Baptiste Bourguignon d'Anville in his French version of the famous Kangxi Atlas[1] (*"Map of a Complete View of Imperial Territory" Huangyu quanlan guan* 皇輿全覽館) named "*Nouvel atlas de la Chine, de la Tartarie Chinoise et du Thibet*" (New atlas of China, Chinese Tartary, and Tibet), also defined the Chinese Empire as "Chinese Tartary". The term was actually absent from the original Kangxi Atlas of 1718, which was made with the help of the Jesuit missionaries in China[2]. This showed in a way the still inadequate understanding of the geography of the area in the Western world. Nevertheless, in this important historical document an improvement was reached concerning the northeast area: on the Paris maps, the Machu homeland was baptised as "*Ancien pays des Mantcheou qui ont conquit la Chine*" (Ancient country of the Manchus who conquered China) [3]. This achievement was actually the result of a process enacted by the Qing court's wish to defend the Manchu identity and to give birth to a "Manchu regionality".

[1] ZHANG Qiong, *Making the New World Their Own: Chinese Encounters with Jesuit Science in the Age of Discovery*, Leida, Brill Academic Pub, 2015, p. 264
[2] ELLIOT Mark C., *The Limits of Tartary: Manchuria in Imperial and National Geographies*, The Journal of Asian Studies Vol. 59, 2000, p. 604-646
[3] *ibidem*

The Kangxi Atlas of 1718 was the product of two intersecting urges: first, the wish to enhance Manchu identity by recording Machu place, and second the necessity to define the extent of Qing imperial space. Actually, speaking about the Manchus, the sense of who they were was very much wrapped up in their sense of where they had come from. Once they took over China and the period of the Qing Dynasty began, the court believed it was necessary to remind itself and its people of their geographic roots. In 1671 the young Kangxi emperor started the tradition to visit Mukden[4] to pay respects to the Qing founders. In 1740, Qianlong emperor even put a decree forbidding Han emigration in the Manchus' region into action, in order to better preserve the Manchu culture. Such ban remained in effect until the early 20th century. In essence the Qing Dynasty attempted for centuries to cultivate Manchurian regionality[5], and the Kangxi Atlas is maybe the most important product of such policy. In fact, over time this cartographic project made a huge impact on European awareness and led to the renaming of China's northeast area first as "Manshu" and then ad "Manchuria" around the turn of the 18th century.

The first occurrences of Manchuria as a toponym appear in the Japanese work "Hokusa bunryaku" of 1794 by Katsuragawa Hoshu. Here the "Manshu" term is with no doubt a place name and not a tribal name. This Japanese mapmaking came under the influence of European, especially Russian, maps starting in the later 1700s. In turn, as already mentioned above, these Western atlases were swayed by the Qing's Atlas of 1718. So, we can say it was Qing's work of promoting Manchu's cultural uniqueness that resulted in the spread of the usage of the term as a toponym. By the end of the 1830s, "Manchuria", written variously as "Mandshuria", "Mantchooria", was emerging also in United States atlases, and had entered common usage in English and other European languages.

The term "*Manzhou*" 满洲, which is acknowledged to function solely as an ethnonym of the Manchus, was eventually adopted as a place name also in the Chinese language. This happened in a well-known geographical collection (*Xiaofanghuzhai yudi congshu*) by the author Gong Chai in 1877. Twenty years later prominent Qing officials also started to use *Manzhou* in their own writings. Furthermore, the term was used as a toponym in early 20th century Chinese-made maps of China,

[4] Mukden is the "Manchu name" for Shenyang 沈阳, which is the provincial capital of Liaoning province
[5] *ibidem*

and during the 1930s it was used in the Chinese Communist Party propaganda and by important communist figures like Liu Shaoqi and Zhou Enlai in their official correspondence. Basically, *Manzhou* was on its way to becoming a regular toponym in Chinese. But then the Japanese colonization and the Civil War came into place, and by the early 1950s the term seemed to have receded into the historical vocabulary. To what extent politics intervened to expunge the term from the Chinese vocabulary remains uncertain. Furthermore, over time the term developed a negative connotation, as it reminded people of the unequal treaties signed with other foreign countries, of the Japanese conquest, and the fight between the Kuomintang and the Communist forces. In fact, there is no denying of the "colonial" past, the tragic losses, and disputes this territory and its people had to face through time.

In conclusion, for however it came to be defined (politically, demographically, nationally), by the early 1700s Manchus, Chinese, and Europeans all had agreed that this corner of the "Tartary" indeed constituted a distinctive region, the so called "Manchuria". To a certain degree it remains so even today. In the present day this region and its people continue to embrace a special regional identity. They call themselves "Northeasterners" (*dongbei ren* 东北人) and take pride in the region's historical importance.

2. Manchuria and the advancing of foreign imperialist powers

2.1 The Treaty of Tianjin (1858)

External forces have been crucial in the formation of the northeast region since the beginning of the Qing dynasty, as demonstrated by the conflicts that took place between Russians and Chinese during the 17th century.

As already mentioned, the Qing court wanted to maintain uncontaminated the so-called "original land" (根本之地[6]) and thus forbade the Chinese to immigrate into it. At the same time the

[6] WU Zu Kun 吴祖鲲，"Lun dongbei diqu zai zhongguo xiandaihua jincheng zhong di diwei" 论东北地区在中国现代化进程中的地位 (*On the status of the Northeast China in China's modernization process*), Social Science Front, 2006, p. 157

Manchu rulers wanted to safeguard their exclusive right to exploit the three main valued products of the region: ginseng, furs and pearls[7]. This whole policy obviously delayed the economic progress of the region. As the law got relaxed at the beginning of the 18th century, Chinese immigration set on foot again. They carried with them the advanced knowledge of agriculture, and to a certain extent they opened the region to trade, especially with the Shandong coastal province and the Hebei one[8].

Generally speaking, each locality of Manchuria grew only the goods that could be produced with greatest advantage, and, what couldn't be effectively produced was supplied by the more southern provinces of China. So, for trade purposes, the natural advantages of the country, mainly in the form of great waterways, were made use of to a very large extent. The Manchus lived mostly on the grant made by the State and added little strength to their native land economically. Afterwards the opening of the port of Newchwang[9] to foreign trade in 1862 occurred, and this was just the first of many foreign interferences in the region.

The port of Newchwang was opened to foreign trade thanks to the Treaty of Tianjin (天津) of 1858. This set of documents ended the first part of the Second Opium War (1856-1860), and also opened eleven ports to Western trade. As a result, the British established their consulate, the so-called "Newchwang Consulate", exactly where today's city of Yingkou is located[10]. This young port was destined to play the most important role in the Manchuria trade.

Three factors contributed mostly to the prosperity of the port of Newchwang: the bean trade, the traffic on the Liao river, and the passage of coolies.

Even before the Treaties of Tianjin, the bean trade was the chief feature of Manchuria's foreign trade. As articles of trade, soya beans take three main forms: soya beans as they are, bean oil and beancake. The latter is the residue after the oil has been expressed from the beans. The northern beancake was used for fertilizing, and beans were needed also for the southern mills, where their oil

[7] ECKSTEN Alexander and Kang Chao and John Chang, *The Economic Development of Manchuria: The Rise of a Frontier Economy*, The Journal of Economic History, 1974, p.241

[8] BANK OF CHOSEN, *Economic History of Manchuria*, Seoul, 1920, p. 14

[9] Newchwang (牛庄), is the historical name in postal romanization for the coastal prefecture-level city of Yingkou (营口), situated in central southern Liaoning Province, on the northeastern shore of Liaodong Bay.

[10] BANK OF CHOSEN, *Economic History of Manchuria*, Seoul, 1920, p. 16

was used as a substitute for groundnut oil. In 1864 the import of beans coming from Newchwang to Shantou[11] had risen to more than double that of 1860.

As for the Liao river, it was this river that made the port exist in the first place and it also sustained it through all its vicissitudes. It was the Liao that gave the port a position which no other port can altogether replace, even when afterwards the railways deprived the port of its original importance. Moreover, the river traffic has always been one of the greatest advantages of the first open port of Manchuria.

Finally, concerning the passage of coolies, looking at the consular report of 1908 it is stated that from Yantai [12] alone more than twenty-thousand Chinese laborers came to the port of Newchwang every spring and distributed themselves all over Manchuria and Eastern Mongolia. The passage of so many people every year, even though mainly poor coolies, cannot have failed to contribute to the prosperity of the port.

The trade returns of the port were actually not that impressive until after 1882. They started to increase appreciably as the restrictive measures on immigration enacted by the Qing's court were entirely removed. Nevertheless, the real progress of the port occurred after the end of the Sino-Japanese War in 1895, and its prosperity was finally reached its zenith 1905 as the Russo-Japanese War ended.

In conclusion, the port of Newchwang made it possible for this practically forbidden land to get access to the world. It also launched new markets for the Manchurian produce and made the great development of the region achievable. In the inner part of Manchuria and in East Mongolia it gave prosperity to many of the riverine towns of the Liao. Last but not least, it can be said that Manchuria owes the English the beginning of its development, as they opened the first international port of the region and paved the way for a greater progress. Indeed, from 1860 to 1899 the value of Newchwang's trade rose from practically nothing to almost 10 million sterling per year[13].

[11] Shantou (汕头) is a prefecture-level city on the eastern coast of Guangdong and was a city significant in the 19th century as one of the treaty ports established for Western trade and contact.

[12] Yantai (烟台) is a coastal prefecture-level city on the Shandong Peninsula in northeastern Shandong province.

[13] PING Ho, *Russian Expansion in the Far East: The Manchurian Crisis 1900-1902*, Tucson, The University of Arizona, 1984, p. 60-61

2.2 The First Sino-Japanese War (1894-1895)

In late April of 1894 the Donghak Rebellion rose in Korea. Peasants opposed against oppressive taxation and unskilled administration of the Joseon[14] government. In response to an appeal from King Gojong[15], China sent 2,500 men to help. According to the Japanese, this act was a violation by the Chinese government of the Convention of Tianjin[16] since the Japanese government was not properly informed of such decision to send troops. In many occasions before, and even in giving notice of the dispatch of troops, China described Korea as her "Tributary State". For about twenty years Japan had treated Korea as an equal, according to the terms of the treaty of 1876[17], and it simply could not agree to such classification of Korea given by China. The situation got more and more tense in the following months, and in July 1894 three Chinese ships opened fire on two Japanese cruisers, putting an end to all negotiation and making the war begin.

At that time the military strength of China was as much over-estimated as that of Japan was under-estimated. Thus, for Japan to start an armed conflict with China meant a big deal. Nevertheless, the result was a complete victory for Japan accomplished in less than a year.

In the Treaty of Shimonoseki signed on 17 April 1895 China recognized the total independence of Korea and also ceded to Japan "in perpetuity and full sovereignty" the following territories: the southern portion of the province of Mukden, all islands belonging to the province of Mukden situated in the eastern portion of the Bay of Liaodong and in the northern part of the Yellow Sea[18], Taiwan and the Penghu Islands. China was also forced to pay a large amount of silver as war reparations. However, in a few days Russia, Germany, and France sent a note to Japan advising to yield the possession of the Liaodong Peninsula territories, as it was damaging to the peace of the Far East[19]. Japan had no choice but to give in and follow the advice and accepted to give up on those territories in exchange of other silver. At heart, the first Sino-Japanese War overturned the long-

[14] The Joseon dynasty was a Korean dynastic kingdom that last for about five centuries from 1392 to 1897.
[15] Gojing (1852-1919) was the last king of Joseon and the first Emperor of Korea
[16] The Convention of Tianjin of 1885 was an agreement between Qing dynasty and Empire of Japan according their external influence over the Korean government and royal family
[17] The Japan-Korea Treaty of 1876 (or Treaty of Kanghwa Island) defined Korea as an independent state on an equal footing with Japan.
[18] BANK OF CHOSEN, *Economic History of Manchuria*, Seoul, 1920, p. 25-26
[19] This event is known as the "Triple Intervention".

standing balance of power in East Asia. No matter the fact that it had to renounce to some territories, Japan had just become the dominant regional power at Chinese expense.

Even though the homeland of the Qing dynasty was in the end left under its control, the rich field of Manchuria and its abundant products were very much noticed by the Japanese. As a result, Japan became the principal market for Manchurian produce after the Sino-Japanese war. Japanese had in fact discovered that is was much cheaper for them to import beans and beancake from Manchuria than produce them in their own country. In Japan pulses were an important component of the diet of the population, even the well-known miso soup itself is prepared from beans, and beancake was successfully replacing fish manure, which at the time had become scarce and dear owing to the death of herrings along the Japanese coast. In 1889 Japan's purchases of Manchurian products exceeded the total export to South China, which had been the greatest consumer of Manchurian beans before the Sino-Japanese war. On the other hand, the imports from Japan were still of a very small amount, as it was still in no position to compete with England, America and India in that respect.

In short, Manchuria's trade was trebled thanks to the war. Agriculture began to be conducted on a much larger scale in the area, and farmers came to depend largely upon hired labor, which was yearly imported mostly from the northern provinces of Shandong and Hebei. The period after the war dawned a new scenario for Manchuria, not only in trade but also in agriculture.

2.3 The evolving Russian interests in Manchuria

As mentioned before, South Manchuria essentially owes its initial economic development to the British and to their installation of the port of Newchwang. In the same way, the rise of the economic relevance of North Manchuria is indebted to the Russians.

The relations between Qing and Romanov empires started from the very beginning of the Qing dynasty. The disputes happened during the 17th century ended with the 1689 Treaty of Nerchinsk, which lastly defined the common border between the two empires. Almost two centuries after, with the Treaty of Aigun of 1858 the Nerchinsk agreement was reversed, and a new border between the Russian Far East and Manchuria was established. Then, in 1860 the so-called First

Convention of Peking was signed, which ratified the Treaty of Tianjin of 1858 and its main object was to put an end to the Second Opium War. The agreement recognized the Russian Empire as master of all the lands on the left bank of the Amur River as well as those between the Ussuri River and the Pacific Ocean. In short, the treaty secured for Russia the whole land now called Siberia. With this convention Russia satisfied her ambition for an outlet on the sea, and the great military port of Vladivostok was established[20].

Until the late 19th century, much of eastern Siberia was little more than an armed camp with the only object to keep a tenuous grip on large expanses of wilderness. So, until the 1880s the majority of Russian in both the Amur and Maritime provinces were subordinate to military authorities[21]. Towns were built at strategical points on or near the frontier, and some of them grew into quite large cities over time, like Khabarovsk and Blagoveshchensk.

From an Oriental standpoint those towns and villages were exceedingly rich, as they were supported by the Russian Treasury. The Russians immigrated in this area were neither good farmers nor good traders, so they had to depend largely upon their southern neighbors in China. This fact alone was sufficient to draw large crowds of profit-hunting Chinese men to the frontier districts. The result was the founding of Chinese towns and villages facing the already existing Russian ones along the rivers of both Amur and Ussuri. Russian gold coming from the Treasury or from Siberian mines was exchanged for the produce of the soil or for other imported articles. Thus, the development of North Manchuria began from the banks of the Amur and the Ussuri.

In 1896, China was still struggling after the first Sino-Japanese war, and this posed Russia in an advantageous position. Why? Thanks to the money that China owed to Japan for war reparation. In order to raise the funds for this payment China tried to approach both France and Russia to get loans. Russia made good use of this situation by signing the Sino-Russian Secret Treaty, also called Li-Lobanov Treaty, in 1896 during the coronation of the Tsar Nicholas II. Thanks to it Russia was able first to obtain the permission to build part of the final portion of the Siberian Railway within

[20] BANK OF CHOSEN, *Economic History of Manchuria*, Seoul, 1920, p. 31
[21] KOTKIN Stephen and David Wolff, *Rediscovering Russia in Asia: Siberia and the Russian Far East*, Abingdon, Routledge, 2015, p. 42

Chinese territories, and second to establish the Russo-Chinese Bank, which was created to promote Russian economic interests in China[22].

On one hand, this penetration of the land by the Russians changed the economic situation not only of the area but also of China in general. In fact, the tens of millions of rubles earned by the coolies employed in the construction work were then carried for the greater part into the provinces of the south from which they mostly came. On the other, the situation changed on a social point of view. The natives suffered a great deal from the conduct of the Russians, who punished any Chinese that resented the invasion.

3. The creation of the Manchurian railway system

By the end of the 19th century and the beginning of the 20th century, railroad development in China, especially in its three north-eastern provinces, became an imperial contest to carve up spheres of influences.

3.1 The Chinese Eastern Railway

The Chinese railway history began in 1875, when the British built a ten-mile track between Shanghai and Wusong[23] without the permission of the Chinese government. Later the line was bought by China and demolished, as they feared that a foreign power might take control of this means of transportation. The Chinese government's general conservatism prevented any railroad development for most of the rest of the 19th century[24].

Afterwards, the loss of the war against Japan in 1895 triggered efforts for promoting industrialization and at the same time gave new impetus to railroad construction. The Chinese realized how a well-structured railway system was going to be useful for both military and economic

[22] PING Ho, *Russian Expansion in the Far East: The Manchurian Crisis 1900-1902*, The University of Arizona, 1984, p. 54-55

[23] Wusong (吴淞) is a subdistrict of Baoshan in northern Shanghai. Before the city's expansion it was a separate port.

[24] ELLEMAN Bruce A. and Stephen Kotkin, *Manchurian Railways and the Opening of China: An International History*, Abingdon, Routledge, 2010, p. 3

purposes. Russia with its own imperialist wishes over the Far East area took advantage of the situation, and Japan's victory in the Sino-Japanese War highlighted the beginning of a new era in Russo-Chinese relations [25]. During the war, the already existing security concerns became widespread in Russia, as they feared that Japan might desire to expel the Russians from eastern Siberia. The Treaty of Shimonoseki made the potential threat more real with the Japanese occupation of the strategic Liaodong Peninsula. Luckily for Russia the Triple Intervention was sufficient to stop Japan and its advance in Manchurian territories.

The question is: why Russia decided to build the Trans-Siberian Railway in the first place? Obviously, there were many reasons. One primary reason was to expand the Russian empire. From Peter the Great[26] to Nicholas II, the tsars showed increasing interest in the Far East. The name "Vladivostok" itself suggests it, as it translates to "Ruler of the East". Potential economic benefits were another reason. In 1900 the Minister of War General Aleksei Nikolaevich Kuropatkin himself wrote that having an outlet on the Pacific Ocean would have granted inexhaustible supply of natural resources to the Russian Empire. A third reason was national security. Russia felt the need to better protect her Asian borders since the Treaty of Saint Petersburg of 1881. Such arrangement provided for the return to China of the eastern part of the Ili[27] Basin region that Russia was occupying since 1871. This agreement was perceived as a huge loss and step backward by many in Russia, and the key Russian negotiator of the Treaty blamed this setback on the lack of a railway system capable of deploying troops to defend Russian borders. This was only one of the many events occurred in the second portion of the 19th century that made the Russian believe they needed to protect their eastern territories from foreign penetration.

Since 1857 there only had been intermittent discussion among Russian officials to build the railway. Then in 1891 a special imperial edict announced the intention to erect a Trans-Siberian railway. In the Far East, the Trans-Siberian Railway (TSR) rose in a context of garrison towns and

[25] *ibidem*, p. 14

[26] Peter the Great was the tsar of the Russian Empire from 1682 to 1725.

[27] The Ili is a river situated in Northwestern China and Southeastern Kazakhstan. The upper Ili Valley was the fortress of the Qing administration in Xinjiang in the late 18th and 19th centuries.

Cossack settlements. The Railroad construction started in 1891, soon leading to an economic boom in the area, and the colonization plans attached to it flourished[28].

The Siberian Railway was originally planned to be constructed completely within Russian territory. However, as already mentioned, thanks to the war between China and Japan, the Romanov Empire was in a position of advantage that made possible the making of a short cut, pushing the railway direct into the heart of Manchuria and through it to its terminus, the port of Vladivostok. As a matter of fact, Russian engineers had realized how technically difficult the Amur section of the railway would have been to build. The alternative route through Manchuria was more advisable as it was easier, shorter by 1,300 miles, and much less expensive.

With the Sino-Russian Secret Treaty of 1896 a deal was reached. Russia offered a fifteen-year defensive alliance with China against Japan and a three-million-ruble bribe that was going to help China with Japan's war reparation debt. In exchange the Chinese government granted Russia preferential tariff rates, and more importantly gave permission to build the railway within its territories. The railroad was put under the control of a nominally independent joint stock company called the Chinese Eastern Railway. However, Russia alone actually ran the company with a majority ownership thanks to the manipulation of the company's stock sales in Russia. This was accomplished with a public sale of the railway shares. The Russian government bought immediately 25% of the shares, but it also acquired an option contract held by the Russo-Chinese Bank in order to be able to buy the rest later. The option contract was indeed exercised after the Boxer Uprising in 1902. This way the Russian government acquired a majority stake, bringing its outright control to 53%.[29]

China was even more cheated by Russia as the railway segment stipulated in the contract made the railway incompatible with the other railway lines in China. Furthermore, even if the treaty provided for Chinese legal control over the Railway Zone, the land and even income of the railway were exempt from Chinese taxation. Within the Zone, Russian personnel and police were given extraterritorial jurisdiction and China was obliged to let Russian troops station within its territories to protect the railway. Moreover, the Statutes of the Chinese Eastern Railway gave Russia the right

[28] KOTKIN Stephen and David Wolff, *Rediscovering Russia in Asia: Siberia and the Russian Far East*, Abingdon, Routledge, 2015, p. 42

[29] ELLEMAN Bruce A. and Stephen Kotkin, *Manchurian Railways and the Opening of China: An International History*, Abingdon, Routledge, 2010, p. 17

to build and maintain mining, industrial and commercial enterprises along the track. In short, the private CER Company represented a fiction.

Just like most of the Western powers present in China during those times, no matter how big the latest achievements were, Russia wanted more. As a matter of fact, it still failed to secure Chinese permission to build a southern Manchurian railway line to an ice-free port. From Russia's point of view, even worse was the permission the British obtained in 1897 to build a line from Jilin to Shanhaiguan[30] near where the Great Wall meets the sea. China and the British wanted both to counterbalance the growing Russian influence in Manchuria, and this extension of the Peking-Shanhaiguan railway seemed a good opportunity. In order to fix the situation, Russia signed an agreement with the British in 1899 stating that Russia would not seek any railway concessions in the Yangzi River Basin provided that the British would forego any railway concessions north of the Great Wall. Russia made a similar accommodation also with Germany regarding concessions in the Liaodong Peninsula and the Jiaozhou Bay. What was in Russia's mind was to use the German occupation of the latter as a pretext for their impending appropriation of the Peninsula. China at the time was so desperate to secure Russian help against Germany that it easily agreed to open all ports to Russian ships. The Pavlov Agreement of 1898 was signed in this state of affairs. This treaty granted Russia the lease of the Lüshun Port[31], and permitted its railway to extend to the port from one of the points of the Chinese Eastern Railway (CER). This southern branch of the CER, called South Manchuria Railway, was built by the Russians between 1898 and 1903. The lease of the port on the other hand, was projected to last for twenty-one years.[32] The lease agreement put the leased territories under exclusive Russian military jurisdiction, and supreme civil administration would also be in Russian hands. Thus, within only two years of the Russo-Chinese alliance, Russia had taken the very territory from China that the alliance was supposed to protect[33].

[30] Shanhaiguan (山海关), also known as the Shanhai Pass, is one of the major passes in the Great Wall of China. The pass lies nearly 300 kilometres (190 miles) east of Beijing and is linked via the Jingshen Expressway that runs northeastward to Shenyang (沈阳).

[31] The Lüshun Port (旅顺港) was a naval base established in the 1880s for the Chinese Beiyang Fleet and is located in the bay of Lüshun. It was also known as Port Arthur during colonial times.

[32] ELLEMAN Bruce A. and Stephen Kotkin, *Manchurian Railways and the Opening of China: An International History*, Abingdon, Routledge, 2010, p. 20

[33] Ibidem

This deal enraged the Japanese, who saw the Peninsula that they won with the first Sino-Japanese War being taken away by one of the three Great Powers that stopped them. This was the start of the Russian Descent on South Manchuria.

What it was left for Russia to get a practical value out of the concessions she acquired was to first build a line through Manchuria from Harbin to the Lüshun Port, second to fortify this latter, and third to build a new port on the Dalian[34] Bay. This for Russia meant to accomplish some of the most cherished desires of centuries standing: to have an outlet to the sea free from ice and the actual possession of such a rich land as Manchuria.

Regardless of expenditure, the Russian Empire pursued these tasks. The fortified Port Arthur came to be recognized as the strongest of the kind in the Far East. Great companies and firms established offices there, and close to great banking and commercial houses were built hotels, theatres, museums, and parks. The building of a new city in the Bay was initially delayed, but then the so-called Dalniy[35] became Russia's primary port-city in Asia, and also served other western traders. Russians wanted Dalian to become the Paris of the Far East. The work was begun in 1899, and it is said to have cost something like 30 million rubles[36].

3.2 The impact of the Boxer Uprising

Never before and never since has Manchuria been so completely under foreign domination as in this period. Each of the Russian railway concessions in Manchuria was individually far larger than any other foreign concession ever made from China. At the beginning of the 20th century, Russia was even able to take advantage of the Boxer Uprising[37], gaining greater rights and privileges throughout Manchuria.

[34] Dalian (大连) is a major sub-provincial port city in Liaoning province, the second largest city of the province and fourth most populous city of Northeast China.
[35] Dalniy is the name Russians initially gave to Dalian (大连).
[36] BANK OF CHOSEN, *Economic History of Manchuria*, Seoul, 1920, p. 47
[37] The Boxer Rebellion that took place between 1899 and 1901 was an anti-imperialist, anti-foreign and anti-Christian uprising.

The Chinese hostilities were against foreigners of all kinds present in China, but also their technology and especially their railways[38]. The negotiator for the 1896 contract for the CER and the lease agreement for the Liaodong Peninsula was executed for his sympathetic attitude toward foreigners[39].

Initially Russians didn't feel threatened by the Boxer movement, so they didn't join Britain, America, Germany, France and Italy in the protest demanding the suppression of the movement. Then, the unrest spread to Manchuria, and their attitude changed.

The Boxer strategy there was to cut railway lines in order to stop hostile troop movements. In the end, the Boxer Uprising caused enormous damage to the Chinese Eastern Railway. In the three years of building the CER, Russia has spent about 1 billion rubles on investments and operating costs for the railway project. The uprising destroyed or damaged almost two-thirds of this new railway system, meaning a breathtaking financial loss for the Russian government. The damages were estimated of at least 50 million rubles.

In North Manchuria the Chinese rebels started to occupy most of the stations of the CER, and in June 1900 the Chinese bombarded the town of Blagoveshchensk on the Russian side of the Amur. Russia deployed about 100,000 troops and occupied all of Manchuria including the port of Newchwang within three months. In August 1900, Russia's commander-in-chief Alekseev even announced the establishment of a provisional government in Newchwang. Russia wanted to put this commercial port under her direct control, especially because of its unique and strategic location, and also as it was the most important commercial center in Manchuria and the only port open to world-trade of the region[40]. Under Russian occupation Manchuria couldn't export anything abroad, not even grain, and imports had almost stopped. Newchwang port was indeed closed to the outside world by the winter of 1900[41]. The occupation of the port was of particular concern of both Britain and Japan, so they strenuously objected and demanded an immediate Russian troop withdrawal.

Russia decided to extract a large indemnity from China, and in return for a troop withdrawal, demanded: a large amount of money to cover railway damages; Russian control over Manchurian

[38] ESHERICK Joseph W., *The Origins of the Boxer Uprising*, Berkeley, University of California Press, 1987, p. 327-328
[39] TAN Chester C., *The Boxer Catastrophe*, New York, Columbia University Press, 1967, p. 70-71
[40] PING Ho, *Russian Expansion in the Far East…*, cit., p. 143-145
[41] *ibidem*, p. 152-153

administration; the abolition of old foreign concessions and the impediment of new ones according Manchuria, Mongolia and North China; the prohibition of Chinese railway development in Manchuria and Mongolia; Russian control of the Newchwang-Shanhaiguan section of the Newchwang-Tianjin Railway[42]; additional tax preferences for the overland railway trade; expansion of the Liaodong concession to include Jinzhou[43]. China argued that such terms would transform Manchuria into a Russian protectorate, just like India was for Britain. Soon China revealed the treaty drafts to a correspondent of The Times (London) in Beijing, which published the agreement on the well-known newspaper[44]. As a result, such text aroused alarm and suspicion among the other foreign powers, which renewed their demands for a Russian withdrawal.

In the end, Russia joined the other powers to sign the Boxer Protocol regarding the Boxer Uprising in 1901. The Romanov Empire agreed to evacuate its troops from Manchuria within eighteen months, to drop its economic demands in Manchuria, and to restore Newchwang[45]. At the same time, Russia managed to get the largest share of the total indemnity of 67.5-million-pound sterling, nearly one third[46].

Anyway, when the time came for evacuation, Russia behaved as though no promise had been given. She even proposed new terms that would have strengthened her hold on Manchuria instead of loosening it. In short, the Tzar's command prevailed in the greater part of Manchuria to the exclusion of other powers. Russia could act there as she pleased, no matter if her wishes were against the ones of the local governments.

3.3 The Russo-Japanese War (1904-1905)

The increasing aggressiveness of the Russian policy toward the Far East deepened the Japanese anti-Russian sentiment. After the Boxer Rising, Russia practically occupied the whole

[42] The Newchwang-Tianjin Railway, or Yingkou-Tianjin Railway, was a railway financed by the British loans.
[43] Jinzhou (锦州) is a strategical coastal prefecture-level city in central-west Liaoning province. It is located strategically in the "Liaoxi Corridor" which connects most of the land transports between North China and Northeast China.
[44] *ibidem*, p. 181-182
[45] *ibidem*, p. 255-256
[46] ELLEMAN Bruce A. and Stephen Kotkin, *Manchurian Railways and the Opening of China: An International History*, Abingdon, Routledge, 2010, p. 23

Manchuria region. Japan's anxiety grew more and more. It was aware that Russia's new target was going to be Korea. In 1903 Japan offered to exchange its recognition of a Russian sphere of influence in Manchuria, for Russian recognition of Japan's sphere of influence in Korea. Russia deferred her answer to Japan's proposal using many pretexts. Finally, Japan chose to start a war. By making a surprise attack on the Russian fleet in Lüshun, the Japanese started the Russo-Japanese War in February 1904.

When the hostilities took place, much of the damage caused to the Manchurian railway system by the Boxer Rebellion remained unrepaired. Furthermore, despite the huge expense, the Trans-Siberian and Chinese Eastern Railways were not even well constructed. Travel between Moscow and Vladivostok was supposed to take one week, but it actually took over a month under optimal conditions, and during the long winter it took about a month and a half. The conditions of the Manchurian railway system had a considerable impact on the war with Japan. At the onset of the hostilities, Russia could transport about a maximum of 40,000 men per month to the front. By the Battle of Mukden, the war's great finale, the train system could transport 100,000 per month. If it had been this way since the beginning, Japan would have lost the war. Unfortunately for the Russian that wasn't the case.

With revolution spreading throughout the Russian Empire[47], and with Japanese forces stretched to their limit, both sides agreed to accept the U.S. offer of mediation. In the Treaty of Portsmouth of 1905 Russia finally recognized Japan's sphere of political, military and economic influence in Korea, ceded the southern part of the Chinese Eastern Railway (from Changchun to Lüshun), its leased territory of the Liaodong Peninsula and last but not least all the accompanying coal mines present in the area, including Manchuria's most important coal mine in Fushun[48]. China agreed to these terms and decided to open sixteen towns in Manchuria to foreign commerce in order to satisfy Japanese demands and at the same time counteract Russian attempts at domination.

[47] At the time, Japan was secretly financing the domestic turmoil within Russia.
[48] Fushun (抚顺) is a city in Liaoning Province, about 45 kilometers (28 miles) east of Shenyang.

The war left Russia indebted and compelled to build the Amur section of the Trans-Siberian Railway, the section that made Russia look for a shortcut through Manchuria. This section of the railway was completed in 1916.

Fought in Manchuria from beginning to end, the Russo-Japanese War caused much suffering and misery to the country and its inhabitants. The destruction of life and property, the damage to crops and to business were great, but fortunately the misery was not so great as the magnitude of the struggle would lead one to suppose. Actually, the war brought a few benefits. The vast armies which occupied Manchuria largely depended upon the local supplies of food, especially cereals. Thus, the war gave a great impulse to Manchurian agriculture. Many made fortunes out of this war, and some cities owe their prosperity to it. Especially lucky was North Manchuria, as there was no battle fought there, hence it suffered no damage. Yet, people reaped all the benefit the war gave them. The development of Harbin[49] was extraordinary, but also the port of Newchwang in the south reached the zenith of its prosperity. Indeed, the war had eliminated the fear that with the advent of railways the port would have lost its supreme position in the Manchurian trade. Exports decreased, but the imports increased to an extent that made the two years covered by the war the record years in Newchwang Port's trade annals. The increase in imports was obviously caused by that in war materials and provisions. On the other hand, the exports were mostly agricultural products. In short, the Russo-Japanese War gave a great impetus to Manchurian trade as a whole.

As it was above shown, what resulted from Russia's policy in the Far East was an unjustifiable spending of millions of rubles, the loss of its influence and its control over Manchuria, and the loss of prestige.

3.4 The South Manchuria Railway Company

After the won of the war against Russia, Japan set up the Government-General of Kwantung in Port Newchwang to rule and administer the leased territory in the Liaodong Peninsula, as well as to police the so-called "Railway Zone". The system was highly militaristic, but very effective.

[49] Harbin (哈尔滨) is a sub-provincial city and the provincial capital of Heilongjiang. It is the second largest city by urban population and largest city by metropolitan population in Northeast China.

Simultaneously with the establishment of the Kwantung Government, on 7 June 1906 Japan also founded the South Manchuria Railway Company. This economic organ was founded by the Japanese government in order to operate the portion of the Russian railway network ceded to Japan at the end of the Russo-Japanese War. It was the beginning of the period of the "Two Manchurias": North Manchuria under the Russian influence, and South Manchuria under the Japanese one. If Manchuria owes anything to the railways for its economic development, it dates back from the moment when they were placed under the charge of the South Manchuria Railway Company.

The SMR Company was modelled on the East India Company (dissolved in 1858), and combined state capitalism and an openness to the market. It was organized under Japanese as a private, joint-stock corporation, but it was also present a state charter, which represented the government's position as a majority shareholder. The Japanese government basically had the power to appoint or approve all top management officials. The SMR company, with an authorized capital of 200 million yen, was the largest company ever founded in Japan and was destined to play the most significant part in Manchurian economic history.

Construction and maintenance of a railway system are notoriously costly, so since the beginning it was necessary for the SMR to be able to pay its own capital and operating costs, especially from Japan's point of view, which was relatively poor at the time. Indeed, in Japan the post-war economic boom quickly disappeared, and the subsequent depression had deprived many of their means of livelihood[50]. Thus, for the architects of this venture to have profitable operation was a fundamental component. As a result, the South Manchuria Railway, ceded to Japan in 1905, was already earning considerable profits in 1907, about 3.6 million yen. In 1912 its earnings reached 14.3 million yen. Japan's winning strategy was to charge low rates to attract business.

The South Manchuria Railway started in the deep-water, ice-free port of Dalian and continued for 438 miles north to the city of Changchun[51] deep in the Manchurian interior. There, the Japanese railway was connected to the branch of the Russian-owned Chinese Eastern Railway.

[50] BANK OF CHOSEN, *Economic History of Manchuria*, Seoul, 1920, p. 61-62

[51] Changchun (长春) is the capital and largest city of Jilin Province, and it is one of the biggest cities in Northeast China. Between 1932 and 1945 it was renamed Hsinking (新京) by the Japanese, as it was the capital of the puppet state of Manchukuo.

In 1909, the SMR Company decided to build a branch line from Mukden, which was the regional Chinese administrative and commercial center, to Dandong[52] on the Yalu River border with the part of Korea that was ruled by Japan. There the SMR connected to the colonial Korean railway system, which in turn gave access to the port of Busan[53]. This way, the Korean Peninsula would become the main pathway for Manchurian crops, especially its soybean products, to metropolitan markets. This proved to be of great benefit to the trade between Manchuria and the northern part of Japan. Unlike the inherited section of the South Manchuria Railway, the Dandong-Mukden branch was not wholly owned by the SMR Company, instead it was loaned by the Chinese government. Anyway, in reality the branch was built on loans from Japan and managed by the SMR. The construction of this part of the line costed about 23 million yen.

Effective and efficient management of railways demands high levels of technological and institutional support, especially in an environment like that of Manchuria in the early 20th century. In order to make the railway efficient, and financially self-sufficient, the SMR had to establish an entire complex of support and ancillary operations, like coal mines, electric power plants, housing for employees, hotels for travelers, etc.

Diversification on the part of railway companies wasn't out of the ordinary, but rarely did it assume the scope and scale seen in the SMR. Its extensive research and development apparatus included economic research units, agricultural stations, both industrial and geological laboratories. Over time they all actively facilitated the diversification of the SMR. The SMR integrated operations in coal mining, machine building, transportation and iron and steel-based industries. The wide extent and most of all the heavy-industrial direction of its diversification, made the SMR unique among foreign railways in China. Only between 1915 and 1919, the SMR invested in its railway, iron production and coal mining division more than 13 million yen[54].

It is important to point out that the Japanese railway project greatly enjoyed the special rights inherited from the Russians. They not only inherited direct ownership of the railway, but also the

[52] Dandong (丹东) is a coastal prefecture-level city in Liaoning province. It is the largest Chinese border city facing North Korea across the Yalu River.

[53] The port of Busan, established in 1876, is still today the largest port in South Korea, located in the city of Busan, which is located on the Southeastern tip of the Korean Peninsula.

[54] CHEN Tsu-yu, *The South Manchurian Railway Company and the Mining Industry: The Case of the Fushun Coal Mine*, Institute of Modern History Academia Sinica, 2015, p. 82

administrative control over a narrow strip of land extended along the whole length of the railway lines owned by the company, known as the Railway Zone. The Zone was of considerable importance in relation to Manchuria's economic life for a few reasons: it passed through the most important commercial centers in Manchuria; it was under Japanese jurisdiction and policed by the Japanese authorities; it was managed by the SMR Company, which provided it with everything that is necessary for the establishment of an advanced society (education, public works, infrastructure, healthcare, hygienic welfare, etc). In short, thanks to it Japan could penetrate deep into Manchurian heartland.

In Manchuria, the SMR stimulated the rapid growth of a regional commercial economy centered on the export of soybeans and other soy products. The company's direct initiatives in agricultural research, together with its rate policies, promoted land reclamation, crop improvement and diversification, the spread of new techniques and the introduction of new breeds in order to expand animal husbandry[55]. Thanks to such policies the population doubled before 1931.

4. From 1905 to 1931: the end of the Qing Dynasty and the Zhang Zuolin and Zhang Xueliang Era

4.1 The 1900s-1910s and the growing Japanese influence in Manchuria

Even if the Boxer movement was crushed at the beginning of the 20th century, the nationalist feeling didn't die among the Chinese population. Actually, the resentment against foreign colonialism in China grew more and more after the peace agreement of 1901. The Revolution started on 10 October 1911 in Wuchang[56], when the city was taken by the revolutionaries. In the following month numerous provinces declared their own independence from the Chinese Empire. On 12 February 1912 Puyi, the last Emperor of China, and Empress Dowager Longyu accepted the terms of abdication and Yuan Shikai took the position of President of the Republic of China. The following period saw the establishment of the Nationalist Party, known as the Kuomintang (KMT), the

[55] ELLEMAN Bruce A. and Stephen Kotkin, M*anchurian Railways and the Opening of China: An International History*, Abingdon, Routledge, 2010, p. 43

[56] Wuchang (武昌) today is one of the 13 districts of the city of Wuhan (武汉), which is the capital of Hubei province.

democratic elections of February 1913, the so-called second revolution against Yuan Shikai, the establishment of the Empire of China (1915-1916) with Yuan Shikai as Emperor, and with his death in 1916 the beginning of the Warlord Era (1916-1928). The country was divided into factions that in the following years kept on fighting each other, making China live a period of constant civil war. According to some surveys, more than 150 wars broke out in China during the Warlord Era[57].

As for Manchuria, the figure of Zhang Zuolin gradually gained power. When the 1911 Revolution began, he and his regiment, which already fought on the Japanese side during the Russo-Japanese War, were used by the Empire to intimidate rebels and revolutionaries in Manchuria. He then obtained Yuan Shikai's esteem when he put down a rebellion in 1912, an act that raised him to the rank of Lieutenant-General. Afterwards, Zhang was one of the few officials that decided to support Yuan when he decided to declare himself Emperor in 1915. For his loyalty, he was rewarded with the title of Military Governor of Fengtian, the name used from 1907 to 1929 for Shenyang and more generally the Liaoning province. When Yuan died, Zhang took power of the three Northeastern Provinces expelling the military governor Duan Zhigui. Zhang went unpunished, as Duan Qirui, who was controlling the government at the time, really needed Zhang's cooperation and a stable situation in the Northeast. As a result, in 1918 Zhang was titled the Inspector General of the Eastern Three Provinces, which made him the civil and military head of Manchuria, except for the small areas held by the Japanese Empire[58]. Zhang Zuolin power rested on the Fengtian Army, which in 1922 was composed of 100,000 men and almost tripled that number by the end of the 1920s.

Initially, Zhang and the Japanese used each other, as the latter needed a strong man to promote and protect their interests, and the first needed a safe situation in the Three Provinces in order to consolidate his position. However, their interests soon conflicted, as Zhang's anti-Japanese policies made it difficult for Japan to manipulate the Chinese in Manchuria as they used to do before his arrival. Zhang wanted to slow down the expansion of Japanese interests in the region and to regain control of native resources. As a result, he began to reduce licensing to the new Sino-Japanese joint firms and started to encourage economic competition with the Japanese in Manchuria. Anyway,

[57] SAMARANI Guido, *La Cina Contemporanea: Dalla Fine dell'Impero a Oggi, Segrate*, Einaudi, 2017, p. 23
[58] CHI Man Kwong, *War and Geopolitics in Interwar Manchuria: Zhang Zuolin and the Fengtian Clique during the Northern Expedition*, Leida, Brill, 2017, p. 59-60

most of these policies and their results came to light in the 1920s and especially with the arrival on the scene of Zhang Xueliang, the eldest son of Zhang Zuolin.

Important to note at this point is another historical event that changed the atmosphere not only in Manchuria but also in China as a whole: the war between Japan and Germany in 1914 regarding the German's concession in Shandong province. After Germany's defeat, Japan drafted the initial list of the so-called Twenty-One Demands. It was an intricate list of requests aiming to expand Japan's economic rights and privileges in China across different regions (Shandong, Manchuria, the Yangzi's valley, and Fujian). Japan also wanted to integrate some Japanese counselors into Chinese political, military and financial sectors, in order to open the door for a future transformation of China into a Japanese protectorate[59]. Obviously, China rejected Japan's proposal. However, in May 1915, a new and reduced version of the list, with "only" Thirteen Demands, was accepted by Yuan Shikai, who at the time was competing with other warlords to become the main ruler of China and couldn't afford a war with Japan. This way Japan's expanded its influence over the Shandong Province, lengthened its leasehold in Manchuria, enlarged its sphere of influence in South Manchuria and eastern Inner Mongolia and gained control of mining and metallurgical complexes in central China. In 1919, with the Treaty of Versailles Japan obtained European diplomatic recognition for its claims in China. Public resentment towards Japan grew more and more because of such agreement. Indeed, this matter contributed to the outbreak of the May Fourth Movement[60] of 4 May 1919.

In conclusion, during these challenging times Japan was able to acquire control of a big portion of the territories of South Manchuria. Instead, the new Chinese government and administration was still too fragile and unsophisticated to be able to enact new substantial policies and generate huge differences in the economic system of the region. This is the main reason why Japan and the changes it produced in Manchuria will be the main actors of the following sections about the economic situation of Manchuria in this historical period.

[59] SAMARANI Guido, *La Cina Contemporanea: Dalla Fine dell'Impero a Oggi, Segrate*, Einaudi, 2017, p. 59

[60] The May Fourth Movement of 4 May 1919 was a Chinese nation-wide anti-imperialist, cultural and political movement.

4.1.1 Agriculture and manufacturing industry

In 1905, after the Russo-Japanese War, Manchuria was mainly a country of raw material, its chief industry being agriculture and mining.

As for the agriculture, the principal cereals and pulse which Manchuria produced were beans, millet, maize, sorghum, wheat, rice, peas, etc. As already seen, it was especially the soya bean that introduced Manchuria into the trade comity of the world. In general, in the first two decades of the 20th century beans, bean oil and beancake constituted nearly one-half the value of the entire exports of Manchuria.

Manchuria's soil was in general not so rich and the climate not so moderate. Nevertheless, this region was yet the most favored spot of agriculture in the Far East at the beginning of the 20th century. The lands around Changchun, Jilin and Harbin were exceedingly rich, and at the time there were still plenty of room for further exploitation. In the Japanese leased territory of Kwantung, which was the most populated portion of Manchuria, every inch of arable land was under cultivation. Generally, it may be said that the best farmlands are not in South Manchuria but in North Manchuria. The greatest centers of the bean trade north of Dalian were found in the north of Mukden, Changchun, Kaiyuan[61] and Harbin. For reference, in 1919 90% of the tons of beans brought down to Dalian came from districts to the north of Mukden.

The following tables based on the statistical returns of the Kwantung Governmental-General of the period 1912-1917 will give some idea of the progress made within Japan jurisdiction in Manchuria.

FACTORIES IN KWANTUNG LEASED TERRITORY (1917)

Town	Number of Factories	Capital (Yen)	Value of Products (Yen)
Port of Lüshun	25	350,375	221,007
Dalian	108	35,404,996	56,619,784
Jinzhou[62]	28	43,840	98,061
Total	216	36,127,661	58,313,003
Year			

[61] Kaiyuan (开原) is a country-level city in Liaoning province, bordering the Jilin province in a small section in the north.
[62] Jinzhou (锦州) is a coastal prefecture-level city in central-west Liaoning province.

1912	204	22,424,192	22,246,852
1913	202	20,357,630	23,534,072
1914	187	20,936,561	14,454,438
1915	198	21,784,865	27,697,647
1916	204	33,628,496	43,137,839
1917	216	36,127,661	58,313,003

Table 1: Factories in Kwantung leased territories from 1912 to 1917. Reference: Bank of Chosen "Economic History of Manchuria" 1920

FACTORIES IN RAILWAY ZONE (1917)

Town	Number of Factories	Capital (Yen)	Value of Products (Yen)
Mukden 奉天	12	10,673,500	323,790
Benxi 本溪	10	7,055,380	15,120,520
Fushun 抚顺	14	5,313,500	2,241,566
Changchun 长春	20	4,064,750	3,978,928
Dandong 丹东	11	680,500	2,312,613
Newchwang 牛庄[63]	1	55,479	96,000
Total	117	29,855,245	29,646,862
Year			
1912	41	2,448,265	3,681,381
1913	53	4,009,131	4,386,513
1914	57	3,600,269	6,344,758
1915	71	11,593,676	9,773,849
1916	92	16,722,531	11,666,113
1917	117	29,855,245	29,648,862

Table 2: Factories in the Railway Zone from 1912 to 1917. Reference: Bank of Chosen "Economic History of Manchuria" 1920

Looking at the number of factories, it is important to note that the bean oil industry accounted for more than 25% of the whole number of firms in Japanese Manchuria in 1917. In amount of production such industry was responsible for aver half of the total value of the regional manufacturing output.

[63] Newchwang (牛庄) is the postal romanization of the city of Yingkou (营口) in Liaoning province.

Furthermore, there are evidences of the preponderance of Dalian, which is due to the shipping facilities enjoyed by the port. A report of 1918 shows that in Dalian there were 57 mills in which no less than 120,000 pieces of beancake were manufactured daily, and that the total production of the year of such mills was of 26 million pieces[64]. Before the start of the Japanese management of South Manchuria, Newchwang was the center of the bean industry with its 35 mills. However, the ascendancy of Dalian affected Newchwang negatively in this as in many other matters. In North Manchuria on the other hand, it was Harbin the great center for the bean industry. Before the collapse of the Russian Empire, the city had 21 mills, and its annual production amounted to 9,558,000 pieces of beancake and 51,210,879 pounds of oil.

As a manufacturing country, in the first decades of the 20th century Manchuria already had every prerequisite. It had raw materials in abundance in the form of agricultural, mining and factory products, fuel thanks to coal, and also excellent workforce in the form of coolies. In Manchuria, mining in the modern sense was first introduced by the Russians, who jointly with the Chinese undertook to work Fushun coal mine. Nevertheless, real progress in the industry began with the management of the South Manchuria Railway Company.

The principal mineral products were gold, iron and coal. Before the arrival of foreigners, in Manchuria they practically only mined gold. The most extensive gold deposits are situated in South Manchuria, along the tributaries of the Yalu River, and by the upper reaches of the Songhua River[65]. Yet, by the beginning of the 20th century in South Manchuria gold was no longer present in large amount. Instead, it was still obtained in large amount in the Amur province. Iron also was a very important mineral product in Manchuria. The Benxi iron mine[66] produced about 50,000 tons annually during the 1910s[67]. Nevertheless, as already mentioned coal was by far the most important mineral product in Manchuria.

Particularly profitable came to be the mine of Fushun, another Russian property obtained by Japan after the war. The mine is located about 22 miles east of Mukden. When Japan received it, the

[64] BANK OF CHOSEN, *Economic History of Manchuria*, Seoul, 1920, p. 185-186
[65] The Songhua River (松花江) is the largest tributary of the Amur river.
[66] In 1905 was established the Benxi Coal Mining Company with joint Chinese and Japanese capital. Then in 1911 the company began iron smelting and changed its name in Benxi Coal and Iron Company.
[67] BANK OF CHOSEN, *Economic History of Manchuria*, Seoul, 1920, p. 165

mining was being conducted on a very small scale. The Japanese introduced new technologies, improved facilities, increased outputs and reduced the costs. Indeed, as the Japanese started to manage the mine, it soon became one of the richest and most productive coal mines in East Asia and provided the SMR's locomotives and steamships with a cheap and easily accessible source of fuel. Over time, its coal, together with the one obtained in the Yantai Coal Mine, increasingly represented an important export commodity and a major source of railway traffic, and the SMR quickly became one of the most formidable competitors in the East Asia coal market[68]. For reference, by 1916 the average daily coal extraction was of 6,000 tons, nine times the average of 1907[69]. The amount of coal consumed, both locally and by the SMR, increased from circa 1.06 million metric tons in 1914 to 1.94 million in 1920. The main reason for such increase was the First World War. Although there was considerable Chinese investment in this commercial activity, the majority of investments came from Japan, especially from the SMR but from other private Japanese firms as well.

4.1.2 Trade and Commerce

Between 1872 and 1899 Manchurian exports, including shipments to China Proper[70], increased at average rate of 7.1% a year. The sales abroad grew significantly after 1907, when the CER and the SMR were fully operational and the port of Dalian was opened[71]. Indeed, the Russo-Japanese War introduced a radical change in Manchuria's trade situation. In 1908 the Manchurian trade amounted the 11.5% of the whole trade amount of all China. In 1911 the percentage increased to 19.3%. The following table will show the trade development of Manchuria in the period 1908-1918, and also that by China during the same period.

[68] ELLEMAN Bruce A. and Stephen Kotkin, *Manchurian Railways and the Opening of China: An International History*, Abingdon, Routledge, 2010, p. 39

[69] CHEN Tsu-yu, *The South Manchurian Railway Company and the Mining Industry: The Case of the Fushun Coal Mine*, Institute of Modern History Academia Sinica, 2015, p. 80

[70] China Proper was a term used by Western people which refers to the original area of Chinese civilization, the Central Plain.

[71] ECKSTEN Alexander and Kang Chao and John Chang, *The Economic Development of Manchuria: The Rise of a Frontier Economy*, The Journal of Economic History, 1974, p.248

FACTORIES IN KWANTUNG LEASED TERRITORY (1917)

Year	(a) Manchuria's Net Trade			(b) China's Net Trade	Percentage of (a) to (b)
	Import	Export	Total	Total	
1908	50,669	45,143	95,812	834,997	11.5%
1909	63,269	86,357	149,626	939,722	15.9%
1910	72,871	86,846	159,718	1,007,947	15.8%
1911	95,384	99,855	195,240	1,013,677	19.3%
1912	94,640	89,309	183,950	1,026,316	17.9%
1913	99,149	99,765	198,914	1,149,513	17.3%
1914	97,824	93,242	191,067	1,058,821	18%
1915	90,359	109,606	199,966	1,085,630	18.4%
1916	105,379	112,203	217,583	1,459,531	14.9%
1917	130,093	120,895	250,989	1,509,650	16.6%
1918	142,097	125,105	267,203	1,593,997	16.8%

Table 3: Factories in Kwantung leased territory from 1908 to 1918. Reference: Bank of Chosen "Economic History of Manchuria" 1920

The above table shows that during the eleven years taken into consideration the trade of Manchuria has nearly trebled. These results show that the progress of Manchuria has been much faster than that of China as a whole during the same period of time. A further encouraging aspect is that the trade in the region has almost always maintained an equilibrium. During the period of 1908-1918 not a single year saw China, just like Japan and Korea, maintain anything like equilibrium. Of course, some years saw import exceed export even in Manchuria, but the deficit was made good by the export exceeding import in the course of the following year or the year after.

The export of Manchuria consisted mainly of agricultural products, notably beans, bean oil and beancake, followed by beverages and various foodstuffs, wild raw silk, coal, leather, and metals. As for beans, as already mentioned, in consequence of the Sino-Japanese War their market was extended to Japan. After the Russo-Japanese War on the other hand, depression spread in Japan and its demand ceased, so it became necessary to find a new field for the surplus supplies. The time was ripe for a greater development of Manchuria's trade. The first actual trial shipment to England occurred in November 1908 and was so satisfactory to open a whole new market for Manchuria. As

a matter of fact, during those years Manchuria started to trade its beans to Europe and also America. The Great War in Europe also gave great impetus to the bean trade of the region, as the demand for oil in Europe and America grew immensely owing to the shortage of other kinds of oil[72].

Manchuria's articles of import on the other hand are more varied in kind than those of its export. The leading position is held by cotton piece goods and yarns, followed by iron and steel, clothing and accessories, tobacco and cigarettes, machines and tools, etc. Before the Russo-Japanese War the markets for most of these goods were practically monopolized by British, Americans and Indians. Especially, cotton products were major British imports into Manchuria, and its trade made China the largest customer for British cotton farmers and merchants[73]. However, after the war Japan entered the list and by the time of the outbreak of the First World War almost all cotton goods were supplied by Japan. As a matter of fact, before the war against Russia, Japan was maybe the greatest foreign buyer of Manchurian products, but definitely not the greatest seller. The war between them proved to be a great stimulus. Already before the Great European War 75% of imports and 85% of exports were made from and to Japan. The war obviously further affected the situation in favor of Japan[74].

With the advent of the Japanese, whose objective in Manchuria has always been mostly commercial, changes occurred also in the Manchurian trade channels. Newchwang ceased to be the only commercial port, and many others were opened in both South and North Manchuria. For instance, in 1907 there was the opening of the Dandong port. Even if it can be said that Dandong is to the Yalu River what Newchwang is to the Liao River, the rise of this port is largely due to the Dandong-Mukden Line of the SMR. In general, it can be said that with Japan's management the trade channels of Manchuria have returned to their original natural routes. Nevertheless, the central route represented by the South Manchuria Railway with Dalian as its port has risen to such an importance that the others are likely to be overlooked.

Speaking of Dalian, when it was under Russian control, Russia's state planning and her massive public investments failed to create a vibrant commercial center out of it. On the other hand,

[72] BANK OF CHOSEN, *Economic History of Manchuria*, Seoul, 1920, p. 216-218
[73] PING Ho, *Russian Expansion in the Far East…*, cit., p. 61-62
[74] BANK OF CHOSEN, *Economic History of Manchuria*, Seoul, 1920, p. 219-225

once the Japanese took the city over after the war, they transformed it into an important center of commerce. Quite the opposite, the close Russian city of Vladivostok remained a commercial backwater until the end of the Romanov Dynasty. Looking on the other hand to the Lüshun Port (or Port Arthur), which was of great interest to the Russians because of its strategic military position, with the Japanese it steadily declined in importance, since according to them and their commercial interests the port was of little value, especially in contrast to the connection that Dalian had with SMR. Its once prosperous streets showed few signs of life owing to the lack of commerce. In short, the once strongest fort in the Orient in which Russia centered its ambition was turning into a place of retirement.

Hence, Japans' attention was from the beginning fixed on Dalian and its great commercial advantages. As a matter of fact, Dalian has the ideal position, since, excepting the small areas along the Liao River in the west and those of the Yalu River in the east, served respectively by the Newchwang (Yingkou) port and the Dandong one, the whole South Manchuria and considerable part of North Manchuria are served by it. When the city fell into Japanese hands it was only partly built, but within a few years they were able to make it a big city with an important port. They further improved the already excellent harbor by the construction of breakwaters, lighthouses, warehouses, a dockyard, and by a great connection between railway and steamship services[75]. In 1908 warehousing was undertaken by the South Manchuria Railway Company in Dalian, and in 1911 such business came to be conducted on a truly extensive scale and on an improved system. Speaking of railway workshops, the company inherited one at the Dalian Station, and others where built afterwards. These workshops were among the largest and best equipped in the Orient and had their own waterworks.

The fortunes brought by First World War, often described as a godsend for Japan, were abundantly evident in Dalian and throughout Japanese Manchuria. In 1915 the port of Dalian boasted receipts of 100 million yen in trade and 2.5 million tons of cargo entering and leaving. European powers needed the import of soybean from Manchuria, and this guaranteed the profitability of local enterprises and also large corporations. Wartime affluence fueled the building

[75] BANK OF CHOSEN, *Economic History of Manchuria*, Seoul, 1920, p. 84-85

of civic amenities in the Japanese territories of Manchuria. During this time the SMR poured money into the construction of residential and shopping areas, schools and hospitals in the Railway Zone. Dalian's population saw an increase of 40% compared to 1910 totals. In 1920, thanks to the increased revenues, SMR's shareholders even decided to double the company's capitalization, approving a new total of 440 million yen[76].

The remarkable progress of the port is best shown by its comparison with other Chinese ports, like shown in the following table.

Table 4: Comparison of Dalian's trade with other important Chinese ports in the year of 1918. Reference: Bank of Chosen "Economic History of Manchuria" 1920

	Port	Trade
Trade amount for 1918	Shanghai	323,998,501
	Dalian	165,824,207
	Hankou	165,162,308
	Tianjin	153,136,643
	Canton	103,226,078
	Other ports	404,258,882
	Total	1,315,603,619

Only ten years earlier Dalian was in no way qualified to be listed with these other Chinese ports, but thanks to the Japanese investment and management and the advent of the First World War it was able to become one of the most important ports in China.

4.2 The uniqueness of the Zhangs' autonomous regional government

Zhang Zuolin, often called "Old Marshal", consolidated his power through the soya trade in Manchuria, from which came most of his revenue. The vast workforce, material and financial resources enabled him to raise a large army, which in turn fueled his political ambition. His initial success made him believe he could replicate the Manchu invasion and restore order in China by taking over the government in Beijing. In these circumstances occurred the first Zhili-Fengtian War

[76] O'DWYER Emer, *Japanese Empire in Manchuria*, Oxford, Oxford University Press, 2017, p. 8-9

of 1922, that saw a disastrous defeat of the Fengtian Army, and an expenditure of almost 30 million yuan by the government of the Three Eastern Provinces.

Despite the loss, Zhang's self-declared autonomous status gave him access to large amounts of new revenues with which he tried to modernize his army.

In 1924 fighting broke out again in Central China with the Second Zhili-Fengtian War. This time Zhang Zuolin won the war and managed to capture Beijing. In the meantime, Manchurian financial stability deteriorated significantly because of the consistent military spending.

In 1926, the Kuomintang began the so-called Northern Expedition to reunify China and defeat the warlords. The increasing number of defeats made Zhang Zuolin combine his military forces with those of other landlords creating the anti-Kuomintang National Pacification Army (NPA). In 1927, he proclaimed himself Generalissimo of the Republic of China and formed a new military government. The following year, as the KMT kept on advancing towards Beijing, Zhang Zuolin was convinced by the Japanese to go back to Manchuria. On the way back his train was blown up and Zhang died, killed by the Kwantung Army. The Japanese wanted to provoke a crisis in the region in order to expand its own influence in Manchuria, and saw the eldest son of Zhang Zuolin, Zhang Xueliang, as more easily maneuverable. He took his father place as Manchuria's ruler and soon started to negotiate with the winning KMT for an armistice. The National government of Nanjing was finally founded in 1928.

Contrary to Japan's hopes, Zhang Xueliang, known as the "Young Marshal", was a true believer of the nationalist cause and trusted that Sun Yat-sen's nationalist industrialism was the only way possible to the Chinese redemption. On one hand he resisted the aggressive forces of Japan, and on the other he devoted himself to the revitalization of the Northeast. Indeed, for Zhang Xueliang, a state-sponsored industrial development in Manchuria meant foremost a symbol of national independence.

4.2.1 Zhang Zuolin's management

As already mentioned, in Manchuria Japan's control and influence not only included politics but most of all business, industry and railroads. After World War I and thanks to the change of the

political situation, Chinese capital began to move into industries such as textile, coal mining, electric power and railroads. Zhang Zuolin and Zhang Xueliang tried and partly succeed to transform this land into an industrial boomtown. As a result, in the 1920s the gran industry of Manchuria flourished.

When Zhang Zuolin took power in 1916, he faced numerous financial difficulties. The main financial problem was the currency devaluation occurring in the three provinces due to the excessive printing of paper money and the general lack of homogeneity in the Manchurian monetary system. Furthermore, the previous government had acquired several loans totaling over 12 million yuan. In 1917, Zhang chose Wang Yongjiang, who was a regional tax officer, as the new Director of the Bureau of Finance and General Manager of the Official Bank of the Three Eastern Provinces (OBTEP) to solve the problem. The solution was the adoption of a new official currency based on silver, the yuan, and to level it to the Japanese yen, which was based on gold. The goal was to strengthen the new currency and reduce the pressure for convertibility from Japanese traders. Indeed, the constant demands of convertibility by Japanese merchants caused economic disorder between 1914 and 1915. The new yuan was adopted in 1917 and named the new Fengtian silver dollar[77]. Even if other currencies were still much in use across the region, over time the Fengtian dollar gained more and more acceptance. Furthermore, there was the establishment of financial inspectors, rectified tax codes and land rent, cleared local and private-issued notes and government spending were hugely cut. As a result, the provincial government enjoyed some economic stability in the following years.

By 1925, 8 years into Wang Yongjiang's financial tenure, Manchuria managed to reap over 30 million yuan in regular provincial income. Aggregating them to the government's overall revenue, to the Beijing-Fengtian Railway revenue and other sources, disposable income for Zhang Zuolin actually reached to an impressive sum of 101.47 million yuan.

Behind such revenues was a well-organized plan regarding the industrial development and economic sovereignty of Manchuria. The fundamental objectives were: to raise 20 million yuan for the establishment of a fund for the industrial sector of the Three Eastern Provinces; to set up state-run firms in ten local sites; to develop 20 high quality state-owned mines; to carry out large scale expansion of the Mukden Cotton within the year.

[77] KAMINISHI Miriam, *The seasonal demand for multiple monies in Manchuria: re-examining Zhang Zuolin's government's economic policy during the 1920s*, Financial History Review, 2013, p. 342-343

As has been mentioned before, at the beginning of the 20th century Japan became the number one importer of cotton in Manchuria. However, the happening of the May Fourth Movement and the rise of the social demand for greater share of domestic products made the Chinese invest in textile mills as well. In this spirit occurred the renovation of the Mukden Cotton Mill (MCM). Its equity structure was set half to the government and half to the public, exclusively to Chinese citizens obviously. The public shares were offered on the open market and by the beginning of 1922 the capitalization of the Mill increased from 4.5 million to 6 million yuan. In 1923 the MCM started full production, and at its peak in 1930 the mill was one of the largest textiles manufactures in Manchuria. In 1927 it had a net profit of 7.13 million yuan, of which 2.8 million went into the provincial treasury. The success of the MCM made investments in the cotton industry rise. Indeed, in the city of Fengtian (Shenyang) were generated 53 textile factories and many more in whole Manchuria. This way, Japan's monopoly was effectively broken.

As for electric power, with the investments that occurred thanks to the economic boom caused by the WWI, 18 Japanese and 10 Chinese electric companies were set up in Manchuria during that period. In 1921 the Japanese wanted to establish a joint power grid corporation with the Chinese, but Zhang Zuolin declined and starts to build the Fengtian's power group. Between 1923 and 1927, 20 electric power companies were registered by the Fengtian Provincial Government. This way a state power grid that covered major cities in Manchuria was created[78].

Fundamentally, Zhang Zuolin and his collaborators tried and succeeded in developing Fengtian (future Shenyang) as an industrialized city and a center of economic progress in Manchuria against Dalian, which was unfortunately under Japan's control.

On the other hand, as already mentioned Zhang Zuolin was determined to build a modernized and self-sufficient military industry. A factory that he desperately wanted was the Arsenal of the Three Eastern Provinces (ATEP). It opened door in 1921 and initially consisted of 4 factories: a gun factory, a smokeless powder factory, a bullet factory and a weapons factory. In 1924, the factory was expanded with 4 more factories: a shell factory, an artillery factory, a fuse factory and a casting factory. Engineers and specialists came from Japan, Russia, Germany, Sweden, Britain and France

[78] ZHAO Hai, *Manchurian Atlas: Competitive Geopolitics, Planned Industrialization, and the Rise of Heavy Industrial State in Northeast China 1918-1954*, Chicago, University of Chicago, 2015, p. 54

to work at the ATEP. Thanks to a professional workforce and a strict quality control system, the Arsenal was able to expand rapidly and localize most of its imported products without compromising the quality. The ATEP's production capacity made it China's largest and most advanced arsenal. Nevertheless, it still wasn't able to meet the demand of Zhang's Feng Army. Financially speaking, the arsenal spent over 300 million silver dollars between 1924 and 1929.

Zhang Zuolin's priority was towards the military buildup and the ATEP, so no matter the excellent financial work of Wang Yongjiang for the Manchurian government, the military spending kept on rising. Furthermore, after the second Zhili-Fengtian War, the occupation of Beijing and much of the Northern China and the ensuing resistance to the Northern Expedition initiated by the nationalists from the South kept on weighting down on the Manchurian financial system. For reference, in 1927 alone the tab of military spending topped 137 million yuan[79]. As a result, out of control inflation started in 1927, and it led to spread worker's strikes, commercial depression and even some cases of soldier mutinies. The Fengtian dollar had started on parity with the Japanese gold yen, but by February 1928, 40 Fengtian dollars were equivalent to 1 gold yen. As a result, the extreme expenditures of Zhang Zuolin brought Manchurian public financing to the brink of bankruptcy when Zhang Xueliang took power in 1927.

4.2.2 Zhang Xueliang's strive towards development

Fortunately, when Zhang Xueliang started to run things everything changed as his aim was to modernize Manchuria and make it a great economy. In a relatively short period of time he carried out modern economic, political, cultural and educational reforms in the Northeast, which greatly helped to promote the modernization process in the area.

Firstly, in order to stabilize the financial situation, Zhang Xueliang issued extensive government bonds and borrowed private capital to increase market currency input. In the summer of 1929 alone, he issued 5 million yuan of "financial bonds" for the three eastern provinces. After this rectification, the financial market became active again. Moreover, in order to fundamentally change

[79] ZHAO Hai, *Manchurian Atlas: Competitive Geopolitics, Planned Industrialization, and the Rise of Heavy Industrial State in Northeast China 1918-1954*, Chicago, University of Chicago, 2015, p. 40

the disordered state of the old financial system and form an institutionalized normal state, in 1930 Zhang Xueliang ordered the establishment of the Financial Consolidation Committee of the Three Eastern Provinces as a financial research institution[80].

Further to this, once he took over control, he declared the "New Manchuria Pioneer Plan", which was basically a regionalized developmental plan envisioned by Sun Yat-sen in his book of 1924 "The general plan for national reconstruction"(Jianguo fanglue 建国方略). His industrial policy featured: retooling the military industry to produce for the civilian machines and tools market; supporting consumer products manufacturing that could break foreign monopolies; encouraging the creation of industrial associations with government endorsement; welcoming foreign investments that don't infringe Chinese sovereign rights; fighting for mining rights with the Japanese. In short, his plan was to develop and revitalize the Northeast's economy by increasing revenue, reducing expenditure and developing production.

Regarding the agricultural system, by the late 1920s the Northeast was still a vast and barely populated land, and much of its soil and resources were left unused. In view of this situation, Zhang Xueliang adopted two measures: first, he wanted to attract population through laws and regulations rewarding agricultural production. Indeed, in 1929 a set of documents was formulated in order to encourage people to engage in agricultural production and thus to increase Manchuria's geographical advantage. Secondly, he encouraged military and civilian reclamation of wastelands. The soldiers there put down their guns and picked up their hoes to open up wasteland. This move not only solved the problem of the placement of the army in peacetime, but also increased the grain output and reduced the army's food supply problem. The implementation of this method has achieved remarkable results and made the grain output of the Northeast increase year by year[81].

On the subject of the development of Northeast China's national industry, by the end of 1930, in Fengtian many national industries such as spinning mills, iron mills, oil mills, kilns, paper mills, match factories and other enterprises were established one after another. Furthermore, in addition

[80] SUN Yi Nian and LI Xue Tao 孙艺年，李学桃，"Zhang Xue Liang yu dongbei diqu de xiandaihua jincheng" 张学良与东北地区的现代化进程 (Zhang Xue Liang and the Modernization Process of the Northeast of China), Harbin, Harbin Insitute of Technology, 2009, p.76

[81] *ibidem*, p.74-75

to iron factories, Fengtian had 18 oil mills, 11 wineries, 25 printing plants, and more than 60 leather factories. The industrial production in the Northeast was booming and was laying the foundation to become China's main industrial base.

As for the ATEP, Zhang Xueliang retooled the arsenal into a “peace factory” at the end of 1928. The arsenal started to manufacture goods such as bicycles, heating radiators, weaving machines, water pumps and agricultural tools. Furthermore, he looked abroad for engineers that could refit the factory to produce trucks and tractors.

Afterwards, in 1929, the Department of Agriculture and Mining (DAM) submitted a development plan which aim was to better manage the mining resources in Manchuria. The DAM proposed to establish mineral laboratories, geological surveys, metal refineries, mining banks and mining schools in order to provide more comprehensive services to the entire mining industry.

About manufacturing, the DAM complained about the still limited scale of native industries. The government in fact was limiting too much its sponsorship in textile industry. In general, in Manchuria there was still too much exporting of materials and too importing of manufactured products. As a result, the government started to better protect domestic industries from foreign competition and to reward invention and innovation, and government sponsorships expanded to pharmaceutical factories, paper mills, glassworks, machinery plants, electrical appliance factories and locomotive works.

Zhang also actively pursued foreign investment, in particular overseas Chinese capital. He paid special attention to the patriotism and love of the Chinese living abroad, and enthusiastically encouraged them to invest capital and technology in the country to develop the economy of the Northeast. In 1929, the DAM published the “Overseas Chinese Industrial Investment Encouragement Ordinance”, which listed, manufacturing, construction, transportation and mining as investment priorities.

Moreover, the Liaoning Provincial Government was reorganized and the new Department of Construction (DOC) was established in 1929, as Zhang was very ambitious in the infrastructure constructions. Most of the DOC’s work was focused on the building of the Port of Huludao[82], in

[82] Huludao (葫芦岛) is a coastal prefecture-level city in southwestern Liaoning province.

southwestern Liaoning Province. This port started to be built in 1910 in order to provide an alternative to the overloaded Newchwang port but because of the 1911 Revolution it was not fully realized. Zhang wanted this new port to be a direct competitor of the port of Dalian, which was still under the Japanese Kwantung Administration, He believed that Huludao could become an important port for foreign trade. The plan was also to connect it with the railway system. In July 1930 the harbor construction started.

Zhang Xueliang government also promoted highways, waterways and telecommunications. Among these, radio communication was a priority and grew the most, especially because of the border war between the Soviets and Zhang about the sovereign control on the CER. After the war, civil radio transmission was permitted. In 1929, new German and American 20kw transmitters were ordered and installed in Fengtian, and the station was able to communicate with Europe and the United States. Before 1931, about a dozen new radio stations were built in railway towns and frontier towns. Zhang was thus able to establish a sophisticated radio network in Manchuria.

4.2.3 Trisecting the railway system

Regarding the railway system, Zhang Zuolin had to deal with the sandwich situation created by the Russians and the Japanese. In the 1920s, Zhang Zuolin managed to take control of the section of the Peking-Mukden Railway north of Shanhaiguan, which was connected with the SMR in Mukden. Both railways were essential to the economic prosperity of Manchuria, and to Zhang they were even more important because of the military mobility they offered to the Fengtian Army. The problem was the fact that Zhang had no control over the SMR, so in order to seek independence and revenue, he conceived a plan to encircle the SMR from east and the west. The strategy was to build two routes that would run roughly parallel to the SMR and eventually connect to the PMR. This way both Russian and Japanese influence would be seriously reduced. Unfortunately, the Japanese possessed a treaty privilege that banned any SMR parallel line. For two years were conducted negotiations that ended up in 1924 with the compromise that Manchuria would take a loan from Japan to build the Taonan-Hailong and the Jilin-Dunhua Railways in exchange for the right to build the Fentian-Hailong Railway independently. In the same year it was established the Office of Railroad

Superintendent for Three Eastern Provinces in order to better deal with the enlargement of the railway system. Such office was later upgraded to the Three Eastern Provinces Transportation Commission (TEPTC). With the establishment of the TEPTC began a wave of Manchurian railway construction and major railways broke grounds one after another, as displayed in the following table.

Table 5: Major Railways in Manchuria 1910-1930 Source: Zhang and Dong 张，东，"Zhang Xueliang yu Dongbei Xinjian she ziliao xuan" 张学良与东北新建设资料选 (Zhang Xueliang and Northeast New Construction Materials Selection)p.96

MAJOR RAILWAYS IN MANCHURIA BETWEEN 1910-1930

Name	Construction Duration	Length (km)	Source of Financing
Changchun - Jilin	4/1910 – 10/1912	128	Japanese Loan (SMR Management)
Spipngjie - Taonan	4/1917 – 10/1923	426	Japanese Loan
Taonan - Angangxi	6/1925 – 6/1926	225	Japanese Loan
Fengtian - Hailong	7/1925 – 12/1927	337	Fengtian Provincial - Merchant
Hulan - Haicheng	9/1925 – 12/1928	221	Heilongjiang Provincial - Merchant
Jilin - Dunhua	6/1926 – 10/1928	221	Japanese Loan
Jilin - Hailong	6/1927 – 6/1929	184	Jilin Provincial
Qiqihar - Keshan	6/1928 – partially finished	158 (341)	Heilongjiang Provincial
Taoan = Suolun	8/1929 – partially finished	83 (180)	Fengtian Provincial – Manchukuo

As it can be seen, Manchurian new railway sections exceeded the ones agreed with the Japanese in 1924. Indeed, Japan kept on bringing up their rights saying that any branch line that might be prejudicial to the SMR was prohibited. Anyway, over time Zhang's attitude became more careless, and his answering notes stated that "all the railways are proposed by the local governments and people; therefore, these are domestic affairs and Japanese interferences are not justified[83]". Zhang's reluctance to cooperate with Japan on the issue of the Manchurian railway system enraged Japanese authorities in Manchuria and it probably largely contributed to his death enacted by the Kwantung Army.

[83] ZHAO Hai, *Manchurian Atlas: Competitive Geopolitics, Planned Industrialization, and the Rise of Heavy Industrial State in Northeast China 1918-1954*, Chicago, University of Chicago, 2015, p. 76

After the death of Zhang Zuolin, his son Zhang Xueliang had to deal with a new management of the CER with the Soviets. They initially promised him full control of choosing which Chinese officials would be on the board in the joint company. This would have given him half control of the CER. Nevertheless, the Soviets later claimed they should keep majority control in order not to injure the railway. As a result, the Russians were controlling 67% of all positions[84]. In 1929 Zhang tried to overturn Soviet's management by arresting Russian general managers of the CER, and the Sino-Soviet conflict started. The Soviet strategy was a huge success and by the end of the year the Chinese were ready to sign the peace treaty.

Anyway, Zhang Xueliang ambitions concerning the railway didn't come to an end, and in 1930 a "New Northeast Railway Network Plan" was approved. It called for extensions of the two main routes of the existing system, and the addition of a third one. The idea was to build 2254 km more of main railroads and 4070 km more branch railroads. The cost curbed the plan and Zhang was only able to launch part of it, the Taoan-Suolun Railway.

On average between 1922 and 1931, under Zhang Zuolin and Zhang Xueliang, about 80 million yuan were spent to build more than 10 railways in Manchuria. In 1931, Chinese railways covered 37% of the 6507 km railways in the three eastern regions, and the Soviet-Chinese CER covered 27%.

Thanks to Zhang Xueliang's efforts, infrastructure such as railways, highways, and ports in the Northeast were quickly established, and a modern transportation system in the Northeast was initially formed. This not only accelerated the circulation of materials in the Northeast and developed the economy of the Northeast, but also effectively resisted Japanese aggression until the invasion of 1931.

4.2.4 Conclusion

Undoubtedly Zhang Zuolin's goal to reach military advantage became a catalyst, and the trigger of the regional reforms initiated, reinforced and adjusted throughout the first decades of the

[84] ELLEMAN Bruce A., *The Soviet Union's Secret Diplomacy Concerning the Chinese Eastern Railway 1924-1925*, The Journal of Asian Studies, Vol. 53, 1994, p. 459-486

20th century. Moreover, obviously the peculiar geopolitical situation of Manchuria largely contributed to its unique development comparing to other regions in China. Anyway, in the course of their governments, both Zhang Zuolin and Zhang Xueliang shook the system with tenacious actions, bold plans and aggregated investment. Thanks to them a state-directed, heavy industry leaning economy started to bloom in Manchuria. Among imperial competitions and Chinese warlordism, Manchuria with its group of modern agencies like the OBTEP, the ATEP, the DAM and the TEPTEC emerged. Industrial independence began to be seen as the foundation of national sovereignty and security and was actively pursued by the government industrial management apparatus they both established.

The direction Manchuria was taking under the Zhangs' administration was so threatening to Japan that in the end it made the Japanese choose a total invasion. They were worried about the fact that they were not controlling the arising competing power of Chinese Manchuria. Indeed, before the September 18th Incident, the degree of modernization in Northeast China was undoubtedly the leading one in the country.

Once such enterprise fell into their hands, they combined it with the colonial industrial state they had already built in the leased territories to form a more advanced military-industrial complex under the rule of the Japanese empire.

5. The "controlled economy" of Manchukuo (1931-1945)

As already mentioned, in Manchuria the Zhangs' governments were trying to recover the rights of China and the anti-Japanese sentiment was spreading in the region. Moreover, First World War economic boom ended quickly for Japan, and afterwards the 1923 devastating Kanto earthquake and the global depression of 1929 occurred. These were the major events that were influencing Japan's economy at the end of the 1920s. In this state of affairs occurred the Mukden Incident of 1931 by the hands of the Kwantung Army. The attack hadn't actually been approved by both the Kwantung Army General and the Japanese government. It was the idea of a Colonel of the Kwantung Army that truly believed a conflict in Manchuria was in the best interests of Japan. However, the

Japanese were secretly talking about an occupation of the region since the death of Zhang Zuolin, maybe even before. So, the Colonel's action was definitely not like a bolt from the blue.

The Japanese Colonel plan was to make a rail section explode, attract Chinese troops and blame them of the attack on an essential portion of the Japanese railway. This way Japan could have legitimately reacted against China. The incident occurred on the 18 September 1931. The next day the Japanese were already attacking Mukden and destroying Chinese forces. By the evening, Japan had already occupied the city.

Zhang Xueliang knew the Chinese troops couldn't win against the experienced Japanese troops and ordered his men not to put up a fight. This way in the following five months Japan easily occupied the major cities of Manchuria, finding some resistance only by the Jilin provincial forces.

After the Japanese invasion, Japan wanted to separate the region from Chinese control and thus created the well-known puppet state of Manchukuo (满洲国). In order to appear more legitimate, they even asked to the last Emperor of China, Puyi, to become the head of state for Manchuria, even if he was obviously nothing more than a figurehead. Manchukuo was officially founded on 1 March 1932, with the city of Changchun, renamed Hsinking, as capital.

5.1 The initial transition period and the building of Manchukuo

The Japanese idea was to impose a direct military rule and modern state control system in Manchuria in order to ensure the rapid growth of economic capacity. At that time, many emerging bureaucrats in Japan wanted to try out their new economic ideas based partly on the Soviet economic planning. Manchuria to them looked like the ideal playground. However, as will be shown below, the put in writing and also the put in action of such controlled economy was not as easy as they initially thought.

Generally speaking, for promoting modern economic development, three institutions are necessary: a formal government, a banking system and industrial firms.

In December 1931, three months before the establishment of Manchukuo, the Japanese Army General Staff approved the founding of the Department of Special Service (DSS), a civic institution that was going to assist the Kwantung Army in building a new regime in Manchuria. The Manchukuo

government that came afterwards was a state far more centralized than when the area was controlled by the warlord Zhang Zuolin.

By February 1932, the DSS had already drafted a financial guiding outline for the new state, the so-called "General Policies on the Monetary System, Fiscal System, Finance, Industry and Transportation". The policies included were listed hierarchically: first there was the collection of funds, the establishing of a central bank and the creation of a monetary system; second, the planning of a state budget, the creation of a tax system, the implementation of state monopoly and the making of banking laws; finally, the document suggested the founding of special banks and reorganization of Japanese financial institutions in Manchuria.

The Central Bank, founded on June 1932, was a merge of three former large Chinese native banks. By 1935 its officials were able to replace 97% of all native currencies in circulation before 1932 with the new official currency of the State of Manchukuo. In the following month, the old tax system had already been abolished, and by the end of the year 160 local tax bureaus and 12 tax inspection department branch offices were established to run the new tax system in Manchuria. By 1933, Manchukuo began to draw enough tax revenue to sustain its government. Initially, it was decided to maintain the old tax system and just to tap the custom duties and salt tax when other tax levy was in disarray. For the first five years, in Manchukuo the custom duties and salt tax constituted almost 50% of the state revues. In 1932, duties claimed 53% of all tax revenue and up to 60% in 1939 when foreign trade was giving in to the wars in Europe and China. Over time a series of financial reforms were introduced in Manchuria, and by the end of 1936, Manchukuo had already achieved a balanced and regular annual budget with an efficient tax system and stable sources of income[85].

Furthermore, in January 1932, the Economic Research Association (ERA) was established, with the purpose of drafting economic policies and plans for Manchuria and also doing some necessary surveys on the conditions of the Manchurian economy. At the end of 1932 the ERA had already drafted a plan on five-year terms for the economic development of Manchukuo. The plan, entitled "the Comprehensive Plan for the First Phase Manchurian Economic Construction", defined

[85] ZHAO Hai, *Manchurian Atlas: Competitive Geopolitics, Planned Industrialization, and the Rise of Heavy Industrial State in Northeast China 1918-1954*, Chicago, University of Chicago, 2015, p. 87-91

the period 1932-1936 as the first phase. The plan was approved by the DSS and finally submitted as the "General Outline of Economic Construction Program of Manchukuo" on 1 March 1933, the first anniversary of the new state. Such plan stated the supremacy of national defense, the construction of a Japan-Manchuria economic bloc, the promotion of special corporations supervised by the state and the control of capitalism. But, essentially, the plan was abstract and vague, very limited capital investment went into the special and semi-special corporations and basically the SMR kept its predominance as the most important economic institution in Manchuria until 1935. As a matter of fact, except for the SMR and its subsidiary companies, Manchuria possessed no real modern enterprises before 1932.

The SMR took over the entire Manchurian land and water transportation system between 1933 and 1936. In 1935, the SMR even bought the Chinese Eastern Railway from the Soviet Union. During this time, it raised its capital to 800 million yen and also incorporated 80 important companies, reaching an amount of total assets of 2.1 billion yen. The Kwantung Army tried to cut all non-rail enterprises off from the SMR in 1933, since the railway company was not a Manchukuo entity that the government could control. But the SMR managed to resist the attempt.

In the economic program of 1933, it was stated that all the industries related to national defense like transportation and communications would be under state control. This new way of conceiving economy, with a widespread state intervention, made Japanese capitalists hesitant to invest in Manchuria. To overcome such apprehensions, the authorities of Manchukuo tried to welcome Japanese private investment. Unfortunately, they didn't succeed and during this initial period Manchukuo didn't treasure many Japanese investments[86].

Nevertheless, in this initial period, "special" and "semi-special" companies were established in order to manage most important industries. Such companies were no different from private corporations in organization, as they had a board of directors, corporate executives and stockholders. The difference was that they were established for the purpose of expediting the economic policies of the government of Manchukuo. The idea was that important industries had to be managed by public corporations, defined "special", because they reflected the anti-capitalism ideology of the Army.

[86] NAKAGANE Katsuji, *Manchukuo and Economic Development*, Princeton, Princeton University Press, 1989, p. 142

Basically, to each special or semi-special company was given authority by the government to monopolize its own industry. As planned, the State contributed a large portion in the building of the "special" companies, and it was also active in financing the "semi-special" ones. The role of the State exceeded the usual rights of stockholders, as all major decisions according the management of the "special" companies required the approval of the government. Initially State control mainly included heavy industries, but over time the larger scale consumer goods industries also passed under government supervision[87]. By the end of 1936, 26 special and semi-special companies were founded, like *Manshu Dengyo* (electricity), *Showa Seikojo* (iron and steel) and *Manshu Sekiyu* (petroleum, mining and refinery)[88]. At the end of 1941 both types of companies increased to 70[89].

During this period of settlement, priority was given also to urban development, transportation and communications. As a matter of fact, the railway increased from 6,300 kilometers in 1932 to 9,260 in 1936. Moreover, the cities of Harbin, Jilin, Dandong and Fengtian were chosen for the establishment of industrial districts to host new factories, while the coal and iron production centers of Benxi, Fushun and Anshan were going to become special industrial districts to comprehensively develop heavy industry.

Besides, Manchukuo began establishing the National Airways and the Mukden Arsenal in its first year, 1932, all with the assets taken from the previous Chinese Government in Manchuria. In the following years many other companies utilized the industrial legacy of the preceding state enterprises.

Regarding agricultural policy, between 1932 and 1937 it was vague, and no concrete proposals were provided by the new government. The authorities only conducted many land surveys, mainly to eliminate any evasion of the land tax or to see if there was any possibility of increasing this tax since revenue was very needed.

[87] KINNEY Ann Rasmussen, *Japanese Investment in Manchurian Manufacturing, Mining, Transportation and Communications 1931-1945*, Abingdon, Routledge, 1982, p.20-25
[88] OKAZAKI Tetsuji, *Development and Management of Manchurian Economy under the Japan Empire*, Tokyo, The University of Tokyo, 2013, p.5
[89] NAKAGANE Katsuji, *Manchukuo and Economic Development*, Princeton, Princeton University Press, 1989, p. 134

5.2 The first “Manchurian development five-year plan”

A turning point to create a new economic system occurred with the establishment on 22 December 1934 in Tokyo of the Manchurian Affairs Bureau (MAB), a cabinet agency. To the MAB was transferred the management of the SMR, the Kwantung Leased Territory and the Manchuria Telegraph and Telephone Corporation. Such agency was headed by the Army Minister Hayashi Senjuro and directly supervised by the Japanese Prime Minister. The bureau had three sections: general affairs, administration and industrial promotion. The latter welded the power of overseeing the SMR and special, semi-special corporations in Manchukuo. At the same time in the new state a military-bureaucracy coalition was formed. This together with the unification of decision-making structure on Manchuria created a favorable environment in Japan for adopting a more state-controlled economic model and putting in place a centrally planned heavy industrialization in the state of Manchukuo.

On August 1936, the Japan-Manchukuo Finance and Economic Research Association (JMRA) drafted a report, the “Revenue and Spending Plan for Five Years from 1937”, whose first attachment stated a set of industrial production targets, estimation of future demands and essential funds. Afterwards, they produced a second more detailed report named “Expansion Plan for Military Industries in Manchuria”. This plan showed industry by industry some production targets: the aircraft industry was asked to grow by 37 time, the military vehicles industry by 33 times, and the arms industry by 5 times. The plans were then revised into the “Target Plan for the Manchuria Development Five-Year Plan”, which became the baseline for the negotiations and conception of the first Manchurian Five-Year Plan. Later on, such baseline was again revised into a new plan based on the research and administrative works of the ERA, the Provisional Industrial Research Bureau (PIRB), and the Manchukuo government. Finally, on 16 December 1936 the "General Outline of the Manchurian Industrial Development Five-Year Plan" (MFYP) was completed, and Japan’s government gave its consent on 1 April 1937[90].

[90] ZHAO Hai, *Manchurian Atlas: Competitive Geopolitics, Planned Industrialization, and the Rise of Heavy Industrial State in Northeast China 1918-1954*, Chicago, University of Chicago, 2015, p. 115-119

The MFYP had some main components: industry and mining, transportation and communication, agriculture, animal husbandry and immigration. The sources of capital for the investment in the industrial sector were divided like so: 34.1% Manchukuo government, 20.9% SMR, 20.1% capital market, 18.4% corporate bonds and 6.5 Japanese government. The plan assigned for 55% of investment funds to the heavy industry sector.

Taking industry as an example, for the period from 1937 to 1941, annual targets capacity and output were set for the most important branches of industry: iron, steel, coal, light metals, electrical power, various fuels and chemicals. The most important enterprises in heavy industry were assigned annual quotas. For reference, for steel the goal was a production of 8,900,000 tons of materials within the period 1937-1941. Such amount was going to be produced both by electric furnace and by ordinary means[91]. For some industrial commodities like steel, petroleum, gasoline and salt a crude input and output method was used to assure the realization of targets, similarly as in the system of balances in Soviet planning.

Anyway, Kishi Nobusuke, who was the Vice-Minister of Industry in Manchukuo since 1936, knew that the first MFYP had capital and technological shortages that were going to make impossible its realization. He thought that the only way to save the plan was to find a Japanese zaibatsu, which is basically a large Japanese business conglomerate, and compel it to invest in Manchukuo's economic plan. For this purpose, he invited many influential Japanese enterpreneurs to Manchukuo. "Old zaibatsu" like Mitsubishi were not interested on investing in Manchuria. But the "new zaibatsu" Nissan and its Chairman Aikawa actually were. Nissan's business was diversified into fishery, mining, machinery, automobile, and chemicals. It was the largest auto producer in Japan and had close relations with American auto companies. After his visit, Aikawa gave some comments about Manchukuo and the draft of the first MFYP: he proposed the coordination of the development of related industries in order to enact the MFYP. Besides, according to him it was necessary to make those industries organized in a hierarchical organization. Finally, he stressed the necessity to import capital from abroad other than Japan, particularly the United States and Germany. Kishi was very impressed by these comments and totally agreed upon Aikawa's ideas. In the end he was able to

[91] MYERS Ramon H, *The Japanese Economic Development of Manchuria: 1932-1945*, The University of Arizona, 1984, p.45-46

convince Manchukuo's government that Nissan and Aikawa were the key to breathe life into the MFYP.

Nissan's conditions included: the introduction of American capital with Manchurian resources as collateral; the development of heavy industry comprehensively under one big corporation which was going to control all resources, enterprises and capital; finally the move of the whole Nissan corporation to Manchuria.

Unfortunately, because of the beginning of the Second Sino-Japanese War after the Marco Polo Incident of the 7 July 1937, the involvement of Nissan was temporarily stopped and the implementation of the Manchurian first Five-Year Plan didn't go as planned. The war altered the regional dynamics and caused ripple effects also into the economic sphere, so the long-term industrialization in Manchuria was no longer the priority.

Nevertheless, the approval of the plan with Nissan occurred on October 1937. Nissan was entirely moved its headquarters to Hsinking, the capital of Manchukuo, the new heavy industrial holding company was named the Manchuria Heavy Industrial Development Corporation (MHID) and Aikawa was put in charge of the company. The MHID was a remarkable trial of a coordination system, where a big part of the national economy was coordinated within one huge private conglomerate. This system was very different from the one of planning and control by the state since the organization was a private conglomerate. In the final copy of the agreement between Nissan and Manchukuo, the capital of the MHID amounted to 450 million yuan. The SMR willingly cooperated to dismantle its economic Empire in Manchuria and transferred by 1938 its majority stakes (a total amount of 189 million yen) in the heavy industries to the MHID. Basically, the MHID revamped the industrial enterprise system in Manchuria.

As for the MFYP, in 1938 and again the following year it had to be modified according to the new state of affairs. The idea of the Japanese Army was to utilize Manchukuo as a source of raw materials and semi-manufactured goods to Japan's industries. Furthermore, the "One Industry One Corporation" industrial enterprise system that was the basis of the controlled economy of Manchukuo had to be remodeled in order to strengthen the state's capability to comprehensive planning, industrial management and production expansion. Throughout the whole war period, the

State of Manchukuo put a big portion of its revenues into heavy industrial development, especially raw material extraction. In 1941 alone, the government spent 4 times more compared to 1932.

The revised plan had to satisfy the much larger demand of military goods. The old plan's targets nearly doubled. The goals for communications and transportation were not changed, while those for mining, manufacturing and agriculture were greatly increased.

As for agriculture, simply expanding production by adding more labor power and capital outlays like in mining and manufacturing wasn't necessarily going to result in favorable results. Yet agriculture couldn't lag behind industry, as raw materials and food were even more required. As a result, in the revised plan the outputs of many crops were increased, although old targets were already unrealistic. Thus, the outputs of sorghum, wheat, millet, tobacco, soybeans and corn were all scaled upwards. The State invested little in the agriculture sector, and it mainly relied upon price fixing and other policies to acquire the produce it needed to maintain the planned rate of industrial expansion. Many companies with monopoly rights were established in order to undertake price setting, assure the supply of grains and properly administer the system of collection and distribution according to the needs of the regime. The result of such ineffective policies was that the State of Manchukuo didn't acquire the surpluses needed and farmers didn't realize a fair price for their produce. Consequently, some black-market techniques and barter increased. In response to this serious situation, the Japanese introduced some incentives into the system, like sale of consumer goods, rent reductions, rationing, and bonuses paid for deliveries within specific periods. Thanks to these and other policies the Japanese had more success in obtaining the amount of planned purchases in 1941 than in 1940. In 1943 and 1944 the amount acquired from planned purchases were 7.6 million tons and 8.9 million tons respectively[92].

[92] MYERS Ramon H, *The Japanese Economic Development of Manchuria: 1932-1945*, The University of Arizona, 1984, p.106-111

AGRICULTURAL OUTPUT: COMPARISON OF THE TARGETS OF THE REVISED MFYP WITH ACTUAL PERFORMANCE

Product	1937	1938	1939	1940	1941
Rice	478,748 (plan) vs 689,335 (performance)	1,199,400 vs 749,902	526,774 vs 829,731	584,370 vs 708,595	664,835 vs 825,585
Soya Beans	4,225,000 vs 4,352,475	4,500,000 vs 4,612,305	4,650,000 vs 4,014,008	4,800,000 vs 3,430,935	5,000,000 vs 3,486,313
Sorghum	4,263,000 vs 4,314,694	4,383,000 vs 4,679,941	4,396,000 vs 4,443,076	4,566,000 vs 4,942,889	4,706,000 vs 5,000,198
Millet	3,520,000 vs 3,226,131	3,500,000 vs 3,133,855	3,650,000 vs 3,041,622	3,770,000 vs 3,777,226	3,920,000 vs 3,713,231
Wheat	1,077,475 vs 1,125,951	1,199,400 vs 976,323	1,357,500 vs 892,413	1,576,100 vs 776,593	1,787,000 vs 842,001
Sugar Beet	135,503 vs 135,503	194,400 vs 183,586	247,000 vs 241,841	280,000 vs 347,569	300,000
Cotton	19,649 vs 19,649	22,075 vs 14,917	28,558 vs 68,840	39,759 vs 80,009	44,705 vs 98,245

Table 6: A comparison of the targets set for agriculture output by the revised MFYP with the actual performance Source: MYERS Ramon H, *The Japanese Economic Development of Manchuria: 1932-1945*

The revised plan called for 78% of investment funds to go to the heavy industry sector. Steel and energy, which included coal and electricity, were supposed to receive 29% of all the funds. The original investment to mining and manufacturing was of 58%, while with the revision 79% of the investment were allocated for these purposes to put the economy on a war footing. Regarding manufacturing and mining, large increases in output were called of ferrous and non-ferrous products, pig iron, iron ore, coal, other fuels and chemicals. Since coal and iron were basic ingredients for pig iron and steel production, their output had to be doubled.

At the end of 1941, the production of both mining and industry grew substantially, but none of the targets set in the MFYP was met. According to official claims, 70-80% of the first five year plan was achieved. The closest was coal, whose production flourished mainly thanks to the hundreds of thousands of Chinese miners employed instead of machines.

Taking the Fushun Coal Mine as an example, it definitely was one of the central players in the Five-Year Plan. Its output had strongly increased from 1933 to 1936, but by 1937 it began to decline. The problem was that the Fushun Mine was not able to increase production as expected during the war years, and even showed a decline and thus a consequent inability to achieve the Manchukuo Five-Year Plan's targets. The causes were many, but maybe the stongest were the lack of progress in mechanization of coal mining, the lack of skilled labor and the increasing inability to acquire proper equipment and materials[93]. Over time, many other companies faced the same problem as the Fushun Mine.

An important factor that may have been causing periodic slowdowns in growth of industrial output in the late 1930s was the absence of a machine tool industry. The Soviets knew the importance of a machine tool industry, which could supply maintenance, replacement and new parts, and thus gave it special priority in the two initial economic plans. On the contrary, the Japanese simply foresaw the possibility of acquiring machines and tools from Japan, and thus inside the plan they didn't include this important industry.

Neverthelss, comparing 1941 results with the ones of 1936, basic industrial output like steel, iron, coal and electric power relatively doubled. In the table below are shown the actual results of the industrial production from 1937 to 1941 compared with the planned ones.

THE FIRST MFYP: THE REAL RESULTS OF KEY INDUSTRIAL PRODUCTS (in thousand tons)

Product	1937	1938	1939	1940	1941	Percentage Plan	1937
Coal	14,078	14,984	19,496	21,056	24,147	94.7%	
Iron Ore	2,256	2,696	3,075	2,977			

[93] CHEN Tsu-yu, *The South Manchurian Railway Company and the Mining Industry: The Case of the Fushun Coal Mine*, Institute of Modern History Academia Sinica, 2015, p. 87-89

Pig Iron	762	827	1,123	1,643	1,433	48.2%
Steel Ingot	452	604	521	532	561	30.3%
Aluminum	0	0.56	3	4.5	6.5	32.5%
Oil	75	80	87	87	280	35%
Lead	1.22	2.57	2.8		3	24.2%
Electric Power (MW)	554	597	771		1000	71.2%

Table 7: The Results of the most important industrial products in the period 1937-1941 Source: ZHAO Hai, *Manchurian Atlas: Competitive Geopolitics, Planned Industrialization, and the Rise of Heavy Industrial State in Northeast China 1918-1954*

In general, according to some studies, the contribution of technological change to the process of economic growth in Manchuria rose from 26% in 1924-1929 during Zhang Xueliang's government to 46% in 1934-1941, with the Japanese administration.

Finally, regarding trade, Manchukuo's economy heavily depended on the trade with Japan, in particular the import from Japan. From 1932 Manchuria had an import surplus that became more prominent year by year, since industrial growth asked for more capital and materials. After 1937 this imbalance became very acute. In 1932 59% of Manchuria's imports came from Japan, 18% from China, and the remainder was divided among Russia, India, Germany, Great Britain, the USSR and other countries. Then, in 1937 the percentage of the import from Japan reached 75.1%. By 1941 Japan handled 85% of imports. In this state of affairs, the Manchukuo government decided to restrict the imports from Japan. These restrictions made capital import even more vital, but, even if Aikawa made great efforts to import capital, all of his attempts were unsuccessful. The main reason was because of the fact that the Japanese diplomatic relationship with the Unite Kingdom and the United States were deteriorating because of the prolonged Sino-Japanese War.

As for the exports, the major export commodities remained pretty much the same as they had always been in Manchuria: soybeans, beancake, bran oil, millet, wheat, sorghum, coal and pig iron. In 1932 about 38% of trade went to the Japanese Empire, 29.6% went to China, Germany absorbed 12%, and Russia, Great Britain, India, Egypt, the United States and others exported the rest.

With the outbreak of WWII, trade with European countries, especially Germany, declined to zero. Gradually Japan came to acquire a greater share of Manchukuo's output, and by 1941 nearly 70% of total Manchurian exports were absorbed by the Japanese.

5.3 The second economic plan and the end of Manchukuo

In 1941, the Japanese proclaimed a second MFYP to carry the economy to a new and higher stage of development. The main difference with the first plans was that this new one took into account the entrire Japanese dominated East Asian bloc, so it also included North China, Korea and Japan[94]. Within the plan it was given priority to the initiative to consolidate the iron, coal, liquid fuel, hydro power, light and nonferrous metals and chemical industries, all of which were necessary for a self-sufficient economy and for the war effort. In the second economic plan, only coal and food production were elevated to top priority. Furthermore, more statal controls over materials, labor, financial funds and prices were going to be imposed. For example, officials, who obviously were always Japanese, even had to approve the procurement prices for Manchukuo steel, coal and soybeans exported to Japan[95].

Table 8: The Targets of the most important industrial and mining products for the second MFYP 1942-1946 Source: ZHAO Hai, *Manchurian Atlas: Competitive Geopolitics, Planned Industrialization, and the Rise of Heavy Industrial State in Northeast China 1918-1954*

SECOND MFYP: Industry and Mining Production Targets

Products (kiloton)	1942	1946	Products (kiloton)	1942	1946
Coal	27,500	44,930	Asbestos	7	10
Steel Products	517	952	Liquefied Coal	268,500 kiloliters	625,000 kiloliters
Pig Iron	1,600	2,590	Soda	1,68	128
Steel Ingot	705	1,318	Ammonium Sulfate	246.4	301.4
Aluminum	10	15	Salt	1,262	2,332
Copper	1.1	5.2	Pulp	92.7	138.3
Lead	9	12.2	Cement	1,862	2,890

[94] MYERS Ramon H, *The Japanese Economic Development of Manchuria: 1932-1945*, The University of Arizona, 1984, p.69

[95] NAKAGANE Katsuji, *Manchukuo and Economic Development*, Princeton, Princeton University Press, 1989, p. 143

Electric Power	1,114 MW	2,708 MW	Zinc	3.82	8.92

However, once the Pacific War broke out with the attack to Pearl Harbor on 7 December 1941, the government announced the "Outline of Wartime Emergency Economic Policy", which revised the second MFYP completed only a month before. The goal was to increase production of wartime supplies, expand material support to Japan and enlarge exchanges among Manchuria, North China and Korea. In short, Manchukuo's economic policy was even more confined to its role as a resources provider to Japan and its war machine. For reference, output of pig iron and iron ore was to be doubled by 1946.

As for the MHID, Aikawa had lost control of the company to the Kwantung Army and the Manchukuo government who both considered priority the meet of the demands of the Japanese war machine. He resigned and left Manchuria by the end of 1942, and the financial health of the MHID deteriorated continuously coming to the point it had to rely on the government subsidy to survive. State planners tried to reverse the situation by reducing unnecessary costs, focusing on technological research and giving a bigger role to the native Chinese. Anyway, in the end the state had no other choice than pouring more money into the MHID system in order to achieve more production, because in the time of war meeting the MFYP targets was more important than efficiency and profitability.

In 1944, the production capacity of coal, iron, liquid fuel and chemical fertilizer reached 31 million, 2.12 million, 0.43 million and 0.25 million tons respectively. In the same year, the production of pig iron in Manchukuo was 1.7 million tons, the production of steel was 869,000 tons and the electric power produced was 3.2 million kilowatt-hours.

Once Germany surrendered, Stalin agreed to fight Japan in China, as he was promised the return of lands and rights lost to Japan at the Yalta Conference of February 1945. On 9 August 1945, the Red Army started the invasion of the territories occupied by Japan, right before the Nagasaki atomic bombing occurred. This was the end of the Japanese colonial empire in the Northeast of China.

In Manchuria, the Japanese built an industrial potential which was far ahead of anything which existed elsewhere in Eastern Asia, excluding Japan and the Soviet Union. In a relatively short

period, they demonstrated skill in mobilizing resources from within Manchuria and launching an ambitious program of rapid industrialization. Such incredible industrial development was achieved not by any husbanding of resources and mobilizing savings, but primarily by a staggering resource transfer from Japan in terms of capital, technology, skilled labor and administrative talent. Taking capital as an example, during the existence of Manchukuo, Japan directed invested over 10 billion yuan in Manchurian companies. Without this transfer process Manchurian industry could never have expanded so rapidly.

Nevertheless, the process of Manchurian development was full of trial and error. Just like the Soviets did before them, the Japanese suffered the disease of "investment in grandiose projects" in Manchuria. They gave priority to projects like automobile plants, airplane works and rolling stock factories, all of which never really succeeded. If the effort given to the development of these industries had instead been diverted to improving agricultural yields, it would have yielded greater fruits overall. In short, the Japanese lacked the ability to be flexible in diversifying their objectives. Moreover, their wartime strategy did no good to the economic plan and finally left Manchuria with a half-built heavy industrial system.

In any case, the Manchurian heavy industrial state was undoubtedly a fascinating piece of empire building which has grown into a giant between 1937 and 1945. During those years, 183.5 million tons of coal, 10.3 million tons of iron, 4.75 million tons of steel and 1.1 million tons of oil were produced in Manchukuo. Not surprisingly, Manchuria once again became the center of postwar struggle among the Chinese Nationalists, the Chinese Communists, the Soviet Union and the United States, as they all wanted to take over the industrial state built by the Japanese in Manchuria.

SECOND CHAPTER

THE MAOIST ERA

1. WWII Post-war struggles

1.1 Manchuria as a Soviet "war trophy"

While in Europe the end of the Second World War seemed close, the front in Asia was in need of assistance, and the Soviets were the only ones that could help the Americans. Negotiations for such intervention started in early 1945, and in the final Yalta Agreement it was stated as follows: the port of Dalian was going to be internationalized; the railroads were going to be run by a joint Soviet-Chinese company; China was going to retain full sovereignty in Manchuria.[96] As a result of the pressures exerted by Russia and America, in March 1945, Chiang Kai-shek started the negotiations in order to sign a treaty of friendship and alliance with Stalin. However, during the Sino-Soviet negotiations Stalin tried to impose extra demands to the Nationalist government. Accordingly, Soviet troops started the war against Japan without the treaty. By the end of August 1945, Harbin, Changchun, Port Arthur, Shenyang and Dalian were all secured by the Soviet strike forces and airborne units.

Afterwards, the Sino-Soviet Treaty of Friendship and Alliance and other agreements about the Chinese Changchun Railway (CCR), which combined former CER and SMR, and also about Dalian and Port Arthur were signed on 14 August 1945.[97] These agreements stipulated that: the CCR was going to have a Soviet manager for the administration of the railway; Dalian port's master had to be a soviet official, even if it was an international "free port"; both the CCR and the port of Dalian should have been tariff free for Soviet goods; finally, Port Arthur was designated as a Sino-Soviet

[96] United States Dept. of State Historical Division, *The Conferences at Malta and Yalta*, 1945, Foreign Relations of the United States Diplomatic Papers, Washington, U.S. G.P.O., 1955, p. 984

[97] Vladislav M. ZUBOK, *A Failed Empire: The Soviet Union in the Cold War from Stalin to Gorbachev*, Chapel Hill, The University of North Carolina Press, 2009, p. 26

joint naval base, but both the chairman supervising the base and the military zone were going to be assigned by the Soviet Union. Fundamentally, Stalin was able to regain what the Russian Empire had lost after the Russo-Japanese War and even more.[98]

Regarding the industrial system created by more than 2 billion US$ of Japanese and Manchurian investment, it was a clear target for the Soviets, the Americans, the Chinese Nationalists and the Chinese Communists. Yet, the region was only mentioned in the Cairo Communiqué of 1943 among President Franklin Roosevelt, Prime Minister Winston Churchill and President Chiang Kai-shek. On such document it was stated that, after the war, Manchuria, together with all the other territories stolen from China, should have been restored to the Republic of China.[99] The problem was that Stalin's intention was to seize some of the Japanese properties in Manchuria as war trophies. As a result, Chiang sent a note to the Soviet stating that all industries and their machines should belong to the Chinese as part of the Japanese reparation. Stalin simply answered that he would reconsider the issue. Such circumstances strongly alarmed the Americans, who decided to send a note to the Soviet Union supporting China.[100] Later on, Soviet Foreign Minister Molotov sent a memorandum to the Chinese on 18 September 1945, where he claimed the Soviet ownership of all Japanese property in Manchuria. This was the first move of a very well-structured and premeditated Soviet plan.

First, the Soviets made sure that the SMR transportation system was functioning, Then, they arrested many industrial executives of the Manchukuo State in order to collect information about the industrial system. On 29 October, some representatives of Manchukuo's companies in Changchun were forced to sign a document dated back to 17 September[101]. With

Figure 1: Manchuria Soya Bean Stem Pulp Mill in Kaiyuan 开原, Liaoning Province "Interior view showing foundations from which pulp mill machinery had been removed during Soviet occupation" Source: Edwin W. PAULEY, Report on Japanese Assets in Manchuria to the President of the United States, 1946, p.228

[98] ZHAO Hai, *Manchurian Atlas: Competitive Geopolitics, Planned Industrialization, and the Rise of Heavy Industrial State in Northeast China 1918-1954*, Chicago, University of Chicago, 2015, p. 157

[99] U.S. Department of State, Foreign Relations of the United States, *The Conference of Cairo and Tehran 1943*, Washington, Unites States Government Printing Office, 1961, p. 322-325

[100] United States Dept. of State Historical Office, *Foreign Relations of the United States: Diplomatic Papers 1945, Vol. 7 The Far East, China*, Washington, U.S. G.P.O, 1969, p.958

[101] It was chosen 17 September as date because it was the day when the Soviet removal actually started.

such contract the entire system of assets of the MHIC[102] was transferred to the Soviet Command. About 72 industrial enterprises and 150 affiliated companies were included in this first document, and in the following weeks similar assets transfer documents were signed in Liaoning, Fushun, Dalian, Fuxin, Anshan and Harbin.[103] Afterwards, thousands of Soviet representatives were sent to Manchuria in order to take over the assets. During the last three months of 1945, industrial machinery, inventories of finished products and raw material stockpiles were removed and transported from Manchuria to the Soviet Union. For reference, at the Anshan Steel Works about 80 Russian technicians and 8000 Chinese and Japanese staff and workers spent 40 days to dismantle the factory. All the equipment was sent to Dalian, and finally arrived in Vladivostok within a month. The French Consul in Shenyang reported that in the end the Russian were moving industrial equipment indiscriminately, it didn't matter if they were Japanese or otherwise.[104] In the spring of 1946, Manchurian cities and all the industrial properties were transferred back to the Chinese Nationalists.

The post-war objective of the United States regarding China was to make it a strong, stable and unified country with an integrated and well-balanced economy within a liberal trade system.[105] After the Soviets stole most of Manchukuo's assets, President Truman decided to send an American Reparations Mission in Manchuria and Korea to directly study the situation after the Russians' departure. In the final report the head of the Mission, Ambassador Pauley stated that according to him, had the Manchurian industrial system remained intact, it would have helped China to grow its economy and accelerate its overall industrial development. Moreover, the excess Japanese heavy industry equipment heretofore dependent on Manchurian resources, after being removed from Japan and destined to Manchuria as reparations, would have been easily absorbed by China. The realignment of productive forces between Manchuria and Japan seemed the perfect solution, as on one hand it would have cut off the source of strength in the Japanese war potential, and on the other hand it would have benefitted China's economy. "*However, the damage which Manchurian*

[102] MHIC states for Manchurian Heavy Industries Company.
[103] Kia-Ngau CHANG, Donald G.Gillin and Ramon Hawley Myers, *Last Chance in Manchuria: the Diary of Chang Kia-Ngau*, Stanford, Hoover Institution Press, 1989, p. 111-115
[104] ZHAO, *Manchurian Atlas…*, cit., p. 161-162
[105] United States Dept. of State Historical Division, *The Conferences at Malta and Yalta*, 1945, Foreign Relations of the United States Diplomatic Papers, Washington, U.S. G.P.O., 1955, p. 352-354

industry has sustained since V-J Day [106] *has set back China's industrial progress for a generation".* [107] The Russians' centered their attention on power-generating and transforming equipment, experimental plants, electric motors, laboratories and hospitals. As for heavy industry, chemicals, mining and cement, they removed complete installation. They always took the newest and the best, leaving behind antiquated assets. For example, about one-third of the tools of the old Mukden Arsenal were taken, while in the new one basically everything was either taken or demolished.

Looking at the accounting financial statements, the total assets of Japanese corporations in Manchuria was worth from 10 to 12 billion yen. The following table compiled by Pauley in his report states the estimated loss of every industry and the percentage of reduction in capacity after the Soviets' passage.

Table 9: Estimated loss of the Manchurian industrial system and its percentage of reduction in capacity after the Soviets' actions of 1945-1946. Source: ZHAO Hai, Manchurian Atlas: Competitive Geopolitics, Planned Industrialization, and the Rise of Heavy

THE PAULEY REPORT		
Industry	Estimated Loss (Million US$)	Reduction in Capacity
Electric Power	201	71%
Coal	50	90%
Iron and Steel	131.26	51-100%
Railroads	221.39	50-100%
Metal Working	163	80%
Non-Ferrous Mining	10	75%
Liquid Fuels and Lubricants	11.38	75%
Chemicals	14	50%
Cement	23	50%
Textiles	38	75%
Radio, Telegraph and Telephone	25	20-100%
Total	895.03	

[106] V-J Day is the short version of "Victory over Japan Day", which is the day on which the Japanese Empire surrendered and brought World War II to an end.

[107] Edwin W. PAULEY, *Report on Japanese Assets in Manchuria to the President of the United States*, 1946, p. 3-4

Thus, Pauley calculated a total damage of 895 million US$, to which he added depreciation and loss of production to the list, and finally estimated that to fix Manchurian industrial complex a capital amount of 2 billion US$ was required.

The Northeast Industrial Association (NIA) also organized an investigation of Manchurian industries in the winter of 1946. The report, named "*Havoc Done to Industries in Manchuria by Russian Occupation Army*", calculated a total economic loss of 1.2 billion US$ (exchange rate fixed at 100 Japanese yen to 23.53 US dollars and inflation adjusted), a sum that greatly surpassed the one in the Pauley report. The American report had more detailed estimates on each sub-category of each industry. For example, the iron and steel sector further divided into 8 sub-categories. On the other hand, the NIA report had more detailed information about individual factory losses.[108]

No matter what the precise value was, a large amount of Manchuria's industrial wealth had been stolen at the end of the WWII by China's putative ally, the Soviet Union. Furthermore, the Manchurian post-war situation and division made the Ambassador Pauley think that, under such conditions, the road to recovery for the region could take many years. Indeed, the Nationalists had most industrialized areas under their control, which consisted in the whole PMR[109] and part of the CCR from Anshan to Changchun. The Chinese Communists, on the other hand, controlled northern and most rural Manchuria. Finally, the Soviet Union ran the port of Dalian, railway communications and few secondary ports.

Soviets' post-war actions in Manchuria alienated their relationship with China, where wide outcry and disgust were spreading, and also with the US. Stalin only ended up worsening Soviet strategic position in the East Asia.[110]

1.2 Failed Sino-Soviet Cooperation

Before the end of the WWII, the Chinese National Government was already actively preparing for the takeover of Manchuria. In 1945, it was set up a Northeast Investigation Commission in order

[108] ZHAO, *Manchurian Atlas…*, cit., p. 167-168
[109] PMR stands for "Peking-Mukden Railway".
[110] Ibidem, p.170

to do a comprehensive study of Manchuria, which published "*The Present Situation in the Puppet State of Manchukuo*". Moreover, it was drafted a plan for the takeover of the 14 main industries in Manchuria, which was later incorporated into the "*Outline for Recovery of Northeastern Provinces*", a plan passed by the Supreme National Defense Council on 31 August 1945. The strategy was to divide Manchuria into 9 provinces and to establish a Northeast Headquarters of the National Military Affairs Commission in Changchun. Furthermore, Chairman Chiang assembled a team of generals, respected native leaders and industrial experts for the recovery of Manchuria. He wanted to gain full control of the Northeast and further develop its industrial power for Chinese use, denying the access of such abundant Manchurian resources to the Communists.[111]

When the Northeast Headquarter became operational, the Soviet Union started to disclose its intention to put the remaining Manchurian heavy industries under the Sino-Soviet joint ownership and management. They considered it necessary to organize joint corporation in order to manage the enterprises in Manchuria, especially because the Soviet Union possessed all those assets transfer documents. The first Russian suggestion was to keep on using the old MHIC format for their economic cooperation, which was generally 70% Japanese and 30% Manchukuo capital. The Chinese argued that, since the majority of Japanese capital came from loans and bonds from Manchurian banks, the MHIC was 70% Manchurian and 30% Japanese.[112] This was the beginning of a long negotiation process between the Soviets and the Chinese Nationalists.

It was still 1945 when the Soviets clearly stated that since they had war trophies at hand, China had only two options, either to cooperate and jointly manage the Manchurian enterprises, or otherwise to see them all destroyed. But China refused to commit to any kind of economic cooperation under Soviet military pressure or before Soviet withdrawal from Manchuria, which originally was set to occur on November 1945.[113]

Afterwards, the Soviets realized that the gap between their demand and the Chinese offer was too big, so they sent a new proposal to China at the end of January 1946, which included a 2.2 billion yuan bestow of Japanese assets.[114] It finally seemed that with only little adjustments they could

[111] ZHAO, *Manchurian Atlas…*, cit., p. 171-172
[112] CHANG, *Last Chance in Manchuria…*, cit., p. 122
[113] CHANG, *Last Chance in Manchuria…*, cit., p.137-138
[114] ZHAO, *Manchurian Atlas…*, cit., p. 177

actually reach an agreement. However, a series of unfortunate events made the Sino-Soviet economic cooperation impossible. Firstly, the Nationalist Party was getting more and more divided and wavering. Furthermore, the "Zhang Shenfu incident" occurred during this period. Zhang Shenfu was a native of Jilin province who studied economic and mining in the United States. In January 1946, he was sent by the Nationalist government with other seven engineers to take over operations at the Fushun Coal Mine. The colliery was still under Soviet occupation, and unfortunately, once they arrived the Soviets refused to cooperate. On their way back to Shenyang, they were all brutally murdered. The Nationalist government accused the Soviets of the killing; the Soviets blamed it on a group of "armed irregulars". In short, the case was never solved, but it shocked the whole nation.[115] The case aroused popular anger and left little hope for compromise with the Soviet Union. Finally, the eruption of the US-Soviet Cold War was the straw that broke the camel's back.

Economic negotiations between Chinese Nationalists and the Soviet Union stopped once for all. Talks were never resumed again.

2. The Nationalists' Government and Civil War's times

2.1 Nationalists' Plans for Postwar Reconstruction

Already in 1940, the "Central Planning Bureau" (CPB) was established to plan postwar national defense and economic recovery and development.

In 1946, the National Resources Commission (NRC), which was an organ responsible for industrial development and for the management of public enterprises, drafted a new State Industrial Development Three-Year Plan. Since the regions of Manchuria, North China and Taiwan were all under a controlled economy, they were chosen for the NRC to lead the takeover process. The NRC had to: takeover basic and large industries that could easily fit state management; aggregate small enterprises into large integrated ones in order to concentrate human and financial resources; wherever possible it had to adopt the form of corporation; finally, it had to restore production as

[115] Xujun EBERLEIN, *Déjà Vu: A Surprising Link from Author to Reviewer*, in "Wellesley Centers for Women", 2009, link, 21/08/2020

soon as possible. After the Soviet withdrawal, from March 1946 the Nationalist Government gradually took over 239 Japanese-Manchukuo organizations and enterprises, including 206 industrial plants and mining facilities. The NCR was able to create 19 industrial conglomerates of the 216 enterprises it received in southern Manchuria.[116]

For the recovery of industries, the Director of the NRC tried to get foreign investments from the US and industrial equipment from Japan. Then, the American government invoked the Far Eastern Commission regulation and decided that initial Japanese reparations should begin. For the first phase of the reparation, the NRC was planned to receive more than 309,000 tons of equipment and industrial material, which was 62.5% of the total Chinese share. Unfortunately, in the end China only obtained 35,912 tons of equipment in total and the NRC received no more than 4,500 tons from Japanese industries. By 1949, the process of removing Japanese industries as war reparations for China completely stopped. This was due to the American change of policy towards Japan and to the conditions of the Chinese civil war. Basically, the plan promoted by the U.S. which aimed to develop Manchurian industries using Japanese war reparations failed and was never resumed again.[117]

Nevertheless, by late 1946, 100% of Manchuria's coalmining, electric power, electric machinery, iron and steel, petroleum, metallurgical and paper industries were managed by the NRC. However, most of the firms were either in minimal or non-performing status. This was because of the chaotic military situation in the region. The NRC tried really hard to revive production and spent a fortune to maintain operations and rebuild enterprises. However, the capital injection wasn't enough, and by the end of 1947 the system started to crumble. Nonetheless, even though the NRC industrial system in Manchuria was in bad condition, it still generated a large portion of the total output in the NRC system and also significantly increased NRC's weight in the national economy in 1947. Manchurian key products in that year were valued 26.4 million yuan in 1936 value. Moreover, the NRC had basically monopolized petroleum, copper, rare metals and sugar production nationally.

[116] CPPCC National Committee of Literature: History and Study, Huiyi guomindang zhengfu ziyuan weiyuanhui 回忆国民党政府资源委员会 (Recalling the Kuomintang Government Resources Committee), Beijing, Chinese Chinese Literature and History Press, 2015, p.116

[117] ZHAO, *Manchurian Atlas…*, cit., p. 181-182

In spite of that, after experiencing great turbulence in 1947 and 1948, the NRC enterprises in Manchuria gradually fell into the Communist hands by the end of 1949.

The leadership of the NRC was war-hardened elites trained in the west. They used their knowledge to begin ambitious recovery plans in Manchuria. Unfortunately, the NRC thought that it would enact its economic plan during a time of peace in Manchuria, with American financial and technological assistance on one hand and the Japanese reparations of industrial equipment on the other. The outbreak of the cold war and the decisive victory of the Communists in 1948 crushed any hope for the Nationalists and for their plans for Manchuria. Anyway, when Shanghai was taken, the Communist Municipal Government retained NRC headquarter staff, and they were put into work in the newly founded East China Ministry of Industry.[118]

2.2 The rise of the Communists

Even if immediately after the end of the WWII there was a period of relative "peace" in China, in 1946 the Civil War burst once again. In this first year of resumed fighting, the Communists were obliged to withdraw from most of the territories under their control. In the Northeast, except from Harbin, all urban centers were taken by the Nationalists. By March 1947 even Yan'an, the well-known Red Capital, was taken by the enemy. [119] Afterwards, the Nationalists' advance began to slow down, especially because it was particularly difficult to guarantee the necessary provisions and assistance to an increasingly extended area.

The People's Liberation Army (PLA) in Manchuria was guided by Lin Biao. In the spring of 1947, he started to attack the Nationalist's forces, and by September he inflicted a devastating attack on them. The main goal was to isolate major cities in Manchuria, making it impossible for the enemy's forces to communicate with each other and to refuel. By the end of 1948, most of Manchurian territories were under the Communists' control.

[118] ZHAO, *Manchurian Atlas…*, cit., p.210
[119] Guido SAMARANI, *La Cina Contemporanea: Dalla Fine dell'Impero a Oggi,* Segrate, Einaudi, 2017, p.185

On 1 October 1949, Mao Zedong declared the founding of the People's Republic of China. In December, Chiang Kai-shek and major Nationalist leaders left China and sought refuge in Taiwan, setting the end of the Chinese Nationalist Government.

At the Seventh Communist Party Congress in spring 1945 in Yan'an, the leadership agreed that Manchuria should have been the number one priority for the future of the party, as it was rich in natural resources, modern cities and communication system, and as it was provided with heavy and military industries. Mao Zedong even emphatically pointed out in the report of the Congress of that "*if we (the CPC) fully conquer the Northeast, the Chinese revolution will have a solid foundation*".[120] The Party Central Committee made the major strategic decision of "developing north and defending south". In September, the Northeast Bureau was established.[121] More than 20 Central Committee members and alternate members of the Central Committee went to work in the Northeast, and 100,000 troops and 20,000 cadres advanced into the Northeast.

In the darkest hours of the Communist struggle, in 1946, the Northeast Bureau established the Northeast Financial and Economic Commission (NFEC) to unify and supervise party, government and military financial and economic affairs. The general mission of the bureau was to improve people's livelihood, develop production and secure supply. Moreover, the Northeast Bureau focused on the rapid reconstruction and development of the heavy industries in order to shoulder the dual task of supporting national revolutionary war and becoming the base for China's future industrialization. Even Mao Zedong cabled the bureau asking them to "set the goal of supporting national operations".[122]

In general, during the civil war, in Manchuria the industrial assets controlled by the Communists belonged to the military industry, the local public industry and the state-owned industry. Military industries were run by the Department of Military Industry (DMI), which had the

[120] GUO Yong Hu 郭永虎, "Maozedong yu dongbei lao gongye jidi de jianshe yu fazhan" 毛泽东与东北老工业基地的建设与发展 (Mao Zedong and the Construction and Development of the Northeast Old Industrial Base), Mao Zedong Thought Study, 2004, p.133

[121] Harold M. TANNER, *Where Chiang Kai-shek Lost China: The Liao-Shen Campaign 1948*, Bloomington, Indiana University Press, 2015, p.31

[122] ZHAO, *Manchurian Atlas…*, cit., p. 236

task to repair weapons and ammunitions left by the Japanese and also to manufacture new arms to sustain the civil war.[123]

Initially, in 1946 and 1947, the DMI settled down in northern Manchuria and established several bases with 14 arsenals ranging from grenade, gun and ammunition factories to wood processing plant, foundry and drug factory.[124] When the People's Liberation Army launched a larger counteroffensive in 1947, military production no longer met its demand. The DMI's work became a key supporting element for the national liberation. After months of reorganization and assimilation of regional military industrial units, the DMI had established 9 field offices in cities like Jixi, Hunchun, Jilin and Dalian, and had 55 factories and 11,00 workers under its control. By then, the communists were controlling 55 large and small military industrial factories in the Northeast.[125] In October, the DMI moved its headquarter to Shenyang and got full possession of the Mukden Arsenal and also other 8 military enterprises.

The most sophisticated office of the DMI was the one in Dalian, which had a corporate form and a commercial name: Jianxin ("Building Anew"). After several rounds of negotiations, in July 1947 the Soviets delivered several factories to the Communists[126]. The Jianxin Company (JC) officially opened doors in the summer of 1947. In order to make the plants work, Communist managers managed to persuade Japanese engineers to cooperate and help with the production. This happened both in the steelworks and in the chemical plants. In 1949, JC had become Manchuria's largest military industrial combine with the strongest technological force, the best industrial machinery and more than 8,000 employees (including 200 Japanese technicians). The JC definitely performed a critical role in the Communist battles against the Nationalists. During civil war times, the JC produced 30 million bullets, 542,000 artillery shells, 460,000 detonators, etc. When in 1950 it ended its military production mission, it was transferred from the DMI to the NMI.[127]

[123] Ibidem, p.234
[124] Wu Xiuquan 伍修权, Wo de lichen (1908-1949) 我的历程 [My experiences (1908-1949)], Beijing, Jie fang jun chu ban she, 1984, p.187-189
[125] TANNER, *Where Chiang Kai-shek Lost…*, cit., p.146
[126] It is better to remember that according to the postwar agreement between the Nationalists and the Soviet Union, the latter held the military administration of Dalian, Lüshun and Jilin County.
[127] ZHAO, *Manchurian Atlas…*, cit., p. 239-240

By 1949, the DMI controlled 74 factories, 11,000 machines and more than 43,000 workers. The Civil War definitely helped spurring the resurgence of Manchurian military industry, which progressed from a primitive guerrilla style production to a regularized industrial production, capable of making a great variety of military products. The huge success of the DMI was able to diminish the initial Nationalist military advantage in the battlefield and sped up the Communist victory.[128]

As for the Bureau of Industry and Mining (BIM), it was installed in August 1946. After some adjustments, its enterprises increased to 15 units, adding coalmines, machine works, power station, a detonator factory, a match factory and a gas plant. At the end of 1947, the BIM extracted more than 3 million tons of coal, which greatly helped the CPC. Gold and coal mining, machinery, electricity, chemicals, textile, paper industry and food processing gradually resumed production despite the very difficult situation. In the table below are better shown the results obtained between 1946 and 1948 by the state-owned enterprises under the control of the Communists.

STATE-OWNED ENTERPRISES INDUSTRIAL OUTPUT 1946-1948

Products	1946	1947	1948
Gold		1.25 tons	1.72 tons
Coal	738,186 tons	2,427,271 tons	5,406,194 tons
Electricity		175.23 million kWh	414.08 million kWh
Rubber Shoes	80,000 pairs	452,000 pairs	2,020,000 pairs
Cotton Yarn	9,314 pieces	452,000 pieces	2,020,000 pieces
Timber		500,000 cubic meters	1,485,641 cubic meters
Paper	1,459 tons	2,101 tons	6,598 tons

Table 10: Industrial output of SOE during the period 1946-1948. Source: ZHAO Hai, Manchurian Atlas: Competitive Geopolitics, Planned Industrialization, and the Rise of Heavy Industrial State in Northeast China 1918-1954

Furthermore, in 1947 the NFEC drafted the so-called "Northeast Liberated Area Economic Reconstruction Plan of 1948", which planned to invest 356 billion yuan into industrial enterprises, 256 billion to the SOEs and 100 billion to private industrial enterprises respectively. The plan implemented workers' training, industrial reconstruction and cost accounting in order to improve the quality of the products and raise the production. The focus in industry was given to military, iron and steel, textile, coalmining, gold mining and power generation.

[128] TANNER, *Where Chiang Kai-shek Lost…*, cit., p.5

In Harbin in 1948, it was also established the Northeast Ministry of Industry (NMI) in order to oversee all the SOEs. The BIM was actually merged into the First and Second Bureau of the NMI, which took care of mining and machinery respectively. Later, its headquarter was moved to Shenyang once the city was taken over by the Communists. By the end of 1948, the NMI administrated Coal and Gold Mining, Nonferrous, Machinery, Electric Power, Textile, Forestry and Enterprise. The NMI even took over four Nationalist industrial management systems: the NRC industries, the Northeast Production Administration, the NRC Northeast Power Administration and the China Textile Industries, Inc.[129] The National Resources Commission (NRC) had a total of 28 units, including large industries like Fushun Colliery, Anshan Steel, Benxi Coal and Iron Co., etc.[130]

By early 1949, after assimilating industries in Shenyang, Jinzhou and Changchun, the NMI system accounted to 323 productive units, of which 234 in operation, 58 in reconstruction and 31 in a preventing deterioration situation. Its mission was to plan for the recovery and development of these new factories, especially the three major industrial complexes inherited from Manchukuo: the coal industry in Fushun, the steel one in Anshan and the coal and steel industry in Benxi.[131]

In October 1949, the Northeast People's Government (NPG) was established, and the NMI became NPG's Ministry of Industry, even if it was still supervised by the NFEC. At the end of the year, the NMI controlled 371 industrial units, of which 307 were successfully brought back to production.

In short, the more and more sophisticated industrial system in Manchuria (from the DMI/BIM system to the NMI one) shows the determination of the Communists in reviving and developing this industrial inheritance. Inside the NMI there was a peculiar fusion of charismatic Communist leaders, educated Chinese Nationalists, Japanese technological experts and mobilized workers. All of them shared the dream of reconstructing the Manchurian industry.[132]

[129] Audrey DONNITHORNE, *China's Economic System*, Abingdon, Routledge, 2005 (I ed. 1967), p.145
[130] ZHAO, *Manchurian Atlas…*, cit., p.245-246
[131] ZHAO, *Manchurian Atlas…*, cit., p. 242-251
[132] Steven I. Levine, *Anvil of Victory: The Communist Revolution in Manchuria 1945-1948*, New York, Columbia University Press, 1987, p.196

3. Industrial reconstruction and establishment of a communist economic planning

During the Congress between 21 and 26 August 1949, at the end of three years of "shared" government of the Northeast with the Nationalists, the leaders of the new Northeast People's Government (NPG) were elected. In short, Manchuria was restored to a unified political entity and under a centralized government after 4 year of division and war.[133]

When the Chinese Communists finally took possession of the whole Manchurian territory, what they acquired was an industrial system left by Japan, plundered by the Soviet Union, and reorganized and partially restored by both the Nationalist Government and the Communist one. The once rumbling industrial juggernaut in Manchuria was almost completely destroyed.

The initial revival of Manchuria industry enacted by the CCP, on one hand provided the foundation for state economic planning, on the other it created the demand for such planning. The need for a planning bureaucracy to make accurate production and distribution arrangement across industries and among enterprises was more and more felt.

The Northeast Bureau decided to establish the Northeast National Economic Planning Commission (NEPC). Its main mission was to create the "1949 Plan for Northeast National Economic Development". The NEPC used the information included in the collection of economic intelligence on Manchukuo produced by Chinese and Japanese experts as references for economic planning and industrial development. Also, the NMI was asked to make economic plans specifically for the state-owned industries.[134] The general main aim was to rebuild heavy industry in Manchuria and restore its economic capacity to at least 40% of the Manchukuo peak level. Once again, the priority was given to heavy industry, to the SOEs' system and to the centralized planning based on production capacity and national security rather than market prices. For reference, in the total industrial output of grain of 1949, the public one amounted 9.86 million tons and the private one 1.28 million tons, or 87.5%% and 12.5% respectively.

[133] ZHAO, *Manchurian Atlas…*, cit., p.256

[134] Yuan Baohua 袁宝华, Dongbei Gong Ye Bu Yu Xin Zhongguo Gong Ye De Qi Bu 东北工业部与新中国工业的起步 (The Northeast Ministry of Industry and the Start of New China's Industry), in *Zhongguo Jing ji dao bao* 中国经济导报, 11 October 2012

Anyway, no matter how hard they tried, the 1949 gross industrial output was only 29% of 1943, and 35% of the total economic output in China. In 1949 the CPC Central Committee's basic policy was to develop China from agricultural to an industrial state. So, what they asked to the Northeast Bureau was to restore Manchurian industrial capacity in 3 to 5 years. The NMI wanted to achieve full recovery in only three years, from 1950 to 1952.

The main problem was the statistical and institutional deficiency. Because of this there were limited improvements in products varieties, manufacturing quality, labor productivity, technology and capital and cost management. So, firstly the NMI tried to establish a better reporting and statistic system. Moreover, it also launched a set of programs to improve labor productivity and the industrial management. Employees were infused with patriotism, trained at the night schools and rewarder with honor and cash bonuses, about 2-3% of salary. As a result, in 1949 the average labor productivity increased 33%.

The 1950 economic plan was not completed on time. Besides the difficulties of mastering the newly acquired massive materials on industrial assets and production conditions, international relations and institutional change also delayed the process.

However, in early March 1950, Mao Zedong, who had just returned from his visit to the Soviet Union, went to visit Liaoning Province for the first time. "*The conditions in the Northeast are better than those in the rest of the country. The Northeast is the country's industrial base. I hope you will do a good job here and provide machines and experts to the whole country"*.[135]

In July 1950, when they started to work on the 1951's economic plan, the War in Korea[136] broke out. Despite the Korean War, the NPG kept its focus on the Manchurian industry and its development. The focus on state-dominated heavy industry and the limited scope of the economic planning were the outstanding features of the 1951 plan. Such plan reflected the contradiction

[135] LI Li 李丽, Maozedong dongbei zhonggongye jidi jianshe zhanlue sixiang pingxi 毛泽东东北重工业基地建设战略思想评析 (Comment and Analysis of Mao Zedong's Strategic Thought of Building the Heavy-Industrial Base in Northeast China), Journal of Jiangsu Polytechnic University, 2006, p.12

[136] The Korean War (1950-1953) was a war between North Korea and South Korea as neither new Korean States accepted the border established after the end of the WWII as permanent. Both of them were supported by foreign powers: North Korea was helped by the USSR and the PRC, while South Korea by the United Nations and principally by the United States.

between the aspirations of the Communist leaders and the true ability of the state agencies to collect, analyze, and process relevant information to make economic plans.

In the meantime, Stalin accelerated the Soviet aids to China which provoked the emphasis on the capital building for the plan of 1952. Statistical analysis and industrial design were given special attention so as to coordinate the Soviet projects. At the end of 1952, the three-year planned reconstruction period was approaching its end.

3.1 The overall contribution of the Soviet Union

During the Civil War, the Northeast Bureau managed to establish cross-border transportation routes within Manchuria with the help of the Soviets in order to exchange supplies between Communist bases.[137] These routes, known as the "Soviet trail", sustained CPC resistance against the Nationalist offensives, since thousands of tons of equipment and materials were transported, and thousands of Communists travelled through these routes.

Later on, in 1946 the CPC started to sign trade agreements with the Soviets, which initially adopted barter and countertrade methods.[138] According to such deals, Manchuria was going to export soybean, wheat, rice, sorghum and meat, while the Soviet Union was going to export cotton, cloth, paper, paint, salt, sugar, automobiles, kerosene and industrial lubricant. Manchuria was importing from the Soviet Union more than 600 types of industrial products like medicine, military hardware and general merchandise.

Briefly, because of the new geopolitical system of the Far East, Manchuria's foreign trade fundamentally changed from east trade to Japan, to the northward Soviet trade. Manchurian total export increased from 23 million US$ in 1947 to 54.5 million US$ in 1948 and 83.5 million US$ in 1949. In the table below are better shown the trades between the CCP and the Soviets during the Civil War.

[137] TANNER, *Where Chiang Kai-shek Lost*…, cit., p.144

[138] DongBei Jie Fang Qu Cai Zheng Jing Ji Shi Zi Liao Xuan Bian 东北解放区财政经济史资料选编 (Selected materials on the financial and economic history of the Northeast Liberated Area), Harbin, Heilongjiang People's Publishing House, 1988, vol.3, p.358-367

SUMMARY OF THE MANCHURIAN-SOVIET TRADES 1947-1949

Products	1947	1948	1949	Products	1947	1948	1949
Manchuria Exports*	201.7	346.5	470.7	Soviet Exports*	212.1	327.5	445.2
Soy	298.2	366.2	568	Transportation*	10.4	26.3	34.5
Sorghum	33.5	-	0.6	Industrial Equipment*	0.07	15.6	24.6
Millet	21.7	25.9	6.1	Oil Products	8.4	46.6	52.4
Wheat	82.1	44.4	4.2	Chemicals*	0.5	1.8	25.9
Corn	95.6	140.2	84.1	Rubber*	-	7.0	9.8
Meat	7.4	3.5	3.4	Medicine*	1.8	3.2	5.7
Rice	15.4	44.3	28.7	Sugar	1.4	3.2	5.9
Vegetable Oil	6.3	5.3	18.5	Paper	1.5	3.0	10.4
Coal	60	430	1,060	Cotton Products^	21.1	30.5	19.8
Total Trade Value*		1947: 413.8		1948: 674.0		1949: 915.9	

* in million rubles; ^ in million meters; All the other items are in thousand tons.

Table 11: Trades between Manchuria and the Soviet Union from 1947 to 1949. Source: ZHAO Hai, Manchurian Atlas: Competitive Geopolitics, Planned Industrialization, and the Rise of Heavy Industrial State in Northeast China 1918-1954

1950 was a year of big changes, as the People's Republic of China signed the Sino-Soviet Treaty of Friendship, Alliance and Mutual Assistance on February 14, and after that the Sino-Soviet Trade Agreement on April 19. The first one, to a certain extent, was based on the prior Treaty of Friendship of 1945, but it also included the Soviets' recognition of the PRC, and the provision of a 300 million US$ loan from the USSR to the PRC. The second one was their first trade agreement, and actually the first trade deal that the PRC reached with a foreign country.[139]

In the following period, the two countries signed several specific contracts with each other. These contracts stated that Sino-Soviet trade was going to reach 238 million US$, of which 143 of Chinese exports and 95 of imports. Manchuria alone was scheduled to cover 57.7% of Chinese export

[139] William B. BALLIS, *The Pattern of Sino-Soviet Treaties 1945-1950*, Thousand Oaks, SAGE Publications Inc, 1951, p.167-176

and 76% of total import.[140] In 1952, agricultural exports were basically restored to the level of Manchukuo's 1943: in terms of tonnage, exported soybean, corn and sorghum were 119.5%, 110.3% and 113.9% respectively compared to that of 1943. Nevertheless, the damages of the mining industry were too extensive, so coal and other metal ore exports remained depressed.

The War in Korea made the trade relations between USSR and PRC even tighter and reduced the western involvement in Chinese trade from 40% in 1950 to less than 5% in 1952. In the meantime, the PRC was starting to have trade relations with countries like East Germany and Czechoslovakia, especially for imports.[141]

Already during the Civil War and the Korean War, from 1947 to 1951, the sum of the Manchuria-Soviet trade was over 6 billion rubles. The Soviet exports rebuilt Manchuria's industry and kept the Communist military machine running. Nevertheless, trade alone was not enough to rescue the devastated Manchurian industries. The Chinese knew that a more direct Soviet help was necessary to fill the technological void left by the retreat of the Japanese staff. Thus, even before the founding of the PRC, the Northeast Bureau began to request for technical experts to the Soviet Union in order to plan and rebuilt Manchurian transportation and industrial system. Initially, the Soviets feared the impact on the international level of a full support to the CPC. So, in early 1949 they only sent 10 Soviet economic experts to assist the NEPC on composing the economic plans. In June 1949, a Chinese delegation was secretly sent to Moscow. Over there, Stalin actively committed to help China and agreed to most of the CPC's requests. In the following month, the CPC signed with the USSR a five-year 300 million US$ credit agreement with 1% interest on a ten-year amortization.[142] Those money would have helped China to purchase Soviet equipment, goods, machinery and materials. 50% of the credits were going to be used in Manchuria and the rest was going to be invested in the economic recovery of North and Northwest China.

[140] DONG Zhikai 董志凯 and JIANG Zhu 江著, Xin Zhongguo Gong Ye De Dian Ji Shi : 156 Xiang Jian She Yan Jiu (1950-2000) 新中国工业的奠基石 : 156 项建设研究 (1950-2000) [The cornerstone of New China's industry: 156 construction studies (1950-2000)], Guangdong, Guangdong Economic Publishing House, 2004, p.42-43

[141] ZHAO, *Manchurian Atlas…*, cit., p.279-280

[142] History and Public Policy Program Digital Archive, *Memorandum of Conversation between Stalin and CCP Delegation 27 June 1949*, Moscow, 1950, p.1-7

As a result, 220 Soviet senior economic officials and engineers went to Manchuria. Over there, they helped the NMI to create their industrial recovery plans.[143] The Soviet Union kept in Manchuria 551 Soviet experts between 1949 and 1953. In early 1950, after months of survey and research in Manchuria, the Soviets gave a series of lectures to the NMI. They decided to put state economic planning on the top of their teaching agenda, they wanted the Chinese to forget the Japanese planning, which they considered isolated and incomplete. As a result, the Manchurian 1950 plan was much more sophisticated thanks to the teachings of the Soviet experts. Not only they helped to design the factories, but they also supervised the installation and testing of the imported Soviet machinery and trained the Chinese to how to run the machines. Furthermore, Soviet experts passed on their advanced experience and technology to Chinese workers through training courses and personal teaching. Mao's initial confidence of full recover the economic system in eight to ten years largely came from his belief that the Soviet Union would continue to provide the economic assistance for China's urgent needs.

When the Communists took full power and the RPC was founded by the end of 1949, the Soviets insisted on keeping most of their rights in Manchuria. Indeed, Stalin wanted to keep the rights and privileges he first secured through the Yalta Agreement and then squeezed out of the Chinese Nationalist Government. He was mostly concerned about the railroad and especially Dalian, since it was the only ice-free port to which the Russians had access to in the Far East. Notwithstanding, Zhou Enlai answered with a draft that asked the Soviets to quit the naval base in Port Arthur and also to give up to all the rights and equities in Dalian and in the China Changchun Railway. In the end the Russians agreed on most of the Chinese draft in order to reach the goal of finalizing the new alliance treaty.[144] Furthermore, on 14 February 1950, the PRC signed a "Supplemental Agreement" with the USSR which forbade the foreigners to participate in industrial, financial, or commercial activities in Manchuria, Xinjiang, and the Soviet Far East and Central Asia.

After Mao and Zhou returned from their first visit to Moscow for the negotiations of the Alliance Treaty, a Chinese delegation continued the negotiations on the 50 Soviet-assisted projects

[143] Oleg Borisovich BORISOV, *The Soviet Union and the Manchurian Revolutionary Base 1945-1949*, Moscow, Progress Publishers, 1977, p.196

[144] Dieter HEINZIG, *The Soviet Union and Communist China 1945-1950: The Arduous Road to the Alliance*, Armonk, M. E. Sharpe Inc, 2004, p. 416-418

to China, which covered coal mining, steel, electric power, chemicals, nonferrous metal, machinery, automobile, and military industry.[145] Among them, 36 projects, or 74%, were located in Manchuria. From 1950 to 1953, China contracted to import industrial equipment valued at more than 6,000 million rubles from the Soviet Union and imported goods for more than 470 million rubles (68.7%). Consequently, power plants in Fushun, Fuxin and Xi'an were modernized or reconstructed. Moreover, Anshan Steel Company, Shenyang First Machinery, Fushun Aluminum Plant, Dalian Chemical Plant, and many other factories were completed or more than 80% developed.[146]

When the eruption of the Korean War occurred, the geopolitical position of Manchuria was suddenly altered from stable to threatened. The Central Military Commission immediately founded the Northeast Border Defense Force so as to safeguard the Chinese-Korean border and even more importantly prevent potential destruction to the industrial and transportation system in southern Manchuria. When American bombing reached northern Korea and eastern Manchuria, the Central Committee ordered to prepare for defense and relocation of industries.

Then, when U.S. forces reached the 38th parallel, the PRC warned the United States not to proceed further. When the Americans ignored the warning and crossed the 38th parallel on October 7, the Chinese Military Forces entered North Korea to urge the Americans to withdraw.[147] As a result, the relocation of Manchurian industries started in the winter of 1950 and within a year, 26 enterprises, of which 10 were military industry factories, were moved from southern Manchuria into the Heilongjiang Province. Luckily the relocation didn't weaken the heavy industry in southern Manchuria. Yet, the war greatly stimulated the industrial development in the north and altered the industrial equilibrium in Manchuria. For reference, between 1950 and 1952, in Jilin Province 157 million yuan RMB, which accounted for 73.9% of total provincial investment, was invested in heavy industry. The result was that the gross industrial output in Heilongjiang and Jilin almost tripled during the war: it increased from 1.13 billion yuan to 3 billion yuan. Thanks to the War, these two northeastern Provinces transformed from agricultural dominated regions to military-machine

[145] Dang dai Zhongguo di ji ben jian she 当代中国的基本建设 (The Basic Construction of Contemporary China), Beijing, Zhongguo she hui ke xue chu ban she, 1989, p.14-15
[146] ZHAO, *Manchurian Atlas…*, cit., p.292-293
[147] John W. GARVER, *China's Quest: The History of the Foreign Relations of the People's Republic of China*, New York, Oxford University Press, 2016, p.69-70

industry and chemical industry bases. On the contrary, Liaoning kept on growing as a steel-machinery center.

Since China's expenditures for the Korean War skyrocketed, the CPC Politburo decided to postpone the initiation of the planned economy to 1953. When the peace talk began in Korea, the Central Government of China started the process of making the First National Economic Five-Year Plan (FFYP). The main aim of the plan was to finally complete the reconstruction of the Northeast base and thus establish a proper industrial base for the new nation. The Soviet assistance was necessary for China's success. Luckily, the Chinese decision to go to war against the United States in aid of the North Korean regime convinced Stalin that the Chinese communists were true allies. This led to an increase in Soviet assistance in China. In May 1953, the two countries signed the Soviet assistance agreement, in which the Russians promised to help China build 91 industrial enterprises between 1953 and 1959. According to these agreements, by 1959 China was going to acquire the industrial capacity equal to that of the Soviet Union in 1932 or to the level of Japan in 1937. Altogether, China was going to be gifted with an independent and comprehensive industrial system capable of sustaining itself in peace and war.[148]

The dimension of the Soviet technological and industrial transfer was unprecedented in either Manchuria or China. From 1949 to 1959, the People's Republic of China imported 7.69 billion rubles of Soviet industrial equipment and an also 3.08 rubles of Eastern European equipment.[149] Thanks to the Soviet-assisted projects, Manchuria's industrial base was updated to the level of mid-1940s. Nevertheless, China also inherited the shortcomings of the Soviet industrialization in industries like electronics and auto manufacturing.

3.2 The First Five-Year Plan

In early 1950s, the first step of the Communists was to take over all enterprises controlled by the Kuomintang government or by the Japanese, no matter if they were public or private

[148] ZHAO, *Manchurian Atlas…*, cit., p.297-298

[149] Dang dai Zhongguo di ji ben jian she 当代中国的基本建设 (The Basic Construction of Contemporary China), Beijing, Zhongguo she hui ke xue chu ban she, 1989, p.55-56

enterprises.[150] Because of its peculiar economic history, in the Northeast there were not that many private or foreign firms, so the communist pioneered their economic planning in this region. Nevertheless, by 1956 nearly no large industrial enterprise was under private control anymore. Around two-thirds of China's industry belonged wholly to the state. The rest consisted mainly in joint state-private ownership, except for the 2%, which were owned by cooperatives.[151]

The Manchurian industrial structure changed during the "First Five-Year Plan" period from a military-industrial structure built during the period of the Puppet Manchukuo to an industrial base with new priorities: the development of heavy industry and the technological upgrade.

China began to implement the First Five-Year Plan for the development of the national economy in 1953. The plan was strongly inspired by the Soviet Union's FFYP (1928-1932), which imposed the vital role of the socialist state. The main aim was to accumulate capital which was later going to be invested primarily in the industrial heavy sector. Such a process of accumulation needed above all a collectivization of rural areas, a high degree of centralized planning and finally the creation of a strong bureaucracy and technocracy.[152]

In mid-1955 694 above-norm[153] projects were published. Among them, 156 key projects were supported by the Soviet Union. 57 of them were specifically developed for Manchuria.[154] Of these latter, 27 (48%) implied the reconstruction or expansion of former MHID, then NRC and finally NMI factories. Most of these projects focused on heavy industries. Many of them were concentrated on the reconstruction and expansion of the industrial base of Anshan Iron and Steel Consolidated Enterprise. In addition, the coal industries in Fushun and Fuxin, the iron and steel industry in Benxi, the machine manufacturing industry in Shenyang and the electric power industry in Jilin were also renovated and expanded. Encouragement was also given to light industry, but not as much as to heavy industry.

[150] PERKINS, Dwight H., The Economic Transformation of China, Singapore, World Scientific Publishing Co. Pte. Ltd., 2015, p. 216
[151] DONNITHORNE, *China's Economic…*, cit., p. 145
[152] SAMARANI, *La Cina Contemporanea…*, cit., p. 210
[153] "Above-norm" meant that the total investment for such projects was above a certain figure, the norm. Such projects were subjected to strict controls compared to "below-norm" ones. On average, the norm varied between 10 and 30 million yuan, depending on the production.
[154] GUO Yong Hu 郭永虎, "Maozedong yu dongbei…, cit., p.134

During the whole "First Five-Year Plan" period, the state's industrial investment in the Northeast reached RMB 9.53 billion, accounting for 38.3% of the country's total industrial investment, which was much higher than the state's investment in other regions during the same period.[155]

Figure 2: The Soviet Union is the best friend of the Chinese people (苏联是中华人民最好的朋友) Source: Political Department of the Chinese People's Liberation Army, Jiefangjun huabaoshe (中国解放军总政治部，解放军画报社), Ca. 1956

During the Sino-Soviet honeymoon period, the Soviet Union basically taught its latest technological achievements to the Chinese, bringing the level of China's machinery industry reach the world's advanced level in a short period of time. A good example of the results of the Manchuria-leaning Soviet assistance during the FFYP is given by the electric power industry. Power generation capacity more than doubled between 1949 and 1956. Its share of the whole country increased from 36.8% to 42.1%, while industrial consumption of electricity reached 82% of the total. In addition, by 1957, the Northeast had basically built a heavy chemical industrial base with distinctive characteristics.[156]

However, although Russian help was very needed and much appreciated, China decided not to rely only on Soviet experts, but also to recruit talents from across the country to support the recovery and construction of Northeast China. In 1950, half of the 18,000 graduates from colleges and universities across the country were allocated to the Northeast.[157] Furthermore, taking Anshan Iron and Steel as an example, thanks to the encouraging slogans of "Supporting Anshan Iron and

[155] XIE Wei 谢伟, "Cong quanguo zhiyuan dao zhiyuan quanguo —— 20 shiji 50 niandai dongbei gongye fazhan de lishi kaocha" 从全国支援到支援全国——20 世纪 50 年代东北工业发展的历史考察 (From Nationally Supported to National Supporter: A Historical Investigation of Northeast Industrial Development in the 1950s), Academic Exchange, 2014, p.196

[156] ZHAO, *Manchurian Atlas…*, cit., p.304

[157] Fu Yi 傅颐, Ershi shiji wuliushi niandai zhongyang dui Dongbei gongye jidi de jing lue yu jianshe 二十世纪五六十年代中央对东北工业基地的经略与建设 (The Central Government's Management and Construction of Northeast Industrial Bases in the 1950s and 1960s), Zhongguo dang shi yanjiu 中共党史研究), 2004, p.5

Steel for the whole country" and "For Anshan Iron and Steel is for the whole country", the central government managed to successfully transfer more than 500 county-level and above leaders to the Northeast since the second half of 1949. Moreover, the government also recruited more than 500 engineers and technical personnel and management personnel with high cultural and professional knowledge coming from Central South and East China.[158] These talents all gave great contributions to the establishment of the Northeast Industrial Base. At the same time, they became a valuable asset for China's industrial construction in general. Indeed, many of them have supported industrial construction in other parts of the country. Take Liaoning Province as an example. During the five years from 1953 to 1957, Liaoning sent a total of 80,321 people to other provinces, including 7,445 engineers and technicians, 56,479 skilled workers, and 16,397 management cadres. Afterwards, much of these personnel played an important role in the construction of new industrial bases such as Wuhan Iron and Steel Company[159] and Baotou Iron and Steel Company[160].[161]

With the support of the central government and the people coming from the whole country, the industrial output value of Northeast China reached 35.33 billion yuan in 1959, which was 16.1 times that of 1949. Electricity's output increased by 11.2 times, fuels 11.8 times, steel 54.1 times, non-ferrous metals 47.8 times, machinery manufacturing 48.6 times, chemicals 91.1 times. In the table below is shown the 1959 Northeast's contribution to the total national output of major industrial products. [162]

TEN YEARS AFTER THE FOUNDING OF THE PRC: THE NORTHEAST'S SHARE OF THE TOTAL CHINESE INDUSTRIAL OUTPUT (1959)

Products	Percentage	Products	Percentage
Steel	52.9%	Metallurgical Equipment	22.9%
Raw Coal	25.4%	Mining Equipment	40.7%

[158] XIE Wei 谢伟, *Cong quanguo zhiyuan dao…*, cit., p.196

[159] Wuhan Iron and Steel Company (WISCO) is a state-owned Chinese enterprise which was founded in 1955 in Wuhan 武汉, Hubei province 湖北省. It started to operate in 1958 and is still running nowadays.

[160] Baotou Iron and Steel Company is a SOE in Baotou 包头, Inner Mongolia Autonomous Region 内蒙古自治区, established in 1954. In 2016 it was reorganized and renamed Baotou Iron and Steel Group.

[161] Wang Liwen 王丽文, henqíng huà zuò qicaihóng--dàxíng diànshì wénxiàn piàn "máozédong lái liáoníng" caifang cèjì 深情化作七彩虹--大型电视文献片《毛泽东来辽宁》采访侧记 (Affectionately turned into a colorful large-scale TV documentary "Mao Zedong Came to Liaoning"), Dang shi zònghéng 党史纵横 Party History, 2003, p.5-8

[162] XIE Wei 谢伟, *Cong quanguo zhiyuan dao…*, cit., p.197-198

Electricity	38.7%	Power Generation Equipment	60.6%
Pig Iron	55.3%	Metal Cutting Machine Tools	23.2%

Table 12: The Northeast's quota of the total Chinese industrial output of 1959. Source: XIE Wei 谢伟, "Cong quanguo zhiyuan dao zhiyuan quanguo —— 20 shiji 50 niandai dongbei gongye fazhan de lishi kaocha" 从全国支援到支援全国——20 世纪 50 年代东北工业发展的历史考察 (From Nationally Supported to National Supporter: A Historical Investigation of Northeast Industrial Development in the 1950s), Academic Exchange, 2014

The rapid growth of industrial output in the Northeast has not only strengthened China's heavy industry strength, but also provided a material guarantee for the Northeast to support the country. Indeed, the heavy industry base in Northeast with advanced technology and great industrial strength was able to provide strong support for the industrialization of the country in terms of products, technology, talents, and experience. The Northeast has exported a large number of products for national industrial construction. From 1953 to 1957, Liaoning's transfer of steel, non-ferrous metals, cement, and petroleum refined products accounted for 54.6% to 73.3% of Liaoning's total production during the same period. The transferred steel supported the construction of the Wuhan Yangtze River Bridge, of the Yumen Oilfield and the Sanmenxia Hydropower Station. Although the industrial scale of Jilin Province is relatively small, the Soviet-aided projects arranged by the state, such as the First Automobile Manufacturing Plant (FAW) and the three major chemical plants in Jilin, have also contributed to supporting national industrial construction. By January 1959, almost 35% of FAW's technical officers, 52% of old engineers, and 72% of regional-level cadres were transferred to support the rest of the nation.[163] In the first half of 1959 alone, Heilongjiang Province's support for national machinery products accounted for 100% of all products: water turbine generators accounted for 100%, steam turbine generators 60.6%, water turbines 100%, high and medium pressure boilers 100%, AC motors 73.8%. These products were supplied to more than 20 provinces and cities across the country, and effectively strengthened their industrial power.[164]

[163] Di yi qiche zhizao chang shi zhi bianzuan shi---di yi qiche chang zhi 第一汽车制造厂史志编纂室---第一汽车厂厂志 (The History Compilation Room of the FAW---The First Automobile Factory), Changchun, 吉林科学技术出版社 Jilin Science and Technology Press, 1990, p.185

[164] Feiyue fazhan de wo sheng jixie gongye 飞跃发展的我省机械工业 (Leaping Development of Our Province's Machinery Industry), 黑龙江日报 Heilongjiang Daily, 1959

The industries in the Northeast also played a leading role in modernization. For example, the Anshan Iron and Steel Complex was the country's largest comprehensive ferrous metallurgical complex at the time. It not only owned the country's largest blast furnace at the time, but there were also two open hearth furnaces of the world's largest type at that time, each with a loading capacity of 600 tons, and a daily output of 1,300 to 1,500 tons of steel. Its level of production was unique in the country. The Harbin Electric Machinery Plant, Boiler Plant, and Steam Turbine Plant, responsible for the supply of national water and thermal power generation equipment, were three modern large enterprises built by the Communists, which greatly promoted the modernization of China's electromechanical industry.

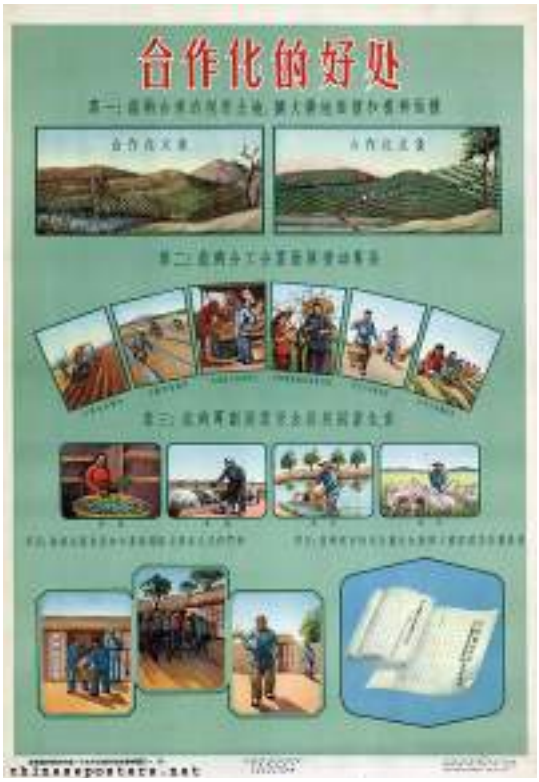

Figure 3: The advantages of the cooperatives (合作化的好处). Source: Zhonghua quanguo kexue jishu puji xiehui (中华全国科学技术普及协会), 1956

In short, after the "First Five-Year Plan" period, the Northeast became the region with the most complete planned economic system of the Republic.

As for agriculture, as early as 1950, when an agrarian reform law was promulgated, a great quantity of the country already experienced some kind of land reform. Briefly, between 1955 and 1956 China's agriculture was collectivized with the founding of agricultural producers' cooperatives, which had an average size of about 200 families. Thus, the majority of crop production was done on a collective basis with individuals who received work points based on the amount of time, skill, effort and political attitude peasants brought into their collective work.[165]

The government asserted that cooperatives would improve production and marketing. The reality was that farmers were soon forced to surrender their products to government procurement agencies, and in a short time the government became the only distributor. Moreover, the cooperatives gave the government the ability to control both the prices and the distribution of

[165] PERKINS, *The Economic Transformation…*, cit., p. 215-216

agricultural goods. Already in 1949, 'mutual-aid teams' of 5-15 households were established, then in 1953 they grew into 'elementary agricultural cooperatives' of 20-40 households, and finally in 1956, they became 'higher cooperatives' of 100-300 families. [166] By 1957, about 93.5% of all farm households had joined cooperatives.[167]

It didn't really matter the fact that China's agrarian economy deeply lagged behind the economies of industrialized nations, both agriculture and consumer goods were neglected in the FFYP compared to the industrial sector. During the FFYP the government allocated to agriculture, to water conservancy and forestry altogether more or less the 8% of total investment funds. Briefly, even if agriculture occupied more than four-fifths of the active population, it was forced to rely on its own scant resources for a great part of its fund requirements. The derisory amount of investments made by the government in such an important sector as that of agriculture soon proved inconsistent with increased demands for food and agricultural raw materials. While government rhetoric and propaganda declared the First Five Year Plan as a success, not only the Northeast, but China in general wasn't able to achieve real successful results in farming, at least, not as successful as industrial ones. Agricultural production simply couldn't keep up with the industrial one. Agricultural output increased on average of about 4.5% a year, a growth that resulted mainly from returns in efficiency brought by the reorganization and cooperation achieved by the collectivization. [168] However, as the FFYP was reaching its end, CPC leaders became more and more concerned about the relatively sluggish performance of agriculture, not to mention the inability of state trading companies to increase the amount of grain procured from rural units for urban consumption.

In conclusion, the First Five Year Plan achieved its targets of increasing heavy industry and stimulating the economy. By the end of 1956, the planned economic system was fully established. Enterprises under the planned economic system became appendages of the government, and the government was responsible for enterprise investment and product sales. In this way, the state's demand for enterprise production surplus reached the maximum. On the other hand, the proportion of light industry was declining, reflecting the shortcomings of the economic structure that was too

[166] SAMARANI, *La Cina Contemporanea…*, cit., p. 213-214
[167] Rebecca CAIRNS and Jennifer Llewellyn, *The First Five-Year Plan*, in "Alpha History", 24 September 2019, link, 20 August 2020
[168] SAMARANI, *La Cina Contemporanea…*, cit., p.211

unitary. In addition, like the economic reforms in Soviet Russia, China's emphasis on industrial growth came at the expense of agriculture. Grain output struggled to keep pace with population growth, jeopardizing food supplies.[169] Moreover, just like in the USSR after the FFYP, the quality of the industrial products was poor, the level of productivity was low, enthusiasm of workers and managers was declining since there were no adequate incentives, and finally there was a too-high compression of consumption, as resources had to be largely allocated to investments in heavy industry.[170] In addition, soon, Mao's ambitious plans for further industrial growth were going to cause the looming disaster of the Great Leap Forward.

4. The end of Sino-Soviet Cooperation and the Great Leap Forward

On 5 March 1953 Stalin died: this event marked the beginning of the end of the friendship between the People's Republic of China and the Union of Soviet Socialist Republics.

After some struggles for the appointment of the new First Secretary of the CPSU, in September 1953 Nikita Khrushchev was chosen as the new Russian leader.[171] In February 1956, at the 20th Party Congress, Khrushchev declared his new plan for the Soviet Union: he delivered what became known as the "On the Cult of Personality and Its Consequences". Khrushchev's speech was very critical of the command of the former General Secretary and Premier Joseph Stalin. Particularly he denounced the "Great Purge" which had marked the period 1936-1938. Moreover, Khrushchev accused Stalin of having encouraged a leadership cult of personality. Furthermore, he believed that the form of socialism proposed by Stalin was too overwhelming and delegitimizing in the long run. Instead, Khrushchev believed in the reintroduction of a more Leninist and less repressive socialism. This speech was the beginning of the so-called "De-Stalinization" campaign.[172]

[169] Rebecca CAIRNS and Jennifer Llewellyn, *The First Five-Year Plan*, in "Alpha History", 24 September 2019, link, 20 August 2020
[170] SAMARANI, *La Cina Contemporanea…*, cit., p.211
[171] William TAUBMAN, *Khrushchev: The Man and His Era*, New York, W. W. Norton & Company, 2003, p.258
[172] GARVER, *China's Quest…*, cit., p.114-117

As a result of the new Soviet policies of relative openness, the Polish October and the Hungarian Revolution occurred in 1956. These uprisings taught Mao the importance of keeping on the repression of the counterrevolutionaries. In response to the discontent among the Eastern Bloc, the CPC denounced the USSR's de-Stalinization as Marxist revisionism. Mao restated the Stalinist ideology, policies, and practices of government as the only correct ways for achieving true socialism in China. From Mao's perspective the events occurred after Khrushchev's speech were symbolizing two threats: on one hand the success of the new Soviet foreign policy of peaceful coexistence with the West was going to geopolitically isolate the PRC. On the other hand, the Hungarian Revolution showed the possibility of anti-communist revolt in the PRC. As a result, in 1956, Mao responded to tensions in the Party with the launching of the Hundred Flowers Campaign and the in the following year the Anti-Rightist Campaign began, which lasted until 1959. It was a series of purges against anyone that was deemed "rightist" within the CCP.[173]

The FFYP came to an end in 1957, and thus the second FYP was planned to last from 1958 to 1962. Since the Northeast Industrial Base was considered restored and completed by the end of the FFYP, in the Second Five-Year Plan period, the Northeast region wasn't seen any more as a key area. In the second five-year period, the central government's guiding ideology was that the Northeast region should support the rest of the country and also pay better attention to the development of agriculture. The central government summarized the Northeast's economic construction strategy as: fully exploiting potential, vigorously supporting the rest of the country, and developing itself appropriately. [174]

However, a series of events and decisions was going to change China's history forever. In November 1957, on the occasion of the 40th anniversary of the Russian Revolution, party leaders of communist countries gathered in Moscow to celebrate. In this occasion Khrushchev proposed the idea to outclass the United States in industrial output in the 15 years to come. Even if Mao didn't

[173] Christine VIDAL, *The 1957-1958 Anti-Rightist Campaign in China: History and Memory (1978-2014)*, in "HAL Sciences de l'homme et de la société", 25 April 2016, link , 10 August 2020

[174] SHI Jian Guo 石建国, "Qian xi 'da yuejin' dui dongbei gongye de yingxiang" 浅析"大跃进"对东北工业的影响 (Analysis of the Impact of the "Great Leap Forward" on the Northeast Industry), Researches in Chinese Economic History, 2007, p.83

agree with the more open direction of the USSR, he was really inspired by this proposal and put forward its own objective: China had to surpass the United Kingdom in 15 years.[175]

In January 1958, at the beginning of the Second Five-Year Plan, the Great Leap Forward was officially launched. Its goals were expressed for the first time in the document "Sixty Articles on Working Methods" disclosed by Mao on the 21st January.[176] It was an economic and social plan which proposed to mobilize the vast Chinese population to quickly reform the country in about 10 or 15 years. The plan was to transform the rural economic system, hitherto based on agriculture, into a modern and industrialized communist society. The crux consisted of a rapid and parallel development of agriculture and industry, in order to avoid the importation of heavy machinery from abroad. The model derived largely from Stalin's transformation between 1928 and 1938 of the USSR, described into the acclaimed "Short Course", although Mao added his own policies that intensified work and investment in industry. Indeed, he underlined the advantages of local initiative in terms of organizational and technical innovation and improvement, advantages that were going to be strengthened by the mobilization of the masses.

Figure 4:"Long live the General Line! Long live the Great Leap Forward! Long live the People's Communes! (总路线万岁，大跃进万岁，人民公社万岁！). Source: Shanghai renmin meishu chubanshe (上海人民美术出版社), Ca. 1964

The implementation of this new policy made it necessary to maintain excellent relations with the USSR, whose capitals supported the Great Leap Forward. However, these resources were not for free, and China had to return the favor with agricultural goods like rice, soy, oil, meat, etc. The greater was the need for Soviet resources, the more China's food exports increased.[177]

[175] SAMARANI, *La Cina Contemporanea…*, cit., p.224
[176] SHI Jian Guo 石建国, *Qian xi 'da yuejin' dui dongbei…*, cit., p.84
[177] GARVER, *China's Quest…*, cit., p.131

The launch of the "Great Leap Forward" made the policies directed to the Northeast change. As for statal investments, significant investments were made in large state enterprises. Taking Liaoning Province as an example, the total investment in the three years of the "Great Leap Forward" consisted in 7.134 billion yuan, which not only is it much more than the total investment of 6.505 billion yuan during the "First Five-Year Plan" period, but it is also 3.729 billion yuan more than the total investment (of 3.405 billion yuan) given in the following period from 1961 to 1965.[178]

According to the revised scheme after the launching of the Great Leap Forward, in the 2nd Five-Year Plan the plan for the Liaoning Province was to reach a total industrial output value of about 4.8 billion yuan by 1962, which meant an increase of 74.4% over 1957. Moreover, in March 1958, Liaoning Province planned to increase the output value of local industries from 3.2 billion yuan to about 13.3 billion yuan within five years, that is, an increase of more than 4 times more. As for the Province of Jilin, its preliminary plan was to develop the output value of local industries from 1.2 billion yuan to about 5 billion yuan within five years, an increase of more than 2.5 times, more than double the output value of agricultural and sideline industries at that time. Finally, the program for the Heilongjiang Province was to increase the output of its industries from 2.15 billion yuan at the time to about 10.2 billion yuan within five years.[179]

In the August 1958 at the Politburo meetings, it was decided that grain and steel were going to be the key pillars of the Chinese economic development. As a result, steel production was set to double within the year. Since the steel industry was the backbone of the "Great Leap Forward" movement, the Northeast region was destined to be the protagonist of this movement. As regards steel, already in 1958, the national steel output reached 10.7 million tons. The Northeast region's share was of 5.25 million tons, accounting for almost half. Among them: 100,000 tons in Jilin, 350,000 tons in Heilongjiang, and 4.8 million tons in Liaoning. Back then, Liaoning was the most important iron and steel industrial base in the country. In 1957, steel production accounted for more than 60% of the country's total, and pig iron accounted for more than 70%. In order to complete the high targets of the "Great Leap Forward", not only the original large equipment and machinery were

[178] Ibidem, p.84
[179] Ibidem

overloaded, but also 85 small blast furnaces[180] were built inside and outside the plant. In 1958, 3.92 million tons of steel were produced, in 1959, the steel output reached 5.18 million tons and in 1960 the steel output of Liaoning province reached 7.48 million tons.[181] Moreover, in Heilongjiang Province in 1958 the ironmaking index increased by 104 times compared to 1957, and the steelmaking index increased by 32 times.

When it comes to machinery industry, during the "Great Leap Forward" period, Liaoning's machinery industry developed extremely fast. By 1960, the total output value of this industry in the province reached 8.05 billion yuan. Compared with 1957, it increased by 2.3 times.[182]

Because the country was in urgent need of coal at that time, coal production was given higher targets year after year. In 1958, the coal output of Liaoning Province reached 38.875 million tons, which consisted in an increase of 67.8% over 1957. In 1959, the output continued to increase substantially, and in 1960 it increased to 52 million tons, the highest annual output in Liaoning coal mine history. The three-year total output was equal to 1.44 times the total output during the first five-year plan. In addition, in the three years from 1958 to 1960, Heilongjiang Province invested almost 416 million yuan in coal mines: it established 62 new mines, with a capacity of 13.45 million tons. The average annual investment soared to 138.66 million yuan. The economic policy of "taking steel as the key link" (以钢为纲) has led the entire Northeast's heavy and chemical industries to a rapid expansion in a short period of time. However, this overall situation was unsustainable and soon destined to end. Especially challenging was the fact that the majority of the collieries' output was destined to the other regions of China, and actually a very small portion was kept for the industries of the Northeast. Indeed, already by the end of 1959, Liaoning Province was in short of coal by about 5 million tons, and it was expected to lack of at least 10 million tons in 1960. As a result, according to the statistics in the province there were more than 300 enterprises that were forced to suspend or semi-suspend production due to insufficient coal supply.[183]

[180] These were the so-called "backyard steel furnaces" that Mao encouraged to establish in each urban neighborhood and in every commune. An actual “Fight for Steel” (夺钢大战) was encouraged. Howevere, the final output consisted of low-quality pig iron with little economic worth.
[181] Ibidem, p.85
[182] SHI Jian Guo 石建国, *Qian xi ‘da yuejin’ dui dongbei…*, cit., p.85
[183] Ibidem, p.88

The "Great Leap Forward" movement also called for the principle of "walking on two legs" and thus for the set-up of small industries[184].[185] As a result, the local industries in the Northeast experienced a period of rapid progress. For example, before the "Great Leap Forward" period, the Baicheng area of Jilin Province was originally an area with a relatively weak industrial foundation. By the end of 1959, more than 2,600 factories had been established in the district. However, not many of them held up. For example, Harbin City opened a total of 890 large and small factories in 1958, but by the second half of 1959, only 523 were left.

As regards light industry, already during the FFYP the proportion of light industry in the total industrial output value of Northeast China strongly declined. During the "Great Leap Forward" period, this situation became even more serious. For example, in the total industrial output value of 1959, the light industry produced in Fushun accounted for 3%, the Anshan one accounted for 5%, and Benxi and Fuxin accounted only for 2%. Furthermore, light industries in many regions switched production, making the supply of light industrial products, especially daily necessities, even more tight. For example, in Liaoning Province the Jinzhou Ceramics Factory was a well-known factory of bowls which supplied the whole Chinese territory. But with the arrival of the GLF the factory changed its production and started to make sulfuric acid. The light industry in Heilongjiang Province, the northernmost part of the Northeast, was in the worst situation. From 1957 to 1960, the proportion of the province's heavy industry increased from 45.3% to 60.4%, while the proportion of light industry only increased from 20.4% to 22.3%. In short, just like in the rest of China, light industry lagged way behind the development of heavy industry.[186]

When it comes to agriculture, the Northeast experienced similar circumstances as the rest of China. The plain in the northeast region had a very fertile land and was an important commodity grain base for the whole country at that time. In general, once in the hands of the state, the goods derived from agriculture were used in 3 ways: a small part was distributed to the municipalities as food rations for the peasants, another was distributed to support industrial and urban workers, and finally what remained, which actually constituted the larger portion of the agricultural production,

[184] This policy was also called of the “five small industries”(五小工业).
[185] SAMARANI, *La Cina Contemporanea…*, cit., p.224
[186] SHI Jian Guo 石建国, *Qian xi ‘da yuejin’ dui dongbei…*, cit., p.87-88

was exported to pay for the machinery and equipment needed for the industrialization of China.[187] In 1957, the output of grain in the Northeast was 24.8 million tons, and it was able to reach over 26.5 million tons in both 1958 and 1959. However, in 1960, due to the impact of natural disasters and the inefficient new policies, agricultural productivity cracked, and grain output dropped drastically to 17.8 million tons. Another element that caused a decrease in the farming output was the transfer of much of the agricultural force to the industry sector. This was done in order to develop heavy industry. Only in the Northeast, the labor force engaged in agricultural production went from 9.9 million in 1957 to 7.28 million in 1960, a decrease of 2.62 million. Obviously, the same labor management was applied to the whole country. Moreover, young and strong laborers were transferred to large-scale steel smelting, and this greatly weakened the agricultural production. The labor force left in rural areas was generally older. Northeastern authorities even reported to the central government that the lack of labor was an important and serious issue in the Northeast which was strongly affecting the region's productivity. They needed an increase of 6 million people in order to reach the Great Leap Forward's goals, but what the central government could offer were only 500,000 people by 1962.[188]

In the Northeast, the number of farm animals in rural areas decreased and their physical fitness declined, mostly due to insufficient feed. In 1957, there were 3.77 million arable animals in Northeast China, and 2.49 million in 1960, a decrease of 1.28 million.

All these factors have led to the decline of agricultural production in the Northeast region, and an almost identical situation was occurring in the rest of China. Furthermore, natural calamities and the inefficiency of the Great Leap Forward policies soon made the masses starve. Between 1959 and 1962 about 45 million people were estimated to have died because of the Great Leap Forward.[189]

Moreover, Sino-Soviet relations suffered the final crisis in 1959. In particular, three Soviet policies towards China brought Sino-Soviet relations to a turning point: Moscow refused to support China in its confrontation with India;[190] the USSR blew away the 1957 agreement with China

[187] GARVER, *China's Quest…*, cit., p.130-133
[188] Ibidem, p.87
[189] Ibidem, p.113
[190] The conflict between China and India in the 1950s and 1960s was mainly caused by the definition of their respective borders in the Aksai Chin region. The fact that India decided to protect the Dalai Lama after he escaped from Tibet in

regarding cooperation on nuclear weapons; and finally Khrushchev made a visit to the USA, and endeavored to mediate the Sino-American conflict.[191] For Mao, the Soviet motto of 'peaceful competition' with the West was a class betrayal. Furthermore, China was unhappy with the economic support provided by the USSR, which was inferior to many other countries of the Soviet bloc. Khrushchev had had enough and in July he declared that all 1,299 Soviet economic specialists and advisors and all their dependents working in China during that time were going to come back to the Soviet Union by September.[192] The breakdown of the Chinese economy caused the government to cancel the Great Leap Forward program by early 1960.

During the "Great Leap Forward" the total industrial output value of the Northeast has increased by 262% over 1957, and more than 50% higher than that in 1958. However, this kind of rush to increase the value of industrial output in a short period of time was doomed not to last. Soon, factories began to experience industrial accidents and equipment breakdowns. Moreover, the increased quantity of output led to a sharp decline in quality. Factories throughout the whole Chinese industrial system received shipments of inputs that they could not use: steel that was too brittle to be used; parts that could not be used for assembly processes; machine tools that broke down or didn't operate properly; trucks that constantly stopped functioning. As a result, many factories throughout China expended additional resources simply to rework the inputs into usable form. Coal, fuel oil, electricity, and were used in vast quantities in order to generate products that could not be used. Thus, the collapse of the whole Chinese industrial system was approaching.[193]

In general, the "Great Leap Forward" was an attempt to build a China's own new industrial system based on self-reliance. As the most important heavy and chemical industry base was in the Northeast, the region played an extremely important role. The Great Leap Forward pushed the industrial growth under the planned economy to an extremely exaggerated form. In the Northeast, the individual advance of the steel industry and the abnormal expansion of the heavy chemical industry, finally led to the imbalance of the whole national economy. Therefore, from the perspective

1959 definitely didn't help solving the hostilities between the two countries, and in the end in 1962 there was the outbreak of the Sino-Indian border conflict.

[191] The 1958 Taiwan Strait Crisis between the PRC and the Republic of China (ROC) caused some debates also between the PRC and the US.

[192] GARVER, *China's Quest…*, cit., p.158

[193] Andrew G. WALDER, *China Under Mao: A Revolution Derailed*, Cambridge, Harvard University Press, 2015, p.175-176

of development performance, the "Great Leap Forward" movement in Northeast China failed, and it will have a profound impact on the future development of the industry. The consequences of the "Great Leap Forward" movement made the development of Northeast industry unsustainable. Facing this grim situation, the Northeast was after forced to start a five-year period of economic adjustment.[194]

5. The industrial adjustments in the 1960s

Already in 1959 all the agricultural problems were coming to the fore, and the industrial production turned into a collapse the following year. Overall, between 1958 and 1962 the gross domestic product decreased of about 35%. However, agriculture experienced the most serious and dramatic repercussions: in particular, cereal production fell of about 30% in the two-year period 1958-60, reaching the levels of 1951. As a result, between 1958 and 1960 average per capita consumption of cereals diminished by 23% in rural areas.[195] The collapse of the Chinese economy was as severe as the US' Great Depression of 1929.

In January 1961 during the 9th Plenum of the Eighth CPC Central Committee, began the economic and political readjustments: policies of adjustment, consolidation, enrichment, and improvement were put forward.[196] Afterwards, in February 1962, they were better defined at the so-called "7000 Cadres Conference". During the latter conference, Mao Zedong made self-criticism, and declared he was going to take a semi-retired role, leaving future responsibilities to Liu Shaoqi and Deng Xiaoping. Liu Shaoqi assumed the chairmanship of the People's Republic of China in 1959 (though Mao retained his position of party chairman) and was given the "first line" administrative and day-by-day direction of the state. Deng Xiaoping, the party's general secretary and top administrator, was given additional responsibilities in the first line.

[194] SHI Jian Guo 石建国, *Qian xi 'da yuejin' dui dongbei…*, cit., p.89
[195] SAMARANI, *La Cina Contemporanea…*, cit., p.230
[196] SHI Jian Guo 石建国, "Lue lun 20 shiji 60 niandai dongbei diqu de gongye tiaozheng" 略论 20 世纪 60 年代东北地区的工业调整 (On Industrial Adjustment in Northeast China in the 1960s), Researches in Chinese Economic History, 2009, p. 126

These moves finally brought the Great Leap Forward to a halt.

The order of priority in the area of economic development was changed: agriculture was accorded the first priority, followed by light and heavy industry. The industrial main task was to help agriculture by providing tools, machinery, fertilizers and consumer goods and also providing training in mechanical skills.

Originally, starting from the Second Five-Year Plan period, the Northeast was no longer the focus of national investment. However, due to the launch of the "Great Leap Forward" and the development of the Daqing Oilfield[197], in 1964 and 1965 in the late economic adjustment period, the state still made a lot of investment in the Northeast. Furthermore, the Northeast, as an industrial base, experienced an abnormal development of its industry during the Great Leap Forward, especially heavy industry. This made the imbalance between industry and agriculture and the tertiary industry particularly prominent in this region. Compared with other parts of China, the economic contradictions in the Northeast were more acute and required even more adjustments.

The growth-enhancing industrial advance proposed by the Great Leap Forward was not based on a reasonable industrial structure and was destined to unsustainability. Due mostly to the extremely tight operation of various sectors, the damage to industrial plants and equipment were particularly serious in the Northeast. For example, as of June 1963, 18% of the equipment in Liaoning Province was in disrepair: 2,000 boilers, and 180,000 square meters of buildings needed to be updated. As a result, industrial production experienced a sharp decline.[198]

A very challenging policy for the Northeast industrial system was the decentralization of central enterprises and the decentralization of certain material distribution and planning authority that occurred in 1958. The problem was that this decentralization policy was not accompanied by any method for coordinating inputs and outputs, and thus the final result was chaos.[199] Certain inter-provincial relations of production coordination appeared chaotic. Accordingly, the once flourishing

[197] The Daqing Oilfield was discovered in 1959. Today is still one of the country's most important sources of oil. Daqing is situated in the northern part of the Manchurian plain, between Qiqihar and Harbin. During the Cultural Revolution (1966–76), Daqing was publicized as a model of large industry organized on Maoist lines. Especially, it was praised for the self-reliant "can-do" attitude of its workers, whose technical innovations made it possible to develop a new oil field only using very primitive equipment.

[198] SHI Jian Guo 石建国, *Lue lun 20 shiji 60…*, cit., p. 126

[199] PERKINS, *The Economic Transformation…*, cit., p. 217

collaboration between enterprises was disrupted. Thus, the supply of materials for production couldn't be guaranteed and raw materials were not available. Indeed, according to the order situation in 1959, the supply quantity was generally lower than that in 1958, and it could only meet 10-30% of the demand in Liaoning Province, and at most 50%.[200] As a result, the original plans couldn't be completed and most of the production was be suspended. During the restoration period in the 1960s, the previous planning and allocation system was restored, but it was no longer to be done all by Beijing. Instead, in many cases such decisions were decentralized to the province and later even to the county. As a result, enterprises obtained most of their inputs from within the province and most of their outputs were sold in the same province. By the 1970s, another decentralization policy was introduced throughout the country.[201]

As previously mentioned, the decline in industrial production began with coal, especially in the Liaoning Province. Coal was the foundation of industry, thus, the reduction in coal production inevitably affected the reduction in production in a series of industrial sectors, forming a chain reaction. The amount of damage created by the Great Leap Forward was so serious that the coal industry took several years to fully recover. Actually, in the early 1960s, coal outputs were still declining. The average daily production level of coal was 155,000 tons in the first half of 1960. In the second half of the year, it dropped to 139,000 tons. From January to May of 1961, it reached 101,000 tons. In the first 20 days of June, it was only 92,000 tons on average. The output value from January to May 1961 was only 4.89 billion yuan, which was 41% of the same period in 1960.[202]

In general, construction, machinery, chemicals, light industry, and textiles were the industries which suffered the largest decline, about 60-80% compared to the same period in 1960. On the other hand, industrial sectors such as coal, metallurgy, and electric power fell by about 35%.[203]

[200] SHI Jian Guo 石建国, *Qian xi 'da yuejin' dui dongbei…*, cit., p.89
[201] PERKINS, *The Economic Transformation…*, cit., p. 217
[202] SHI Jian Guo 石建国, *Lue lun 20 shiji 60…*, cit., p. 127
[203] Liaoning Provincial Planning Commission, Guanyu suoduan gongye zhanxian de huibao tigang (chugao)关于缩短工业战线的汇报提纲(初稿) [Report Outline on Shortening the Industrial Front (First Draft)], 1961

In September 1960, the Political Bureau of the Central Committee decided to establish six central bureaus, which were formally confirmed by the 9th Plenary Session of the Eighth Central Committee of the Communist Party of China in January 1961. In the Northeast it was established the Northeast Bureau of the Central Committee of the Communist Party of China. Such establishment on the one hand could free the central government from the consideration of too many international and domestic issues. On the other hand, it could also help with the integration of the central line, guidelines, policies, and various regional conditions. The economic adjustment policy introduced by the Northeast Bureau was as follows: following the policy of taking agriculture as the basis and industry as the leading factor, the Northeast had to ensure key points, and support the whole country. The specific tasks of industrial adjustment were: improve quality, increase varieties, develop cutting-edge, fill up deficiencies, fully tap potentials, increase labor productivity, and further build a more complete industrial system with a high level of technology to better support agriculture and the country. They had to focus on "adjustment, consolidation, enrichment, and improvement" within a certain period of time, and afterwards "improvement" had to be put in the first position. Judging from the expression of the above-mentioned ideological indicators, the thinking of the leadership still didn't realize the seriousness of the economic situation, and still put "improvement" in the main position, rather than "drastically adjust".[204]

In 1962, the guiding ideology of the central and local governments began to change: they started to make real efforts in order to make true adjustments. Several ministers personally went to various place around China to offer specific guidance and supervision. In view of the large number of heavy industries in the Northeast, the situation was complicated, and the difficulties were particularly serious. For this reason, Zhou Enlai offered to go to the Northeast.

In order to make adequate preparations, Zhou Enlai sent Gu Zhuoxin[205], then deputy director of the State Planning Commission, to lead a working group of more than 80 people including the

[204] Huang Huoqing 黄火青, Guangyu Dongbei diqu gongye de qingkuang he jinhou renwu de yijian 关于东北地区工业的情况和今后任务的意见 (Opinions Concerning the Industrial Situation and Future Tasks in the Northeast Region), 1960

[205] Gu Zhuoxin 顾桌新 (1919-2002) was a political figure in the People's Republic of China. He served as the director of the Planning Committee of the Northeast People's Government in the early years of the PRC. Then, in 1954, he was promoted to deputy director of the State Planning Commission of the PRC. In his final working years he was elected as a member of the Central Advisory Committee.

deputy ministers and directors of the various industrial and communication departments of the State Council. Zhou Enlai proposed three specific adjustment policies to the working group, asking them to study and implement them after they arrive in the Northeast. These three guidelines are: (1) In the overall economic layout, the industrial front must be given less importance in favor of the agricultural front; (2) In the industrial system, the production front must be improved; (3) In terms of machinery and equipment , repair first, then manufacture.[206] Thus, the working group adjusted and arranged work in Northeast China based on this ideological guideline.

As for the strengthening of agriculture and the light industry sectors, it was pursued in terms of personnel, enterprises and equipment. In the Northeast they started by mobilizing a large number of skilled workers to participate in the agricultural production. At that time, the proportion of people working in the agricultural sector in Liaoning Province had increased from 13.4% in 1960 to 31% at the end of 1961, and then to 45% at the beginning of 1963. Moreover, many industrial factories switched to agricultural production. For example, reform-through-labor enterprises vigorously contracted industrial production and turned to agricultural production. In addition, some agricultural machinery manufacturing plants were transformed into agricultural machinery maintenance plants.

In order to strengthen the agricultural machinery industry, the Northeast made dozens of small enterprises with poor production conditions switch their production. Thus, many new manufacturing or maintenance firms of agricultural machinery parts were established. Indeed, during this period, the number of agricultural machinery maintenance plants in Liaoning Province increased from 33 in 1960 to 45 in 1963, and the number of manufacturing plants of agricultural machinery parts increased from 10 to 12. At the same time, efforts were also made to strengthen the production of light industrial products. At that time, the Northeast had paid attention to making full use of scrap materials in order to increase the production of light industrial products and handicrafts, and also to improve the quality of products. Faced with the shortage of agricultural raw materials and insufficient supply, Liaoning has adopted the strategy of shutting down some light industrial

[206] Gu Zhuoxin 顾桌新, Jianchi yuanze he jiejue kunnan de gaochao lingdao yishu 坚持原则和解决困难的高超领导艺术(Superb Leadership in Adhering to Principles and Solving Difficulties), 中央文献出版社 Central Literature Publishing House, 1990, p.190

production factories based on agricultural raw materials: textile, cigarette, paper, leather and other similar industries. Instead, they decided to strengthen the production of light industrial factories which were using industrial products as raw materials. By the beginning of 1963, sewing machines, basins, cups, plastic shoe soles, detergents, bicycles, household ceramics and other products urgently needed had more than doubled their production compared with 1961.[207]

In the process of sizing the industrial front, it was emphasized the need to pay special attention to protecting the large-scale enterprises which were the backbone of the country, while small enterprises with high costs, low quality, and large waste should generally stop production. Since 1961, there were than 6,600 industrial enterprises above county-level in Northeast China. Of the 3,285 enterprises under the industrial sector, 972, about 30%, were either closed, merged or changed production. In the non-mechanical machinery industry, which had a total of 911 enterprises, 290 factories suffered the same fate. Finally, the non-industrial sector had a total of 3,337 enterprises, and 950 of them were closed, merged, or switched production. The focus of these adjustments was directed towards local industries, and the large-scale key enterprises directly under the central government had basically been exempted. Indeed, in total the central industry abolished 87 enterprises, which was only 20.2% of the original number of enterprises in 1960, while the local industry abolished 1,688 enterprises, which stood for the 54% of the original number of enterprises in 1960.[208]

The Party Central Committee drafted the "Regulations on the Work of State-owned Industrial Enterprises (Draft)" in September 1961. The purpose of this bill was to formulate a system that suited the current situation of the country and that could better serve the general line. The "five decisions" described in the draft were: determine the product plan and production scale; determine the personnel and institutions; determine the consumption quota and supply sources of the main raw materials, materials, fuels, power, and tools; determine the fixed assets and working capital; determine the cooperative relationship. According the CCP, after the Great Leap Forward, it was necessary to go through the "five determinations" to find out the basis of the enterprise. Only after

[207] SHI Jian Guo 石建国, *Lue lun 20 shiji 60…*, cit., p.131-132
[208] Ibidem, p.130-131

such research the firm could gradually achieve a relatively stable and normal production in order to consolidate its achievements. In short, the implementation of the "Five Sets" and the implementation of the "Five Guarantees" on the basis of the "Five Sets" aimed to encourage enterprises to better rely on the masses, implement plan management, and fully complete or exceed the national plan.[209]

The provinces and cities in Northeast China gradually implemented this new policy. At that time, the pilot enterprises in Harbin were experimenting with the "Five Sets" and "Five Guarantees" described in the draft. The effect was remarkable and immediate. Afterwards, a group of management cadres and technical personnel was concentrated in the process of industrial adjustment, thus strengthening the strength of the enterprises retained after adjustment. At the same time, various industrial enterprises carried out liquidation and capital verification, strengthened economic accounting, and improved various responsibility systems. According to Liaoning's inspection of 57 major products in the province in early 1963, 54 of them have improved their quality compared to 1961. Among them, the quality of pig iron, open-hearth steel, seamless pipes and heavy rails approached or even exceeded the highest level in history. Basically, they increased production efficiency, reduced consumption, reduced product costs, and reduced losses. From January to October of 1962, comparable costs were reduced by 5.3% compared to the ones in the same period in 1961, and profits increased by 6.6%. In addition, the number of loss-making enterprises was reduced to 18%, and their loss was 66.4% lower than that in 1961.[210]

Undoubtedly, after the adjustment of Northeast industry, the national and also regional economy took a turn for the better, but at the same time there were some problems. Despite the large-scale industrial adjustments, the heavy industry in Northeast China advanced individually, and the situation of agriculture, transportation, and urban construction was still relatively lagging. Food, meat, edible oil, and light industrial products in the Northeast still needed to be transferred in large quantities from the rest of China. Although the absolute quantity of agricultural products in Liaoning increased in the late stage of the adjustment, the average ration per person for farmers from the

[209] Zhonggòng zhongyang guanyú taolùn hé shìxíng “guóyíng gongyè qiyè gongzuò tiáolì (cao'àn)” de zhishì 中共中央关于讨论和试行《国营工业企业工作条例（草案）》的指示 [Instructions of the Central Committee of the Communist Party of China on the discussion and trial implementation of the "Regulations on the Work of State-owned Industrial Enterprises (Draft)], in “Wikisource”, 1961, link , 8 August 2020

[210] SHI Jian Guo 石建国, *Lue lun 20 shiji 60…*, cit., p.133

collective was only 179.5 kg in 1965, and the actual ration per person, with the addition of self-retained grain, on average consisted only of 203.5 kg per person.[211]

Another very important issue is the technological level of Northeast industry after the industrial adjustments of the 1960s. As it has already been explained, after the founding of the PRC basically all the technical equipment used in China came from the Soviet Union and seemed to be very advanced at the time. However, from the mid-1960s, some designs and equipment were outdated. No matter the policies of renovation of the whole system after the Great Leap Forward, many of the equipment were at the level of technology in the 1930s and 1940s, the production methods and operating technologies were backward, and the system involved a lot of heavy manual labor. In short, some equipment and workshops could no longer maintain production, and some equipment needed to be replaced. This was not only the case for machinery, equipment and technical equipment. In 1965, the working group of the Economic Committee of the Northeast Bureau conducted an investigation on 874 metal cutting machine tools belonging to 21 local industrial enterprises in Harbin. The investigation found out that only 47% were in good condition, 53% were in disrepair, and 22% were in serious disrepair. The equipment intact rate of the enterprises was below 10%, and there were 3 enterprises without complete equipment. Moreover, in the same year in Liaoning were drawn some statistics referring to some industries of machinery, light industry, textile, chemical industry, metallurgy, and coal: 14,030 equipment was planned to be overhauled that year, and only 6,869 were actually completed from January to July.[212]

In the mid-1960s, Liaoning, the country's leading industrial province at the time, didn't have a very high level of industrial production technology. The quality, variety and labor productivity of many products were not only lower than the international advanced, their level was even lower than the domestic advanced level. By the end of 1965, after the task of industrial adjustment was basically completed, half of the industrial products of Liaoning Province still lagged behind the country's advanced level. The cost of many products was higher than that of advanced areas. For reference, at

[211] Ibidem, p.136
[212] Ibidem, p.137

that time, the cost level of Jilin Province was 18% higher than that of the whole country and 33% higher than that of Shanghai.[213]

In conclusion, it can be said that although the Northeast region has basically realized the recovery of industry and agriculture already by the end of 1965, and the national economic situation improved in an all-round way, the Northeast industry wasn't able to go further and reach a new level of development. One of the main reasons was the shift of the state's investment focus, which made the planned economy, which mainly relied on capital investment, lose its pillar driving factors. In addition, the overall equipment update and technological transformation of the Northeast industry were not on the agenda. As a consequence, it can be seen from the above analysis that the overall industrial technology level of the region, with only few exceptions, begun to lag behind more advanced regions such as Tianjin and Shanghai. During the "Cultural Revolution," this gap further widened. In essence, the contradictions and problems of the Northeast economic system continued to accumulate and settle. They later became the long-term motivation of the economic difficulties in the Northeast after the reform and opening up.[214]

6. The Cultural Revolution

The period between 1961 and 1965 was a transitional phase in the economic policy strategy. The start of a new five-year plan was planned for 1966. The adjustments were able to achieve good results: agricultural and industrial production substantially recovered, the imbalances between the productive sectors were attenuated and the internal market revitalized. Of great importance was the development of the oil industry, which began with the discovery in 1959 of fields in the Daqing area, in the Northeast. The establishment of the Daqing Oilfield laid the foundations for tackling the problem of energy supply with greater strength and autonomy. Finally, at the 3rd National People's

[213] Jilin Province Planning, Finance and Infrastructure Conference Secretariat, Guanyu jihua, caizheng, jiben jianshe huiyi qingkuang huibao tigang (caogao) 关于计划、财政、基本建设会议情况汇报提纲(草稿) [Outline of Report on Planning, Finance, and Infrastructure Conference (Draft)], 1965
[214] SHI Jian Guo 石建国, *Lue lun 20 shiji 60…*, cit., p. 134-137

Congress in 1964, Zhou Enlai announced that the Third Five-Year Plan was going to officially start the next year.[215]

Already in 1962, during the 10th plenary session of the Central Committee elected at the 1956 congress, Mao Zedong raised the issue of the general situation of the party and the country and insisted that "class struggle" remained high on the Chinese agenda. Originally the plenum was convened to essentially debate issues related to economic policy, but soon the debate focused on Mao's theses. In the course of the following four years, Mao enacted a series of shrewd actions which had the objective to discourage the more pragmatic policies taken by the CCP after the end of the Great Leap Forward, and at the same time to restore the power into his sole hands. Mao thought that such policies would turn China away from the utopian socialism it believed in, in favor of the new corrupt Soviet system. He was afraid that the more moderate party members who were "taking the capitalist road" were gradually leaving him and his revolution dream behind. Finally, in August 1966 the "Sixteen Points"[216] was issued to define the Revolution's goals.[217] Thus, by the end of 1966 the Cultural Revolution was officially launched, together with the Third Five-Year Plan.

Mao called China's youth to become the next generation of revolutionaries under his guidance, conventionally described in the famous "Little Red Book", and in a few months countless "Red Guard" organizations formed across the whole nation. In every city and every province, people were hit with radical criticism. Many were forced with coercion and brutality into self-criticism and resignation, followed by months or years of hard work in the countryside in the most remote peasant villages. Schools and universities were closed for years, many of China's cultural treasures were attacked because of the "Destroy the Four Olds[218]" campaign, and purges started to be carried out. Both Liu Shaoqi and Deng Xiaoping, who played influential roles in reviving the economy after the disastrous outcome of the Great Leap Forward, were prosecuted as "bourgeois reactionary's elements" and

[215] SAMARANI, *La Cina Contemporanea…*, cit., p. 255-256

[216] The "Sixteen Points" is the shorter name for the directive entitled the "Decision of the Central Committee of the Chinese Communist Party Concerning the Great Proletarian Cultural Revolution".

[217] BAI Liang, *Economic Legacies of the Cultural Revolution*, Edinburgh, The University of Edinburgh, 2014, p.7

[218] The "Four Olds"(四旧) were Old Customs, Old Culture, Old Habits and Old Ideas (旧风俗，旧文化，旧习惯，旧思想). The campaign was launched in Beijing already in August 1966.

removed from their roles. Liu, arrested in 1968, was labeled "the biggest capitalist roader in the Party" and died in 1969, while Deng was sent to work as a factory worker for four years.[219]

By the end of the summer of 1967 Mao considered finished the task of the Red Guards, who had overthrown the power of the institutions, and thus tried to limit their actions. The order to return to the classrooms of March 1967 was not carried out and the riots escalated. Finally, when the situation reached an unmanageable level, the army regained control by force and the Red Guards movement officially ended by the end of 1968.[220]

Figure 5:The first Party secretary of Harbin, Ren Zhongyi, forced to wear a dunce cap and a placard around his neck with the accusatory label "black gang element" at a struggle session, Harbin, Aug. 26, 1966.Source: Photo by © Li Zhensheng/Contact Press Images,

In the same year, both the "down the countryside" and "cleansing the class ranks" movements were inaugurated. 17 million urban youths, about 10% of the urban population, and also many cadres and party leaders, were sent to the countryside to be re-educated by the poor peasants through farm labor. This policy was also useful for the reduction of unemployment in urban areas and for the increase of agricultural output.[221]

Social and political stability was finally reached by the end of 1968, but certainly not without serious difficulties and strong tensions. The following period was characterized by much confusion, few concreteness and growing divisions within the party. There was a division of three groups: the activists of the Cultural Revolution like Jiang Qing[222] and his allies, the ones that didn't have a role

[219] SAMARANI, *La Cina Contemporanea…*, cit., p. 261
[220] SAMARANI, *La Cina Contemporanea…*, cit., p. 264
[221] ZHOU Xueguang and Liren Hou, *Children of the Cultural Revolution: The State and the Life Course in the People's Republic of China*, American Sociological Review, 1999, p.12-36
[222] Jiang Qing 江青 (1914-1991) was the fourth wife of Mao Zedong and a major political figure during the Cultural Revolution.

in the CV but still had benefit from it like Hua Guofeng[223], and finally the so-called survivors of the CV like Zhou Enlai.[224]

After the death of Lin Biao and the worsening of Mao's health condition, in the period between 1972 and 1976 the main agenda was the succession of Mao as Party leader. The so-called "Gang of Four"[225] rose in antagonism to Zhoun Enlai and Deng Xiaoping. After the death of Zhou Enlai in January 1976 and the following removal of Deng Xiaoping, Mao ended up naming Hua Guofeng as acting premier and thus as his successor. With this final decision Mao sided in the intermediate group, between the supporters and the critics of the Cultural Revolution.[226]

Mao finally died on 9 September 1976. Afterwards, with the PLA backing, on October 6, 1976, all members of the Gang of Four were arrested in a bloodless coup, and the devastating 10-year long period of the Cultural Revolution was officially over.[227]

6.1 The economic implications of the Cultural Revolution

When the Third Five-Year Plan was launched in 1966, it seemed that China's economic program was finally reaching a reasonably successful pattern of growth. And then the Cultural Revolution arrived to cloud the future of the country. It is unclear if the plan really got under way by the beginning of the year or not. What is sure is that many political events overshadowed the 3rd FYP.

The impact of the Cultural Revolution on China's economy seemed to be slight in the early stage, when production units were protected from Red Guard interference. Afterwards, when the struggle extended into factories and communes in late 1966, the Cultural Revolution's disruptive effect became conspicuous. Indeed, such spread to the production units led to a serious disruption of transportation and industrial production in 1967. This happened because workers started to participate in the Cultural Revolution and thus there was less labor force actually working in the

[223] Hua Guofeng 华国锋 (1921-2008) was a Chinese political who held the top offices of the government, party and the military immediately after the death of Mao in 1976.
[224] Ibidem, p.271
[225] The "Gang of Four" 四人帮 was a political faction composed of four CCP officials (Jiang Qing 江青, Zhang Chunqiao 张春桥, Yao Wenyuan 姚文元 and Wang Hongwen 王洪文) which came to prominence during the Cultural Revolution
[226] SAMARANI, *La Cina Contemporanea…*, cit., p. 279
[227] Keith FORSTER, *China's Coup of October 1976*, Newbury Park, SAGE Publishing, 1992

production units. In addition, local authorities were intentionally disrupting the railway system in order to at least try to prevent Red Guard units from outside to enter their cities. Finally, many production units, transportation facilities and construction projects were temporary closed because of the occurring of open physical clashes.[228] These events were especially affecting since in the non-market Chinese economy the flow of goods and services depended upon the coordination of administrative planning and trade organizations. When during the Cultural Revolution the interdependent activities of the various economic units were suddenly disrupted, the whole economic system was disrupted. 1968 was still a bad year for industry and transport, and in April 1968, Zhou Enlai even admitted that the 1967 plan had not been fulfilled. The output of some products actually fell below the level accomplished in 1966. Some estimates in the Western world showed a decline in industrial production of 18% in 1967, and it didn't regain the peak level of 1966 until 1969.[229]

In the whole country agriculture was less affected compared to industry. For reference, in 1968 and 1969 the number of hogs was down significantly, stating that the status of private plots and the free market was not so good. In 1968 and 1969 grain output fell, and cotton's one in 1969 and 1970. As some studies have shown later, this decline in the agriculture sector was strictly linked to the shortfalls in the availability of chemical fertilizer, which in turn was caused by the decrease in industrial production. Indeed, fertilizer's supplies fell by more than 39% in 1968. Actually, it could have been worse if the shortfall of such product had not been matched by an increase of 65% in imports between 1966 and 1968.[230]

Nevertheless, luckily by 1970 both agriculture and industry had recovered to the previous levels achieved in 1966 and 1967. Some products even surpassed those levels and reached the long-term trend line. In short, all of the disorders caused by the outbreak of the Cultural Revolution had cost China two years of reduced output in almost any sector but little more, at least in the short run. Overall, the growth rate of national product in the 3rd Five Year Plan period of 1966–1970 averaged

[228] For a detailed account of the incidents that occurred during the Cultural Revolution see Jan S. Prybyla, *The Political Economy of Communist China*, Scranton, International Textbook Company, 1970, p. 477-567
[229] Robert F. DERNBERGER, *Radical Ideology and Economic Development in China: The Cultural Revolution and its Impact on the Economy*, Berkeley, University of California Press, 1972, p. 1058-1059
[230] PERKINS, *The Economic Transformation...*, cit., p. 143

as much as 6% per year. Taking grain as example since it accounts a substantial portion of agricultural production, in the 1966-1970 period grain output grew at an annual average rate of 4%. As for the industrial sector, the annual average rate of growth of electric power was over the Five-Year Plan's desired levels of 11%. Indeed, in 1970 electric power was 71% above 1965. [231]

Through 1972 and 1973 the output of most industrial products grew. As for agriculture, in 1972 a severe drought occurred, and grain output was reduced by it, but eventually farm income was able to grow slightly. Between 1974 and 1976 there were declines in the outputs of certain key industrial products, such as steel and machine tools. However, energy output and many other products managed to grow even in those politically challenging years. Thus, even the turmoil occurred in 1976, which saw the deaths of Zhou Enlai and Mao Zedong and also the terrible Tangshan earthquake, didn't actually have a lasting impact on economic performance comparable to that of the Great Leap Forward.[232]

In the initial phase of the Cultural Revolution, and thus the period of the 3rd Five-Year Plan, the Northeast economy suffered the same fate of the rest of the country: industry outputs declined as a consequence of the general unrest, but by 1970 a more stable atmosphere was restored. What it is interesting to notice are the effects that a new policy of decentralization had on this area in the 1970s.

Since in China's Northeast there was an important industrial base with many SOEs and mines under the central government, its system was subjected greatly by the policy of decentralization of state owner enterprises that began in 1969 and ended in 1973. On 5 March 1970, in accordance with the spirit of the "*Outline of the Fourth Five-Year Plan (Draft)*", the State Council sketched the "*Notice on the Decentralization of Local Administration of Enterprises Directly Under the State Council's Industrial and Transportation Ministries (Draft)*". Such notice required that most of the enterprises and institutions directly under the Ministry of Industry and Communications of the State Council should have been delegated to local management. The decentralization took different forms: the 'all decentralization' one, and the 'ministries and provinces co-management" one, usually with

[231] Ibidem
[232] PERKINS, *The Economic Transformation…,* cit., p. 147-148

provinces as the mainstay. Already by September 1970, more than 2,400 directly affiliated enterprises, institutions and construction units throughout China went to local management.[233]

A similar policy had already been enacted during the Great Leap Forward period, to be precise in 1958.[234] However, compared with those institutional changes of 1958, the ones undertook during the 1970s were more powerful and broader, and had a far-reaching impact. Large industrial and mining enterprises in all the three provinces, such as Daqing Oilfield, Changchun N.1 Automobile Plant and Jilin Chemical Industry Company, were all transferred to their respective provinces' bureaus. Taking Liaoning province as an example, in the summer of 1973 the government owned a total of 396 enterprises in the province. Thanks to the new policy 311 industrial enterprises were delegated in the 1970s. What they did was to keep sectors involved in the lifeline of the national economy undivided, such as railways, power and ports. But many industrial and mining enterprises were decentralized.[235] Thanks to the Decentralization Reform, in the Northeast between 1971 and 1972 the number of employees increased by 9 million.

As already mentioned, the decentralization of enterprises of the Northeast was stronger in this period and broader in scope. However, the management system of the planned economy didn't undergo fundamental changes. Thus, many problems arose from the decentralization policy. Production plans, financial plans, material supplies and other issues were still handled according to the original affiliation. Thus, the various ministries and commissions of the State Council were still responsible to the end. Furthermore, multi-handed leadership led to many meetings, reports, documents, heavy pressure on the enterprise, insensitive production scheduling and command, etc. As a result, many specific problems were still solved too slowly. Moreover, just like in 1958 but on a larger scale, after the decentralization many supporting and cooperative relations outside the province were interrupted. For example, in the past 50% of the repair parts of the 301 factories in Fushun were processed by the Ministry of Metallurgy. With the new management, all relations with other provinces were interrupted, and thus the equipment couldn't be overhauled as planned.

[233] SHI Jian Guo 石建国, "Weige" shiqi fangquan gaige dui dongbei gongye de yingxiang "文革"时期放权改革对东北工业的影响 (Impact of the reform of power devolution on the industry of Northeast China during the "Cultural Revolution"), Contemporary China History Studies, 2008, p.76

[234] SHI Jian Guo 石建国, *Qian xi 'da yuejin' dui dongbei…*, cit., p.89

[235] SHI Jian Guo 石建国, *"Weige" shiqi fangquan…*, cit., p.76

Lawbreakers took advantage of the situation and began to speculate on it. Obviously, even some financial problems occurred as a consequence of the decentralization.[236]

In short, the decentralization reform didn't boost the industrial production situation in the Northeast. Taking Liaoning province as an example, the province total industrial output value increased by 9.8% in 1973, by 7% in 1974, by 6.9% in 1975 and only by 6% in 1976. Thus, the rate of increase decreased year by year. Actually, some major products' outputs were not increasing but decreasing. For example, in 1976 iron production decreased by 8.6% and steel production dropped by 8.1%. Moreover, few companies fully completed the FYPs' production goals, in 1973 about 30% of companies and 19.3% in 1976. Additionally, loss-making enterprises kept on increasing, with an increase of 48% in 1976 compared to 1973.[237]

On February 15, 1970, another policy was launched that affected the Northeast economic system in the 1970s. At the National Planning Conference held in Beijing it was re-emphasized that all localities should have vigorously developed local 'five small industries' (iron and steel, machinery, chemical fertilizer, coal and cement), a policy introduced first during the Great Leap Forward. The local government's attitude was enthusiastic and positive, as the development of local industry could increase fiscal revenue, arrange employment, and at the same time add new resources to complete national tasks like supporting agriculture, exporting, supporting large industries, serving the light industry market and implementing regional economic balance. Thus, the 'five small industries' have sprung up in various parts of the Northeast. The number of such industries in Heilongjiang nearly doubled in 1971 compared to 1965, and the output value more than doubled. For reference, in Hailin County[238], Heilongjiang province, before 1966 there were only three 'small industries': a liquor factory, a fruit wine factory and a brick factory. After the National Planning Conference of 1970, in less than four months the county built 30 county-run factories, 25 social-run factories and 25 team-

[236] Ibidem, p. 77-78

[237] Liaoning sheng ji wei, Liaoning sheng gong jiaoban guanyu dangqian gongye shengchan qingkuang de baogao 《辽宁省计委、辽宁省工交办关于当前工业生产情况的报告》(Report of the Liaoning Provincial Planning Commission and the Liaoning Provincial Office of Industry and Communications on the Current Industrial Production Situation), 1977

[238] Hailin (海林) is a country-level city under the administration of Mudanjiang, in the southeast of Heilongjiang provine, bordering Jilin province to the southwest.

run factories. They produced ore, steel, chemical raw materials, raw coal, electric motors, small and medium agricultural machinery, fertilizers, pesticides, construction materials, textile, etc. [239]

By 1976, the total industrial output value of collectively owned enterprises in Heilongjiang, Jilin and Liaoning provinces was respectively 2.453 billion yuan, 2.041 billion yuan and 6.052 billion yuan. Compared to 1971, Heilongjiang doubled its output, Jilin tripled, and Liaoning grew twice as much. However, although the "five small industries" achieved certain results in the Northeast during the Cultural Revolution period, their large-scale development didn't meet the actual needs of the region, nor did it build comparative advantages for the region. After the opening up and the new reforms, the “five small industries” in the Northeast didn’t form the flourishing situation of township and village enterprises like in the coastal areas, and they gradually declined.

Finally, obviously the decentralization policy was not the only reason why the industrial output in the Northeast was gradually decreasing. In addition, the five small industries' system couldn't certainly help much the Northeastern declining system. However, it is better to remember that the problems risen after the 1960s adjustments were still there since no new renovation policies had been performed during the Cultural Revolution period. The majority of Northeastern industrial equipment was still obsolete, and technology was getting more and more outdated. Actually, the system's overall situation might even have worsened because of the unrests caused by the Cultural Revolution. Moreover, in more general terms, it is better to point out that the most damaging effects of the Cultural Revolution in the economic field were the result of the long-term impact of following the same strategy of development set in the First Five-Year Plan. The strategy that Chinese planner were pursuing consisted in investing a greater share of investments into producer goods instead of consumer goods. They were so investing in products such as electric power and machinery, which can be used after to manufacture other products or items such as clothing and food. In short, fundamental changes in the overall strategy were necessary, but Chinese planners did not fully realize this until a decade later. Indeed, major changes occurred not before 1979. Each new idea was

[239] Mudanjiang diqu ge wei hui diaocha zu 牡丹江地区革委会调查组 (Mudanjiang Regional Revolutionary Committee Investigation Team), “Chongfen liyong bendi ziyuan gao sudu fazhan xian she dui gongye---hai lin xian da ban gongye de diaocha baogao”《充分利用本地资源高速度发展县社队工业---海林县大办工业的调查报告》(Make Full Use of Local Resources to Develop the County Community Industry at a High Speed-Investigation Report on Hailin County's Large-scale Industry), Heilongjiang Daily, 1970

systematically attacked by the Cultural Revolution system, and thus the safest course for the planners and the bureaucracy was to continue doing whatever they were doing before.[240]

In conclusion, by the end of the Cultural Revolution, the overall decline of Northeast industry began to appear[241].

[240] Ibidem, p. 144-146
[241] SHI Jian Guo 石建国, *"Weige" shiqi fangquan…*, cit., p.82

THIRD CHAPTER

CHINA'S OPENING AND THE REVITALIZATION PLAN FOR THE NORTHEAST

1. A new China: the opening and China's economic reforms

The Politburo named Hua Guofeng Chairman of the CPC Central Committee and the Central Military Commission the day after the capture of the Gang of Four, 7 October 1976.[242] Actually, his rise in the Party leadership was formally confirmed in the course of 1977 and 1978.[243] Afterwards, in order to establish a personality cult, Hua emphasized much the message Mao gave him "With you in charge, I am at ease". Hundreds of books and articles were published, and propaganda posters positioned throughout the country, but in the end, he wasn't able to consolidate his position.[244]

Hua Guofeng's economic strategy soon proved to be over-ambitious and definitely ill-adapted to the Chinese situation. The Ten-Year Plan presented in 1978 during Hua's rule was in line with the Twelve-Year Plan that Mao outlined previously in the mid-1950s. Such plan placed particular priority on the development of heavy industry, combining it with a strong emphasis on cereal production. Moreover, he decided to use the importation of foreign technology to support the modernization effort. The so-called "the Two Whatevers" policy[245] further stated Hua's weak personality and the fact that he did not have real ideas of his own since what he was doing was just upholding and further promoting all Mao's policy decisions.[246]

The truth is that the time in China was ripe for reform. First, the just ended Cultural Revolution was very unpopular, and the Party needed to distance itself from the old regime which

[242] Immanuel C. Y. HSÜ, *China Without Mao: The Search for a New Order*, New York, Oxford University Press, 1990, p.18
[243] SAMARANI, *La Cina Contemporanea…*, cit., p.280
[244] Stuart R. SCHRAM, *"Economics in Command?" Ideology and Policy since the Third Plenum 1978-84*, Cambridge, Cambridge University Press, 1984, p.417
[245] "The Two Whatevers" referred to the slogan "Whatever Chairman Mao said, we will say and whatever Mao did, we will do".
[246] SAMARANI, *La Cina Contemporanea…*, cit., p.280-281

enacted it and make changes in order to win people's support. Second, finally, after years of experience, economy's planners came to understand the many shortcomings of the planned system, and thus really felt the need for change. Third, the burst of economic development in other parts of Asia like Singapore, Hong Kong, South Korea and even Taiwan[247], demonstrated to China that a market economy worked better than a planned one. The different rates of economic development between North and South Korea further marked this lesson. Fourth, given all the reasons described above, China's population was more than ready to support an economic reform.[248]

The 3rd Plenary Session of the 11th Central Committee in December 1978 was the start of something new in China. According to many, the conference corresponds the moment when Deng Xiaoping[249] became paramount leader of China, even if Hua Guofeng remained nominal Chairman of the CCP until 1981. This Plenum also marked the beginning of the "Reform and Opening Up" policy and confirmed the central role of the development and the modernization of the economy in the national agenda.[250] The introduction of "readjustment" (tiaozheng 调整) and the official launch of the "Four Modernizations" at such event made the Chinese economic policy undergo significant changes.[251] China had finally opened its doors to the outside world, and had decided to shift the focus from politics to economy.

The economic situation when China opened up had pretty much this shape: in comparison to the other countries in the world, even to some of the Communist ones, China was stagnating since the beginning of the RPC. In comparison, only the less-developed, overpopulated and resource-poor countries seemed worse off.[252]

The Maoist Chinese planned system was characterized by three elements: the macro policy environment, planned resource allocation and micromanagement institutions. First of all, as seen in the previous chapters, such macro policy environment always gave priority to heavy industry. Their

[247] These four countries were known as the "Four Tigers" at the time.
[248] Gregory C. CHOW, *China's Economic Transformation*, Malden, John Wiley & Sons, 2015, p.93
[249] Deng Xiaoping was restored in July 1977 to the posts of Vice-Chairman of the Central Committee, Vice-Chairman of the Military Commission and Chief of the General Staff of the PLA.
[250] SAMARANI, *La Cina Contemporanea…*, cit., p.280
[251] George B. PRUDEN Jr., *Economic Development in The People's Republic of China: Effects of The Four Modernizations*, Gainesville, University Press of Florida, 1986, p.38
[252] PRUDEN, *Economic Development in…*, cit., p.39

hope was to speed up capital accumulation and industrialization. However, they never managed to make the Chinese industrial sector become the country's comparative advantage. Secondly, the highly centralized system, though suitable for implementing the economic plans, strongly denied a role for markets. As cross-nation studies discovered looking at China's experience, Chinese planned economy and the rejection of the market mechanism together caused inefficiency in resource allocation. As a result, such resource misallocation distorted the industrial structure. Indeed, contrary to Chinese thinking, high rates of capital accumulation and increases in the labor force didn't really lead to proportionate rates of economic growth as productivity performance was low. Moreover, without a doubt the lack of appropriate technology in economic activity didn't help. Such system also ended up bringing an imbalance between supply and demand. Therefore, total factor productivity (TFP) [253] kept on declining and dragging down economic growth. Finally, Micromanagement institutions were arranged in order to match the planning system. They were characterized by nationalization of industry and collectivization of agriculture. People's communes, production units and state-owned enterprises (SOEs) all lacked operational autonomy and work incentives, and thus operated extremely inefficiently. This definitely contributed to the decline in TFP. In conclusion, in the first three decades the PRC missed the chance to become a developed country and also fell further behind the rest of the world.[254]

For a couple of years from Mao's death, the collective agricultural system remained pretty much the same. As for the industrial system, at the end of Mao's 'dictatorship' it was nearly a complete bureaucratic command system where enterprises had basically no autonomy and were the bottom layer in a bureaucratic hierarchy.[255]

After 1978's Plenum, in China it was finally accepted the idea that institutions and policies that raised national economic output had to become a priority. Moreover, across the country rose the acceptance that domestic and international exchange through markets was a necessary part of a

[253] Total factor productivity (TFP) is measure of economic efficiency and represents part of the differences in cross-country per-capita income. It is usually measured as the ratio of aggregate output to aggregate inputs, and its rate of growth is calculated by subtracting growth rates of labor and capital inputs from the growth rate of output.
[254] Ross GARNAUT and Ligang Song and Cai Fang, *China's 40 Years of Reform and Development*, Acton, ANU Press, 2018, p.8-10
[255] PERKINS, *The Economic Transformation…*, cit., p. 216-218

national development strategy.[256] At the 3rd Plenum of 1978 the two essential decisions adopted were: first, economic modernization was going to be at the center of the Party's work in the future, while ideology, especially "class struggle", had to be weakened; second, the new development strategy was to move towards greater economic liberalization.[257]

The concept of the "Four Modernizations" has a long history. It all started back in 1954 when Zhou Enlai proposed the modernization of industry, agriculture, transportation and communications. Over time the project was modified multiple times[258], and in January 1975 Zhou renewed his call for an overall modernization of the four sectors (agriculture, industry, science and technology, defense). Unfortunately, the obstruction of the Gang of Four was too strong at the time. However, this speech is generally considered the basis of the Four Modernizations program enacted after the death of Mao.[259]

The major aims of the Four Modernizations included: (1) become basically self-sufficient by the development of natural resources and all economic capabilities; (2) assigning first priority to agriculture, the sector where 80% of the work force is employed and for centuries the foundation of China's economy; (3) improving science and technology to support modernization in other fields; (4) providing modern equipment in order to improve production and productivity; (5) encouraging individual enterprise; (6) further decentralization of management and political administration; (7) opening to the world in order to learn the best techniques, to find the best equipment, to establish the most beneficial economic relationships, and to profit from foreign trade; and finally (8) create a "socialist spiritual civilization" to prevent the introduction of capitalism.[260]

1.1 State-owned Enterprises' reforms

Under the pre-reform Chinese economic system, state planners decided resource allocation and the government-controlled inputs and outputs of goods, as well as their price. Indeed, demand,

[256] GARNAUT, *40 Years of Chinese…*, cit., p.31
[257] SAMARANI, *La Cina Contemporanea…*, cit., p.300-301
[258] Lawrence C. REARDON, *The Reluctant Dragon: Crisis Cycles in Chinese Foreign Economy Policy*, Seattle, University of Washington Press, 2002, p.111-114
[259] HSÜ, *China Without Mao…,* cit., p.93
[260] PRUDEN, *Economic Development in…*, cit., p.39

supply and price were all set on the basis of bureaucratic decision and not market-response driven criteria.[261]

In 1977 and 1978 planners were still thinking to the implement of the Ten-Year Plan (1976-1985) which was developed before the death of Mao in the summer of 1975. Such plan saw steel output still as "key element" for the development of the industry sector. The plan implied 120 large-scale projects of which 10 concerned iron and steel complexes, 9 non-ferrous metal complexes, 9 coal mines, 10 oil and gas fields, 30 power stations, 6 new trunk railways and 5 key harbors. In short, the Ten-Year Plan imposed once again investing huge amounts of money into heavy industry. No matter how, but fortunately the contradictions within the 10 Year Plan became visible as 1978 progressed.[262]

After the Third Plenum of 1978, a few more first efforts were enacted towards the reform of the industrial system: basically, they attempted to make the Soviet-style bureaucratic-command system work better. They wanted to change the way firms were managed internally, to relax the monopoly control over regional markets in favor of competition, and to adjust the priority given to various plan targets in order to give greater emphasis to efficiency-oriented targets and less to output targets.[263]

However, as already mentioned, actual reforms and open-door policies regarding industry began in 1979. At that initial time, the government simply granted Chinese SOEs the authorization to produce above a defined quota and to sell the surplus on the free market.[264] Moreover, from 1979 to 1986 it was adopted the policy of "fang quan rang li 放权让利", i.e. "to decentralize", which aimed to delegate more power and to leave more profits to the enterprises.

Other than that, Chinese leadership decided to postpone the urban sector reform. Indeed, inside the CCP there were some members who strongly opposed against the more market-oriented reforms. Such debates inside the Party ended up slowing the reform for almost two years at the beginning of the 1980s. By October 1984, the CCP called for more sweeping reforms in the industrial

[261] François DESNÉ, *Social and Political Challenges of the Chinese SOEs Reform*, Philadelphia, The Joseph H. Lauder Institute of Management & International Studies, 2003, p.8
[262] PERKINS, *The Economic Transformation…*, cit., p.155-201
[263] Ibidem, p.202-203
[264] Edward S. STEINFELD, *Forging Reform in China: The Fate of State-Owned Industry*, Cambridge, Cambridge University Press, 1998, p.52

sector. This was partly a reaction to the dramatic success of the rural reforms which provided sufficient confidence and a solid economic foundation to push reforms in general to a higher level. Such urban sector reforms included also the reform of State-owned enterprises (SOE). In the following three years, important steps were taken toward changing China's industrial management and control system. The goal was to create a system very distant from the centralized bureaucratic-command system of the past. The new system had to combine market methods of control and coordination with continued bureaucratic control in key sectors. The dream for some of the reformers at least, was a socialist version of the mix of market and state controls founded both in South Korea and Japan in the 1960s.

As for the state of China's SOEs, in early 1980s, they were facing the problem of low efficiency. During the central planning era, there was no competition as the whole economy was publicly owned and state-run. After the opening up, it soon became clear that Chinese SOEs had difficulties to adjust to the changing reality. They weren't prepared at all to the increased competition placed by collectively owned enterprises (COEs), privately owned enterprises (POEs) and foreign-invested enterprises (FIEs). Indeed, more than half of the rise of the industrial output (gross value) from 1982 to 1986 was reached by small-medium scale enterprises under urban collective rather than by SOEs. Rural collective industries on the other hand accounted for a third of the total increase in industrial output.[265]

In general, low efficiency seems to be persistent to any centrally planned economy. As for the case of Chinese SOEs, two major factors contributed to the inefficiency problem. First, the lack of incentives in the SOE workforce and second, the heavy social burdens the SOEs shouldered. Under China's central planning system, SOEs were the actual 'work-shops' of the big 'national factory'. Thus, SOEs passively performed the production tasks ordered by the central planners, and all profits were basically handed in to the central government. The system didn't imply any kind of performance measure. Thus, Chinese SOE workforce enjoyed job security. Workers lacked incentives and thus had no special reason to work harder and to improve their efficiency. Afterwards, in the first phase of reform, SOEs were experiencing competition with COEs, POEs and FIEs for the first time, but at

[265] Xin LI and Kjeld Erik Brødsgaard, *SOE Reform in China: Past, Present and Future*, Copenhagen, University of Copenhagen, 2014, p.55-56

the same time they were receiving favorable treatments from the government and enjoying soft budget constraints. As a result, there was still no real incentive for workers to improve efficiency because they knew the SOEs would be bailed out by the State in case of losses. As for social burdens, Chinese SOEs had to deal with two types. One was that Chinese SOEs had to provide as much employment as possible, and thus were generally overstaffed. The other was that the Chinese SOE's system made them undertook many social functions like running hospitals, schools, canteens and even convenience stores. One reason was that this maintained social stability, as SOE workers would have almost all their social needs met within their so-called *danwei* 单位 i.e. working unit. Furthermore, another reason was that some SOEs were located in remote or isolated regions, and thus they had to provide those social functions for their employees simply because there were no alternatives.[266]

Generally speaking, reforms regarding Chinese SOEs can be roughly divided into two phases. During the first phase, which generally occurred from 1984 to 1992, the emphasis of the reform was on “enterprization”, that is, transforming the SOEs from the government's affiliated organizations under the centrally planned economy into autonomous, productive enterprises under the so-called "planned commodity economy".[267] Policymakers first introduced the idea of commodity economy into its economic lexicon in October 1984 at the Third Plenary Session of the 12th CPC Central Committee. In that occasion, the traditional concept that a planned economy cannot go with a commodity economy was dropped, and what they declared was that China was going to develop a socialist commodity economy. It was decided that the nation had to learn from the valuable experiences of all foreign countries, including those capitalist economies, in order to better promote productivity and build a socialist commodity economy. They even said that the development of commodity economy was a necessary precondition for China's economic modernization. This decision to build a planned plus commodity-based economy was in line with the state of things. Indeed, five years from the start of the reform, people were no longer satisfied with the scarcity of commodities in the market and were eager to have access to freer supply of commodities to improve

[266] Ibidem
[267] Xin LI and Kjeld Erik Brødsgaard, *SOE Reform in China…*, cit., p.56

their living standards. The "commodity economy" was virtually a euphemism of "market economy" at that time, when the population was not very knowledgeable about the idea of market economy and to the eyes of policymakers it seemed too radical to explicitly assert their intent of building a more efficient economic system where the market plays an important role in distribution of resources.[268]

Thanks to such policies, SOEs were allowed to keep 15% of their profit while the government took the remaining 85%. SOEs' management usually either reinvested the incremental profit in the company or used it for its employee welfare and benefits. The culmination of this reform occurred in 1988, with the promulgation of the "*Law of Industrial Enterprises Owned by the Whole People*". The key for transformation was thought to be incentivizing SOE managers and employees. To do so, the government decided to undertake an experiment: implementing the so-called "contract management responsibility system"[269] from 1987 to 1992. This trial ended up being effective in boosting the SOEs' production output but not as much in increasing the government's fiscal revenue. This was due to the problems of information asymmetry deeply rooted in the relationship between the government and the SOEs.

The second phase began in 1992 and was designed to last until 2002 under Jiang Zemin's leadership. In 1992, after Deng Xiaoping's 'Southern Tour', the Chinese government decided to start a new round of reform related to SOEs: the new aim was to address the property rights issue. The reform theme of this phase can be named "corporatization". Indeed, the new specific goal for SOEs was to transform them into modern corporations characterized by clear-cut responsibility and authority, clearly defined property rights and separation of the functions of government and enterprises. In order to facilitate this transformation, the Chinese government issued the Company Law in 1993. Once the marketization reform started, however, Chinese SOEs appeared to be inefficient compared to the other types of enterprises. Indeed, by the mid-1990s, more than 60% of the 11,000 largest Chinese SOEs were loss-making. Furthermore, in 1997 the Chinese government

[268] Xin Zhiming, *China Embraced Commodity Economy in 1984*, in "China Daily", Copyright By chinadaily.com.cn. All rights reserved 20.10.2014, link , 06.09.2020

[269] The Contract Responsibility System (CRS) was a policy which was first introduced with the rural reforms enacted after 1979. The also called Household Responsibility System (HRS) was the new way of organizing the agriculture sector. It consisted in assigning to each farm household a piece of land. Such households were responsible of delivering a certain quantity of a specific product so that the commune could fulfil its procurement requirement with the State. When they satisfied such quota, they were free to keep the remaining output for their own consumption or for sale in the market.

gave up the idea of bailing out every loss-making SOE and implemented the so-called "zhua da fang xiao 抓大放小" strategy, i.e. "grasping the big SOEs while letting go of the small ones". This implied a wave of restructuration which triggered privatizations of small and medium sized corporations. Moreover, the government favored the detachment of social and health service providers in order to get rid of social burdens that financially constrained most of SOE's profit. Additionally, between 1998 and 2000, the government enforced a program to pull the big SOEs out of difficulties within three years, the so-called "san nian tuo kun 三年脱困", namely "shake off difficulties within three years". By the end of 2000, the program was said to have succeeded, but such success came with a price: writing off 1.4 trillion yuan in non-performing loans of state-owned banks.[270]

1.2 The rise of the so-called "Northeast Phenomenon"

As explained in previous chapters, in the early days of the founding of New China, the Northeast took advantage of its unique geographical and historical advantages and early industrialization accumulation and occupied a leading position in the process of Chinese socialist industrialization. Overall, during the almost 25 years between the first five-year plan (1953-1957) and the fifth five-year plan (1976-1980) the three provinces in the Northeast were able to establish a relatively complete regional industry system, making the area become an important part of the national economy. In 1978, Northeast's total industrial output value reached 202.63 billion-yuan, accounting for 14.7% of the country's total industrial output value. The output of many industrial products in the Northeast accounted for a large proportion of the country. Raw coal, logs, and crude oil accounted for 16%, 50%, and 52% of the country's total respectively.[271] Generally speaking, its industry accounted for 17.8% of the country's total, while agriculture accounted for about 9-10% since the beginning of New China.[272] Comparing North-eastern provinces with Guangdong Province,

[270] Xin LI and Kjeld Erik Brødsgaard, *SOE Reform in China…*, cit., p.56-57

[271] SUN Naiji 孙乃纪, Zhongguó dongbei dìqu jingjì de youshì yu kùnjìng--guanyú "dongbei xiànxiàng" de sikao 中国东北地区经济的优势与困境--关于" 东北现象"的思考 (The Economic Advantages and Dilemmas of Northeast China--Thinking about the "Northeast Phenomenon"), Northeast Asia Forum, 1993, p.28

[272] QIAO Zhen and Lu Xing Long 乔榛，路兴隆, "Xin zhongguo 70 nian dongbei jingji fazhan: huigu yu sikao" 新中国 70 年东北经济发展: 回顾与思考 (Economic Development of Northeast China in the 70 Year Since the Founding of New China: Retrospect and Reflection), Contemporary Economic Research, 2019, p.7

in 1980, the total industrial output value of Liaoning Province was 44 billion yuan, accounting for 8.8% of the country's total. During the same period, Guangdong's total industrial output value was only 22.4 billion-yuan, accounting for 4.5% of the country's total.[273] At the same time the Northeast region made significant contributions to the overall Chinese socialist industrial system and to the cultural construction. Over the years, a large number of industrial raw materials, fuels, materials, and technical equipment have been provided to all parts of the country, and a large number of management and technical personnel have been sent.

In short, before the reform and opening up the Northeast region's economic growth rate was higher than the national average as a result of all the investments it benefited for decades. Indeed, during the 2nd, 4th and 5th FYP and also during the adjustment period in the 1960s the State invested over 15% of the national total in the Northeast. Nevertheless, the deterioration of the North-easter's industrial system was becoming more and more evident.

At the start of the 1990s, the above-mentioned new wave of economic reform implemented by the Chinese government shook Northeast's already unstable balance. Such tightened economic policy resulted having differing impacts across the nation. The rate of growth in Southern and Eastern China experienced a slight decrease because of the higher cost of production material. On the other hand, provinces in the Northwest and Southwest kept a development rate higher compared to the national average because of their weak industrial foundation. Finally, the old industrial bases of the Northeast experienced negative growth, at the same time it accumulated high levels of debt to manage.[274] By 1990, Northeast's various economic efficiency indicators were lower than those of other regions. In addition, in 1990 SOEs' loss in this region accounted for 21.67% of the total SOEs' losses in the country, which was 7.556 billion yuan.[275]

[273] JIANG Wei 姜威, "Zhongguo dongbei gongye chong zhen: Lishi jing jian yu duice tantao" 中国东北工业重振:历史镜鉴与对策探讨 (Historical Mirror and Countermeasure Discussion of Reviving Northeast Industry of China), Northeast Asia Economic Research, 2017, p.114

[274] WANG, Mark and Zhiming Chen and Pingyu Zhang and Lianjun Tong and Yanji Ma*, Old Industrial Cities Seeking New Road of Industrialization: Models of Revitalizing Northeast China*, Singapore, World Scientific Publishing, 2014, p.24

[275] SUN Naiji 孙乃纪, Zhongguó dongbei dìqu…, cit., p.29

The registered extreme contrast after such policies was named as "Northeast phenomenon 东北现象" by Professor Feng Shunhua[276] of University of Liaoning. Afterwards, this definition was very much used by scholars and was officially recognized afterwards on a political level. The Northeast phenomenon refers to the economic slow-down of the so-called "Northeast old industrial base" in the early 1990s, while other regions of China maintained a higher economic growth. Such phenomenon was not only considered a regional phenomenon, but also an indicator for wider problems, especially the deterioration of such old industrial base.[277]

When analyzing the causes of the Northeast phenomenon on a macro level, first of all it is very clear that after the reform and opening up, China shifted its developmental emphasis to the South-eastern coastal areas. When China decided to enact economic reforms in the late 1970s, it had the opportunity to learn from the western world about their experiences with the market economy. Then, the Chinese started developing their own "socialist market economy", moving away from the limitations of the Stalinist Model. These overall macro strategy changes resulted in the Northeast industrial system losing its traditional competitive advantage. Indeed, during the 1980s, China's industrial center shifted its location: Guangdong, Fujian, Jiangsu, Zhejiang and Shandong Provinces became the new centers for the Chinese economy. These were the first provinces to enact new development policies and soon became central to the China's economic growth. A big example of a policy that strongly influenced Chinese economic development was the establishment of the Special Economic Zones (SEZ)[278] of Shenzhen, Zhuhai and Shantou in Guangdong province, and of Xiamen in Fujian province. These zones were an experiment in order to start some forms of cooperation with the international economies: in those zones foreign investments were encouraged together with progressive management methods like joint ventures.[279] Meanwhile, the provinces of the Northeast region were unable to get support from any of the preferential policies since it was not a key area for the reform and opening up. Therefore, it soon fell into a position of disadvantage.

[276] Feng Shunhua 冯舜华 (1934-2019) was a Chinese economist and expert of Russian and Eastern European affairs. She was professor and Chair of World Economic Research at Liaoning University.
[277] WANG, *Old Industrial Cities…*, cit., p.24-25
[278] The so-called Special Economic Zones (SEZ) of China were areas to which the government decided to grant more free market-oriented economic policies and flexible governmental measures compared to the planned economy elsewhere.
[279] SAMARANI, *La Cina Contemporanea…*, cit., p.301

The coastal new industrial zones were enjoying preferential policies in land, taxing, finance and international trading. Furthermore, differently from what the planned economy did in the Northeast industrial base, in such areas it was chosen to invest mainly in light manufacturing industries and high technology industries. To boost their industrial development, they imported from abroad a large amount of new technology and equipment. Further, the enterprises in the new industrial bases implemented modern management systems from the start and easily adapted to the market economy.[280]

At this stage, the Northeast was already facing difficulties, and was starting to be further brought to its knees by the fact that it the government made it support the development of the new industrial zones. Indeed, while these areas were enjoying many tax discounting policies, the old industrial base was being taxed at increasingly higher rates. The Northeast's contribution to the overall national income was far greater than the amount being invested by the government in the region. Thus, during that period, this region was contributing more than the investment it was receiving from the government. Instead, the coastal new industrial zones definitely contributed less than they received. For example, between 1980 and 1989, the gap between the GDP Liaoning Province had produced and the government investment received by Liaoning Province was 56.75 billion yuan. On the other hand, the Guangdong Province received a government investment of 1.04 billion yuan, which was more than its GDP.[281] As a consequence, some scholars ended up arguing that the Northeast old industrial base was covering the cost of the South-eastern coastal reform and opening up and that it was thus directly or indirectly subsidizing the economic growth of the country.

The question is: why the government decided to start the reform by the Southeast coastal area and not by the Northeast region?

When the reform started, the Northeast was the most developed region of China and was related to the fundamental economic stability of the country. The market economic system that China wanted to establish with the reform obviously involved some risks factors as well. The Southeast coastal areas had a low percentage of state-owned enterprises, and also had a tradition of

[280] WANG, *Old Industrial Cities…*, cit., p.25

[281] CHEN Yongjie 陈永杰, Dongbei lao gongyè jidì jiben qíngkuàng diàochá bàogào 东北老工业基地基本情况调查报告 (Research Report of Basic Conditions of Northeast Old Industrial Base), Review of Economic Research, 2003

valuing commerce. On the other hand, after more than 30 years of economic development of the PRC, the Northeast region owned the highest percentage and the most extensive allocation of SOEs in the country.[282] Actually, this is still the case today, as the state-owned enterprises still dominate the economy in the Northeast region. Therefore, Chinese leadership chose the South-eastern region to undertake a trial reform. In addition, the South-eastern coastal area had a good geographic location for trading with foreign countries, especially western ones. The triangular area around the Pearl River is indeed very close to Hong Kong and Macau, and thus it seemed like the best place for trying a market economy.

For the Northeast region, the most serious problems that resulted from the Northeast phenomenon were the bankruptcy of enterprises and the emerging high level of unemployment. These two problems had the greatest impact on the economy of the region and on its society in general. In actual fact, during the 1990s, most of the industrial products manufactured by the SOEs in the Northeast lost their market competitiveness, this was mainly because of the types of products produced, their quality, and price. As a result, many enterprises had to be liquidated. For reference, by the end of the 1990s in the Tiexi District[283] of Shenyang, many enterprises had an average leverage ratio[284] of 90% and had accumulated debts of billions of yuan. In addition, about 40% of enterprises had partially or entirely stopped their operations, and the factory vacancy rate reached almost 50%.[285]

But what were the reasons for such downfall of the State-owned enterprises in the Northeast?

First of all, the region fell back on their own systems and habits. SOEs lacked experience in defining the division of responsibility and in the planning and of implementation of economic measures. Such inability made them unable to operate in a market economy.

Second, the region wasn't quick enough in adjusting its rigid industrial structure to the new circumstances. The Northeast industrial system continued making the same mistakes of the last

[282] SUN Naiji 孙乃纪, Zhongguó dongbei dìqu…, cit., p.28

[283] Tiexi District 铁西区 is one of the ten districts of Shenyang, which is the capital of Liaoning.

[284] The leverage ratio is a financial measurement that asses the ability of a company to meet its financial obligations, or debts.

[285] WANG, *Old Industrial Cities…*, cit., p.26

decades: it kept on focusing on heavy industries like coal, petroleum, chemical engineering, and machinery manufacturing industries, and once again light industry was left aside.

Third, as already outlined in the previous chapter, in many cases the industrial technical equipment being used was outdated and unfortunately enterprises lacked enough financial investments to fund technological upgrading. As a matter of fact, most equipment was not being properly maintained even since before the opening and reform. Indeed, it is better to remember that already by September 1965, Northeast Bureau's inspection of 21 Harbin SOEs' machineries expressed that only 47% of them were in good condition. Obviously, the Cultural Revolution period that came afterwards was not the right one for renovations and R&D. During those 10 years, the regulations of enterprises were abandoned, equipment wore out and the issues with lack of maintenance worsened. Entering the 1980s, China did start technical reform of some key industrial enterprises, but unfortunately this was only occurring on a small scale. In Shenyang, only 1/10 of medium to large industrial enterprises were actually reformed. Due to insufficient attention to technological renewal and transformation, and insufficient funds North-eastern factories were producing old products with their old equipment, and regrettably such products couldn't meet the diversified market demand.

Fourth, the social responsibilities of enterprises made the cost of reform very high: it was hard for SOEs to support social development as well as to undertake reform within the market economy.

Fifth, as far as the life cycle of the industry system and resource reserves, in the early stages of reform and opening up, the Northeast reached its "maturity stage" of development as a result of over 30 years of exploitation. Indeed, as early as the late 1960s, the Northeast region, the national mining, raw material and heavy industry base, had already announced energy shortages. In the 1980s and 1990s, the Northeast industrial base was quickly moving toward aging and the shortage of energy and resources reached an alarming point. The reserves of Heilongjiang province's four largest coal mines were almost out by the end of the 1990s, and 11 of Liaoning province's 35 key coal

mines were destined to be used up and closed in ten years. Thus, the original regional advantages of the Northeast were greatly weakened.[286]

A related problem was that too many cities and areas throughout the region were dependent on a single factory, sector, or resource, and alternatives were either poorly developed or lacking completely. For example, the basic raw material industries in Benxi and Liaoyang have always accounted for more than 70% of the province's industry.[287] In general in many countries throughout history, once resources start to lack, many of these resource-cities have become abandoned "ghost towns" which failed to survive. Classical examples are "boomtowns", where the single economic resource or activity that created the city itself undergoes a collapse or depletes.

Apart from the reasons of the downfall of north-eastern SOEs, the main consequent problem to this overall situation was large scale unemployment. Many SOEs had to fire a big portion of their employees, and others even had to file bankruptcy. Furthermore, the newly established share-based enterprises[288] of the late 1990s cut employees to raise efficiency levels. The result was that unemployment was very widespread in the cities. Between 1997 and 2002, according to the statistics from the Department of Labour and Social Security, the total number of SOEs' dismissed workers in the three provinces of the Northeast was 6.8 million (2.4 million in the Liaoning Province, 1.18 million in the Jilin Province, and 3.2 million in the Heilongjiang Province), which represented 25% of China's 27.15 million laid-off workers. However, luckily the number of workers who were reemployed during the same period in the Northeast accounted for a total of 4.2 million, which represented 23.24% of China's total re-employed laid-off workers. The reason for the high level of unemployment and the difficulty of reemployment was because of the high percentage of SOEs present in the region and also because of the fundamental role such enterprises played in the cities' social capital. As a result, when the SOEs were in difficulty there was no other social economic sector to absorb their shock. The laid-off workers found themselves in very poor situations since the

[286] LISHENG Dong, *China's Drive to Revitalize the Northeast*, Open Edition Journals, 2005, p.5-6

[287] CHEN Lin Lin and JIN Feng Jun and HONG Hui 陈琳琳，金风君，洪辉, "Dongbei diqu gongye jidi yanhua lujing yanjiu" 东北地区工业基地演化路径研究 (The Evolution Path of the Industrial Base in Northeast China), Scientia Geographica Sinica, 2016, p.3-6

[288] Since late 1990s, the CCP started systematic reform of state-owned enterprises with the aim of establishing a modern enterprise system. Enterprises were encouraged to merge and reorganize: the aim was to increase the presence of the share-based reform model and to effectively build new modern corporations.

Northeast base didn't have unemployment, medical and pension schemes in place. Citizens had no other choice but to go to the government and petition or hold sit-ins. Chinese workers to restlessly fight for their rights and benefits, and search for new employment. Thus, unemployment in turn had a great impact on social security.[289] These social problems posed by the reforms depends highly on the environment in the Northeast. Certainly, SOEs in wealthy and diversified areas are easier to reform than SOEs in more isolated areas, where they contribute to a large portion of the local economy, like in the Northeast. Indeed, the industry concentration across provinces plays a role in the ability of the government to implement SOEs reforms.[290]

Apart from SOEs' downfall, the Northeast region economic system was facing other difficulties. An example is represented by non-state-owned enterprises. In the Northeast region such enterprises have developed slowly. The presence of POEs in the Northeast region was obviously far less than in the Southeast coastal areas, and surprisingly was even worse than in some inland areas. By the start of the millennium, the non-state sector was still too weak in terms of both output quantity and value and provision of jobs. Most industries were dominated by SOEs. Indeed, in 2001, state-owned or holding enterprises still contributed to 73.27% of the region's total industrial output value. In this situation, SOEs' redundant workers had few alternative outlets and the whole economy lacked diversification.[291]

Generally speaking, problems in the industrial sector basically remained the same until 2003. As for the agricultural sector, the region was baffled by an excess of traditionally well-marketed agricultural produce, a slow-down in the increase in farmers' income and by the stagnation of agricultural efficiency. After the reform, the region started facing foreign competition, and thus, the low competitiveness and high cost of the region's agricultural products suddenly became evident. As a result, the region suffered one failure after another in marketing produce that had held the sway of the domestic market under the planned economy.[292]

[289] WANG, *Old Industrial Cities…*, cit., p.26-29
[290] François DESNÉ, *Social and Political…*, cit., p.12
[291] LISHENG Dong, *China's Drive to…*, cit., p.5
[292] Ibidem, p.3-4

THE NORTHEAST'S SHARE OF THE TOTAL CHINESE OUTPUT

	Agriculture		Industry		Service	
	1998	2002	1998	2002	1998	2002
Liaoning	3.57 %	3.66 %	4.81 %	4.87 %	5.10 %	6.43 %
Jilin	2.89 %	2.77 %	1.55 %	1.83 %	1.81 %	2.34 %
Heilongjiang	3.11 %	2.77 %	3.90 %	4.05 %	2.94 %	3.60 %
Northeast	9.58 %	9.20 %	10.26 %	10.7 %	9.85 %	12.30 %
China	100 %	100 %	100 %	100 %	100 %	100 %

Table 13: Percentage of the corresponding national sectors. Source: LISHENG, Dong, China's Drive to Revitalize the Northeast, Open Edition Journals, 2005

The percentage of agriculture in the region's total GDP decreased from 17.2% in 1998 to 12.8% in 2002, which is a drop of 1.5 times higher compared to the national average, which has dropped from 17.96% to 15.38% in the same period.

In 1993 in the Northeast, growing one hectare of maize yielded on average between 5,000 and 6,000 yuan. By 2001, the sum drastically dropped to 100 or 200 yuan. Consequently, the region's farmers, whose net income in the early 1990s was higher compared to the national average, ended up suffering a deterioration in the standard of living. Indeed, by 2000, the net income of Jilin and Heilongjiang provinces' farmers was below the national average.[293]

In conclusion, after opening up, gradually, the status of the Northeast industrial base in the national industrial system has dropped sharply, and also the agricultural sector was facing some problems. It was like the North-eastern ship was slowly sinking further into hopelessness and couldn't adapt to the rapid changes occurring in the market.[294] The share of the region in the national total industrial output value has dropped from 15.46% in 1985 to 7.56% in 2001. Specifically, the energy industry's share in the country fell by 15%, and the basic raw material industry fell by 10%. Furthermore, the proportion of light industry has further decreased: from 1985 to 2010, the proportion of light industry dropped by 8.61% and 13.65%, respectively.[295] Northeast's share in national Gross Value of Industrial Output (GVIO) declined from 16.5% in 1978 to 9.3% in 2003. In

[293] Ibidem, p.4-6

[294] TIAN Yi Peng and KANG Wen Jia 田毅鹏，康雯嘉, "Zuowei fazhan mingti de dongbei xianxiang——dongbei xianxiang yanjiu sanshi nian" 作为发展命题的"东北现象"——"东北现象"研究三十年 (The "Northeast Phenomenon" as a Development Proposition: Thirty Years of Study of the "Northeast Phenomenon"), Open Times, 2019, p.57

[295] CHEN Lin Lin 陈琳琳, "Dongbei diqu gongye…, cit., p.3-6

short, the region had become the exhibit of all the problems embedded in the state-run economy. In order to prevent the northeast from distressing the national economy as a whole, a new scheme was necessary.[296]

2. The revitalization process of Northeast China

As mentioned above, after 1978 China's growth was concentrated in eastern coastal areas. Besides, the establishment of special economic zones, the introduction of a wide range of other preferential policies and the mission defined as the 'economic development strategy for coastal areas' proposed at the end of 1987, led to a sharp increase in regional disparities.

In response, the 9th Five-Year Plan (1996-2000) indicated that economic and social development should "*adhere to the coordinated economic development among regions, and gradually reduce the regional development disparities*". Thus, such plan encouraged to put forward a series of policies to accelerate the development of underdeveloped regions. Nevertheless, disparities kept on increasing and led to a reinforcement of regional policies.[297] Indeed, in 1999 the Chinese government put in place the "Western Development Strategy", and in the 10th and 11th FYPs included some

Figure 6: China's macroeconomic regions and the associated regional development strategies. Source: WANG, Mark and Zhiming Chen and Pingyu Zhang and Lianjun Tong and Yanji Ma, Old Industrial Cities Seeking New Road of Industrialization: Models of Revitalizing Northeast China, Singapore, World Scientific Publishing, 2014

[296] CHUNG, Jae Ho and Hongyi Lai and Jang-Hwan Joo, "Assessing the "Revive the Northeast" (zhenxing dongbei) Programme: Origins, Policies and Implementation", *The China Quarterly*, No. 197, 2009, p.110

[297] Michael DUNFORD and Thomas Bonschab, *Chinese Regional Development and Policy*, in "Regions Magazine", 20 March 2013, p.10-13

regional development proposals in order to reach an overall harmonious national development. Afterwards, in 2003, it was the Northeast's turn.

As a matter of fact, in 2002, the industry GDP of the three north-eastern provinces was only 60% as that of Guangdong Province of the Southeast region. Moreover, as mentioned earlier, widespread discontent caused by a high unemployment rate was threatening social stability in the Northeast at the beginning of the new millennium. Given that all three provinces had serious problems with petitioning, labor disputes and collective protests, Beijing thought that drastic measures were needed to remedy the worsening situation. It was in this state of affairs that Hu Jintao[298] toured Liaoning in June 2002 and also Wen Jiabao[299] visited the region for three times in 2003, eventually giving birth to the program of "*revive the northeast*."

Thus, the executive power decided to give higher priority to the revitalization of the Northeast on the agenda, and in November 2002, the report of the 16th Party Congress announced for the first time that "*revive the northeast*" was going to become a national priority. The decision was later confirmed by the Government's Work Report for the First Session of the 10th National People's Congress in March 2003.[300]

Generally speaking, it definitely seemed more efficient to make a transition based on the Northeast region's existing strengths. The idea was to implement systematic and mechanical innovations, and to change the old management structures coming from the traditional planned economy in order to make the new market economy stand out. Thus, the government proposed a strategy of revitalization that implied utilizing the Northeast's competitive advantages and providing equalized public services for all residents. Furthermore, a new regional cooperative development structure was formed with clearly defined key functions and channels for the cooperation of the Eastern, Western and Central regions.

[298] Hu Jintao 胡锦涛 (1942-) has been the paramount leader of China from 2004 to 2012. Moreover, from 2002 to 2012 he was the General Secretary of the Communist Party of China.

[299] Wen Jiabao 温家宝 (1942-) held membership in the Politburo Standing Committee of the Communist Party of China, the country's de facto top power organ (he ranked third out of nine members), from 2002 to 2012. Moreover, he served as the 6th Premier of the State Council of the PRC and China's head of government for a decade between 2003 and 2013.

[300] CHUNG, *Assessing the "Revive the Northeast" …*, cit., p.112-113

Finally, on 5 October 2003, the State Council and Central Government published the "*Suggestions for revitalization of the Northeast old industrial base* 关于实施东北地区等老工业基地振兴战略的若干意见 ", representing the start of the implementation of the revitalization strategies. The document mentioned 10 aspects of detailed strategies of revitalization:

1) System and mechanical innovation: erase the present system barriers that interfere with the economic development and the integrated reform; promote innovation; deepen the reform of SOEs; create a better environment for the flourishing of non-public owned enterprises;
2) Promote updates for the industry structure: upgrade secondary industry; boost regional industries' development; take advantage of competitive advantages;
3) Develop a more modern agriculture: enhance the agriculture sector; give importance to the ecological environmental protection;
4) Develop actively the tertiary sector: reduce enterprises social responsibility and promote the development of the service industry; develop the distribution of primary products; develop tourism;
5) Promote the transformation of resource-based cities: enhance the usage of the resources in cities that still possess rich quantities of resources; find alternative ways to develop continuous industry in cities with draining or already drained resource;
6) Enhance infrastructure construction: invest in public infrastructure; improve transportation, water and power infrastructure; implement environmental protection projects focusing on residential living or treatment of pollution;
7) Expand further the opening up of the economy both at domestic and international level: actively seek to attract foreign investments into the region; optimize the investment environment; enhance the region's trading cooperation with the surrounding countries; promote the breakthrough of regional barriers and market segmentation;
8) Accelerate the development of scientific and technology educational sector: develop cultural sector and cultural industry; import advanced foreign technology; enhance

market competitiveness of products; create key technologies; build a motivating environment;

9) Define complete policy measurements: government departments should create a suitable environment for the reform of SOEs; enterprises should be released from performing social functions; promote fiscal and tax policies in order to support the old industrial base; simplify the granting process for transformation projects;
10) Enforce organizational leadership: improve the coordination among all levels of government in order to improve the implementation of policies; promote the opening up of markets, broader reform and self-motivated development;[301]

These "suggestions" focused on key and specific problems of the region. The ultimate goal was to reach total revitalization of the economy and society of the Northeast. Essentially, the tasks included were the maintenance of rapid and healthy economic growth, the achievement of large improvements in economic structural adjustment, the promotion of sustainable development, the increase of the social development level, and ultimately the making of significant progress in implementing the opening up and reform strategy.[302] The forecasted duration of the program was roughly 15-20 years, thus until 2020 or 2025.[303]

On a more practical level, after the publishing of revitalizing strategy, a series of favorable policies were enacted by the Chinese central government. These aimed to give more benefits to Northeast China.

Looking at the agricultural sector first, in 2003 the Northeast accounted for 15% and 10% of China's grain and meat production respectively. In order to better exploit the region's potential, in 2004 the government promoted a tax-free policy in Jilin and Heilongjiang provinces, exactly two years before such policy was introduced to the rest of the nation. Besides, the central government expanded compensatory coverage and scale of grain production.

In the agriculture sector, all three north-eastern provinces had the same target: improve peasants' income for 2010. Liaoning set its goal at 5,500 yuan, Heilongjiang at 4,130 yuan and Jilin

[301] WANG, *Old Industrial Cities…*, cit., p.39-41
[302] WANG, *Old Industrial Cities…*, cit., p.41-42
[303] CHUNG, *Assessing the "Revive the Northeast" …*, cit., p.115

at 4,500 yuan. Furthermore, Heilongjiang province announced also some other targets: to increase grain production to 36 million tons, to expand the planting area for pollution-free products to 20,000 km² and to raise the share of animal husbandry in gross agricultural output value to 60%. In 2004 and 2005, the three north-eastern provinces of obtained 24 billion yuan from the central finance through the transfer payment of rural tax-for-fees reform, seed purchasing price difference and direct subsidies on grain.[304]

As for taxes, from July 2004, the Northeast was permitted and encouraged to implement the value-added tax reform. In addition, by cutting down depreciable life for fixed assets, and by cutting down resources tax (about 30% tax rate) in the depleting mines and oil fields, the relevant sectors and enterprises collected considerable profit. Moreover, Beijing announced that it would exempt some selected enterprises from paying consumption-related value added taxes. Thanks to such preferential treatment, such enterprises were able to save up to 10 billion yuan per year.[305]

Regarding FDI, the Northeast desperately needed them. Indeed, before the revitalization plan of 2003, the region's foreign trade as share of gross product amounted only 20.4%, while the national average was of 43.6%. In 2002, the amount of FDI committed in the northeast was 3.2 billion US$, only 7% of the national total amount. Given that the region's share in GDP was 11%, its level of "opening" towards abroad was quite low. Beijing made efforts in order to expand the Northeast's contacts with the outside. For reference, Wen Jiabao briefed leaders from ASEAN[306] nations, Japan and Korea on the "*revive the northeast*" plan in September 2003, and moreover, the central government hosted an international conference in Dalian in September 2004. Furthermore, the three north-eastern provinces set FDI-related targets for themselves in order to enhance the levels of foreign economic linkages of the region. Liaoning province wanted to increase its total foreign trade volume to 17.6 billion US$ by 2005 and to 28 billion US$ by 2010, and the rate of trade growth to an annual average of 10.5%. The province wanted also to expand its total FDI to 4 billion US$ by 2005 and 7.2 billion US$ by 2010, and the rate of its growth to an annual average of 12%.

[304] Ibidem, p.115-119
[305] Ibidem, p.118
[306] The Association of Southeast Asian Nations (ASEAN) is a regional intergovernmental organization that includes ten countries of Southeast Asia. The association promotes cooperation among its members and facilitates political, security, military, economic, educational, and sociocultural integration among its members and other countries in Asia.

Heilongjiang craved to increase its foreign trade volume to 15 billion US$ by 2010 and the share of trade in gross domestic product (GDP) to 15%. As for the expansion of total FDI, the target was of 2.5 billion US$ by 2010, and the rate of its growth to an annual average of 11.8%. Between 2006 and 2010, Jilin planned to expand its FDI inflow by 20% a year, and also to attract a total of 10 billion US$, and to increase its foreign trade by 11% a year to 11 billion US$ by 2010.[307]

With regard to the reform of SOEs, by the end of 2003, in the Northeast there were about 13,000 SOEs, 900 of which were directly controlled by the central government. Between 2004 and 2005, the Northeast region started the battle for the reform of SOEs since the main goal was to restructure the ailing state sector. Mainly, these were the general guidelines provided: put the ownership structure reform as core; separating welfare functions from enterprise management; rationalize the structure of state-owned industrial sectors (such as downsizing dominant sectors like mining and steel); expanding the share of the non-state economy; try to gain strategic investors; achieve diversified enterprise ownership.[308] Besides, the central government designated six priority sectors (equipment manufacturing, the petrochemical industry, shipbuilding, automobile manufacturing, agricultural processing and high-tech industries, notably pharmaceuticals) for the north-eastern provinces to concentrate on with pledges of preferential support.[309]

The government stopped leading directly the enterprises after the reform as the management system of SOEs was separated from it and a double management system was created. SOEs structure was adjusted and the majority of SOEs completed a share-based ownership reform. As a matter of fact, except only for large coal enterprises, it was recommended to remove the limitation on the percentage of shares available in SOEs, regardless of their sizes and sector.

Moreover, the government supported the strategy of releasement of enterprises from performing social responsibilities and began to take over social public servicing organizations and administrative organizations. Large and medium SOEs had made substantial actions on separating their social function. Already between 2004 and 2005, about 420 bodies such as primary and middle schools, public security organs and people's courts were transferred to local governments.

[307] Ibidem, p.119-120
[308] ZHANG Pingyu, *Revitalizing Old Industrial Base of Northeast China: Process, Policy and Challenge*, Changchun, Chinese Academy of Sciences, 2008, p.114
[309] CHUNG, *Assessing the "Revive the Northeast" …*, cit., p.118

Afterwards, the government gradually began to manage public welfare organizations like public transport, hospitals and waste management organizations. As a result, in the Northeast the production efficiency got significantly better with a rise in the profitability of state-owned assets. However, is better to note that it still was lower than the national average.[310]

Furthermore, pilot projects dealing with collective enterprises' issues were carried out extensively.

Besides, in the end of 2006, the State Council of China issued the policy to cancel the enterprise owing taxes of 10 billion yuan before 1997. It is better to point out that such a regional policy is rare to be found in China's tax history.

In addition to the above descried policies enacted by the Chinese central government, also provincial governments and some municipalities had issued preferential policies to support the North-eastern region, such as the planning outline for the revitalization of old industrial bases in the northeast region, regional opening up, promoting work in slum clearance, land and mineral resources development.[311] The main focus of these policy documents was the planning of the entire region and the construction of the industrial development environment, which could be classified as macro-industrial policies. The purpose of establishing these policy documents was to re-cultivate competitive advantages for industries in the Northeast region.[312]

For example, the three provinces have executed pilot projects of urban social security system including pension insurance, minimum-standard living insurance and unemployment insurance. In 2004 and 2005, Jilin and Heilongjiang provinces managed to get from central finance an annual quota of 1.82 billion yuan for personal pension insurance, and a total of 5.5 billion yuan for compensating the previous laid-off workers of SOEs.[313]

As for the industrial policy, in this phase it was paid more attention to the development of advantageous industries or leading industries. For example, the city Changchun focused on the

[310] WANG, *Old Industrial Cities…*, cit., p.53-57
[311] ZHANG Pingyu, *Revitalizing Old Industrial…*, cit., p.114
[312] Sun Jiuwen 孙久文, Su Xijian 苏玺鉴 and Yan Haosheng 闫昊生, "Xin shídài dongbei zhènxing de chanyè zhèngcè yánjiu" 新时代东北振兴的产业政策研究 (Research on the Industrial Policy of Northeast Revitalization in the New Era), Beijing, Renmin University of China, 2019, p.21
[313] ZHANG Pingyu, *Revitalizing Old Industrial…*, cit., p.114

development of automobiles and parts, rail cars, agricultural machinery, corn deep processing, modern Chinese medicine, leather processing, software development, etc.[314] Besides, Liaoning was the only province which stipulated a target for enhancing the share of the "non-state sector" (民营经济) to about 60% of the province's economy by 2010. Moreover, Liaoning province set 700 billion yuan as target of added value for non-state sectors and non-collective ones.

In conclusion, the strategies implemented in China's Northeast region in 2003 covered a broad range of aspects: the regional system, industrial structure and development, external opening up, city transformation, infrastructure constructions, culture, scientific education, and health and hygiene. Compared to the strategies used in other regions, the preferential policies of the Chinese government for the Northeast region provided a supportive and adjusting function. In fact, the Northeast region has seen an overall revitalization. Among the manifest signs of such achievement there was the eased of resource city's structural conflicts thanks to the overall development of continuous industries. Moreover, SOEs were able to achieve a good level of reform through liquidating, merging and asset and debt reorganizing. In addition, their social responsibilities were reduced a lot. Also, North-eastern dominant industries (equipment manufacturing, automobile, petrochemical, green food processing, and pharmaceutical industries) were reformed and a mixed ownership economy was established and after the initial plan of 2003.[315]

3. Some macro and local projects for the revitalization of the North-eastern region

3.1 Some projects for the macro layout of the region

The Northeast achieved a balance in its development by adjusting the region's macro layout. Especially, some measurements were particularly beneficial: the establishment of a coastal economic belt in Liaoning Province, the Chang-Ji-Tu national pivot for reform and opening up and the

[314] Sun Jiuwen 孙久文, "Xin shídài dongbei …, cit., p.21
[315] WANG, *Old Industrial Cities…*, cit., p.62-70

"Shenyang economic zone". Such measurements helped to build a new regional economic development zone.[316]

As for the coastal Liaoning Economic belt, between the end of 1990s and the beginning of the new century, the Liaoning Province enacted a new economic strategy which implied using coastal cities as "tap" cities to drive regional economic development. The Party Secretary of the Liaoning Provincial Committee of the CPC proposed the strategic development idea of "*five points and one line*" in 2005. In the following year five key development areas in coastal Liaoning Province were identified: the Changxing Island Port Industrial Zone in Dalian, Jinzhouwan Coastal Economic Zone in Western Liaoning, Yingkou Coastal Industrial Base, Dandong Industrial Zone, and the Huayuankou Industrial Zone in Dalian. Altogether such zones cover an area of about 583 km². In the course of 2006, this strategy was expanded to all coastal cities of Liaoning Province including Dangdong, Panjin, Yingkou, Jinzhou, Hulu Island and Dalian, creating the so-called Coastal Economic Belt of Liaoning Province. Such resulting zone was really important for the development of the region since it was a significant platform for economic and technological development. Indeed, it soon became the face of Northeast Asia. Moreover, accelerating the development of Liaoning's coastal zone was beneficial for completing China's coastal economy and for forming new economic growth zones. It was destined to strengthen the cooperation with countries in the Northeast Asia, especially Japan and Korea, and to accelerate the process of North-eastern Asia's economic integration.

Figure 7: Coastal Economic Belt of Liaoning Province. Source: WANG, Mark and Zhiming Chen and Pingyu Zhang and Lianjun Tong and Yanji Ma, Old Industrial Cities Seeking New Road of Industrialization: Models of Revitalizing Northeast China, Singapore, World Scientific Publishing, 2014

[316] Ibidem

Figure 8: Shenyang Economic Zone. Source: WANG, Mark and Zhiming Chen and Pingyu Zhang and Lianjun Tong and Yanji Ma, Old Industrial Cities Seeking New Road of Industrialization: Models of Revitalizing Northeast China, Singapore, World Scientific Publishing, 2014

Instead, regarding Chang-Ji-Tu national reform, in 2009, the State Council formally approved the "*cooperative development framework for Tumen River region*". Such policy signaled the construction of the Chang-Ji-Tu development and the opening up of the pivot zone. Such pivot zone covered the core region around the Tumen River, including Changchun, the capital of Jilin Province, part of Jilin and also Yanbian. In total it was an area of 30,000 km². The first advantage of the area was the strategic location, the second was the well-built infrastructure, the third was the extensive economic and trading cooperation and the fourth was the strong industrial and scientific support available. In general, it was important since it could promote revitalization of the old industrial base. The strategy effectively solved the development problems of the Tumen River region. Furthermore, since Chang-Ji-Tu is border region and is close to the sea, it was able to set an example for the opening up of other border areas in China.[317]

Last but not least, there was the establishment of the "Shenyang Economic and Technological Development Zone" (SETDZ). The zone was actually founded in 1988, thus about 15 years before the revitalization program took form, and was provided essentially with the same preferential policies, incentives, and flexible measures as all the other Chinese special economic zones. Originally, the area was only 86 km². Later in 1993, the SETDZ was approved by the State Council as a national-level development zone.[318] The aim designed for the Shenyang economic zone was to make it into an advanced equipment manufacturing industrial base with international competitiveness. In addition,

[317] Ibidem, p. 65-70
[318] *Shenyang Economic Development Zones*, in "China Daily", 2016, Copyrights © 2020 China Daily All Rights Reserved, link, 10 September 2020

in the area it was developed a pilot for driving modern agricultural development through modern industrialization. Furthermore, the final goal was to make the city a demonstration area and an example for other resource-based cities who were transforming themselves and shifting to more diversified industrial development. Generally speaking, the establishment of such economic zone in Shenyang was beneficial for promoting economic cooperation of China with the Northeast region overall.

3.2 Liaoning Province's local projects

The old industrial zone in Northeast China consists of many old industrial cities which vary in size and function. Thus, the rise and fall of the old industrial zone is basically the rise and fall of such old industrial cities. Indeed, as already mentioned, during the Mao era, the economy and urban planning were largely copied from the former Soviet Union, and therefore, before the reform in the late 1970s, many cities in China were characterized with industrial districts equipped with a vast number of SOEs' clusters. These districts were self-sufficient and mainly had just one function like for example manufacturing or mining. Nonetheless, with the rise of the market economy, these cities gradually became problem areas depicting slow growth rates and high unemployment rates.[319] In the following sections four of the most important cities in the Northeast, Shenyang, Dalian, Daqing and Jilin, will be analyzed, as they propose different types of development and revitalization strategies.

3.2.1 Shenyang: Tiexi District and the creation of the "Tiexi reform model"

As described in the first chapter, at the turn of 20th century Shenyang (previously called Mukden) was a point of contention between Japan and Russia. However, in the end Japan emerged as the winner, and it was during its colonial experience in Manchuria that the Tiexi District was established (1938). After the adjustment period of the 1960s, Tiexi's products manufacturing capacity and technical level were representing the highest achievement in China.

[319] WANG, *Old Industrial Cities…*, cit., p.71

Until the opening up and economic reform, Tiexi district kept on playing a leading role in the China's industry because of its solid industrial base and the advantage of scale. Before Deng Xiaoping introduced the open-door policy 1978, Tiexi was substantially China's most important industrial district. Indeed, a famous phrase in China at that time was "*Liaoning Province leads China's industry, Shenyang City leads Liaoning's industry and Tiexi district leads Shenyang's industry*".

At the beginning of the opening-up and economic reform in 1978, China had three key industrial bases which were Shanghai, the Beijing–Tianjin area and Liaoning Province. During Mao's era, the Tiexi district equipment manufacturing industry's rank and technical level was irreplaceable and its contribution to overall China's industrialization was significant. However, while Shanghai and the Beijing-Tianjin area kept on growing after 1978, the Tiexi district experienced a decline in the industry sector. Actually, it shifted from contributing about half of Shenyang city's industrial output to becoming one of the most problematic zones of China. Indeed, after the economic reform many enterprises in Tiexi bankrupt and workers were laid off, just like many other parts of the Northeast. By the end of the 1990s, 90% of enterprises in the famous district either had totally or partially stopped their operations, and about 232 medium to large SOEs didn't have the money to pay salaries. Consequently, social stability became an issue. In 2000, laid-off workers demonstrated about 127 times by closing the roads in order to be listened by the government.[320]

Obviously, a set of factors caused the deterioration of Shenyang's Tiexi District. Most of them have been mentioned previously. First, after the opening up, investments in heavy industry coming from the central government were reduced, and thus the domination of the state sector in the zone made it hard for Tiexi to compete with the areas such as the Pearl River region and the Lower Yangzi delta. A related problem was that, because of SOEs' social responsibility system, Tiexi's communities were over-dependent on the government and on enterprises. In general, from enterprises' prospective, the result of such problems was that enterprises strongly lacked resources for undertaking reforms and for their development. On the other hand, just like mentioned earlier, from workers' prospective, the result was high unemployment rate and a worsening of living conditions.

[320] In order to better understand not only the situation of Tiexi District at the end of the 20th century, but also of the Northeast in general, the famous documentary "*Tiexi Qu: West of the Tracks*" directed by Wang Bing 王兵 shows in details the conditions of the District and of the people working and living there in 1999 and 2000.

For reference, from 1990 to 2000, the number of engineering and technical staff of Tiexi district decreased by about 25.7%. Second, Tiexi district' economic recession was also led by structural problems: just like most north-eastern SOEs, enterprises in Tiexi were focused on heavy industry. Thus, when after 1978 there was the shift towards light industry, Tiexi was unable to produce light industrial goods and therefore it was also unable to satisfy the demand in the domestic market. Another structural problem was the outdated equipment used in Tiexi. Over there, most of the equipment in the mechanical, chemical engineering, electrical and automobiles industries were made in the 1950s and 1960s. Only 27% was made in the 1970s and 21% in the 1980s. Third, the change in both the international and domestic environments strongly affected the deterioration of the district. Finally, last but not least, the dual-track price system[321] made the Tiexi district sell raw material and primary industry goods at heavily reduced price or even for no profit at all.[322]

It is better to point out that, actually, the Tiexi district began its revitalization process before the enactment of the Northeast's revitalization policy in 2003. Indeed, two previous reform policies were performed between 1986 and 2001.

In 1986, the State Council passed the so-called "plan for total reform of Tiexi Industrial zone", which was truly the only pilot project of restructuring present in the 7th Five-Year Plan (1986-1990). The plan's main aim was to upgrade the level of technology of Tiexi's enterprises. As a result, the district was able to get financial support not only from the central government but also from foreign investment. In 1999, Tiexi reached an allocation of 2,300 fixed asset investment projects and a total funding of more than 18 billion yuan. Specifically, 1,712 projects were designed for technology upgrades with associated costs of 13 billion yuan. After a decade, the achievements resulted from such project were: first, some enterprises managed to improve their levels of technology, and second, the urban structure was improved, mainly in the shanty town areas. Generally, the overall project was successful to some extent, but SOEs' management problems and institutional barriers remained unsolved.

Afterwards, in 1998 the Tiexi district was asked to participate in China's SOE reform program, which was designed to cease SOEs' losses within three years (2001). Such reform implied that SOEs

[321] The dual-price system was introduced in the late 1980s.
[322] WANG, *Old Industrial Cities…*, cit., p.77-79

could merge, and further they were permitted to convert debt to shares and to discount interest for technical renovation. This policy mainly benefited medium to large enterprises in Tiexi. Specifically, the debt to share conversion let reduce the leverage ratio so that the interest cost and credit risk were reduced. For some SOEs with a long history of negative profit, the policy was to file for bankruptcy and afterwards to encourage acquisition. This way such enterprises could free unused assets and to compensate employees. Such measurements helped solving some of the issues related to laid-off workers, by reducing employer numbers in order to improve efficiency and reforming the social security system.

The two phases of reform explained above were supported by both the central government and the Liaoning provincial government, which both provided financial support and macro policies to the Tiexi district. The institutional changes were the most important achievement obtained by the two restructuring stages: SOEs and enterprises were finally permitted to make decisions according to market needs and not only follow the state's instructions. However, Tiexi district still wasn't able to take off after such reforms, as the achievements obtained were too limited.[323]

Subsequently, in 2003 two key strategies were implemented. First, obviously, there was the revitalization strategy of the Northeast region promoted by the central government. Second, the Shenyang municipal government decided to change its approach and to reform the whole industrial zone: the strategy was both to merge the Tiexi district with the Shenyang Economic and Technological Development Zone (SETDZ) and also to relocate enterprises from the east to the west.

[323] WANG, *Old Industrial Cities…*, cit., p.79-82

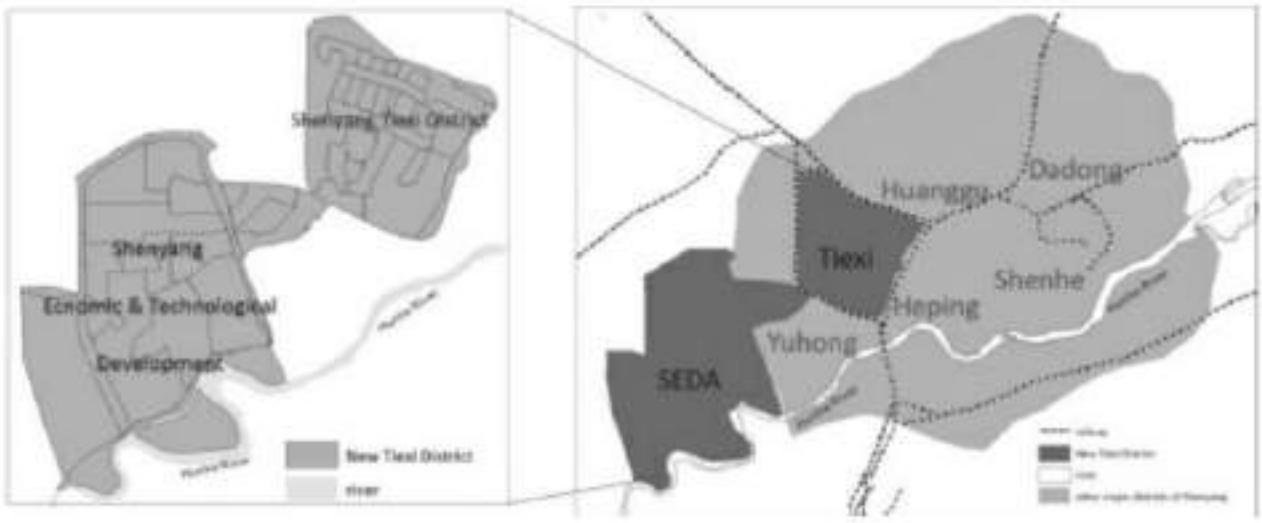

Figure 9: New Tiexi District Function Zones in 2004. Source: WANG, Mark and Zhiming Chen and Pingyu Zhang and Lianjun Tong and Yanji Ma, Old Industrial Cities Seeking New Road of Industrialization: Models of Revitalizing Northeast China, Singapore, World Scientific Publishing, 2014

Thus, in June 2002 the Tiexi district and SETDZ were combined to create the New Tiexi district. This wasn't only a physical expansion, the new Tiexi district was able to benefit from the polices permitted since 1993 to the SETDZ. Thus, after the merge, the zone as a whole was benefiting the same policy advantage as the 14 coastal cities.

As for the relocation of enterprises, it was not simply a physical movement. The original Tiexi district was located next to the CBD [324] area of Shenyang. This fact was a significant location advantage which gave the area a high value in terms of commercial development and real estate. The relocating enterprises were thus given funding from the land conversion. This way they created an additional financial resource through the difference in land value. For reference, the first enterprise applying the relocation program was the Shenyang Agricultural Machinery and Automobile Corporation, which was famous as the birthplace of tractor manufacturing in China. The enterprise was able to sell its 240,000 m² land to the New Tiexi district government for 240 million yuan (1,000 yuan/m²). It then used those money to pay its debts, to provide standard pay packages, and to build a new factory with updated equipment. Like that, the New Tiexi government was able to help enterprises by converting the land resources into capital. By 2010, more than 300 enterprises had relocated to the development area. Approximately, the total cost of relocation of such enterprises was estimated about 30 billion yuan.[325]

[324] CBD stands for "Central Business District"
[325] WANG, *Old Industrial Cities…*, cit., p.83-84

Another important measure was the overall renovation of Tiexi's economic structure: strengthen secondary industry and trigger tertiary industry. The secondary industry had to be developed in SETDZ's industry group. On the other hand, the tertiary industry was going to be start up in the land previously occupied by Tiexi's old manufacturing enterprises. The plan was to make it a modern district characterized with residential housing and an area with tertiary industries such as logistics, finance and IT. Initially, between 2004 and 2007, the share of the secondary industries output value increased and surpassed the tertiary ones' share. However, from 2008 the commercial service industry of the district began to grow quickly. In the following year the secondary industry's weight dropped to 28.8%, while the tertiary industry became the driving force behind the economic development of Tiexi. Indeed, the GDP generated by Tiexi's manufacturing industries dropped from 13.7% in 2005 to 1.07% in 2009. By 2010, in the new Tiexi area there were about 430 equipment-manufacturing enterprises. Moreover, by then the district had developed a competitive advantage in transport equipment manufacturing, professional equipment manufacturing and general equipment manufacturing, and also generally in the mechanical, electrical and equipment manufacturing industries.

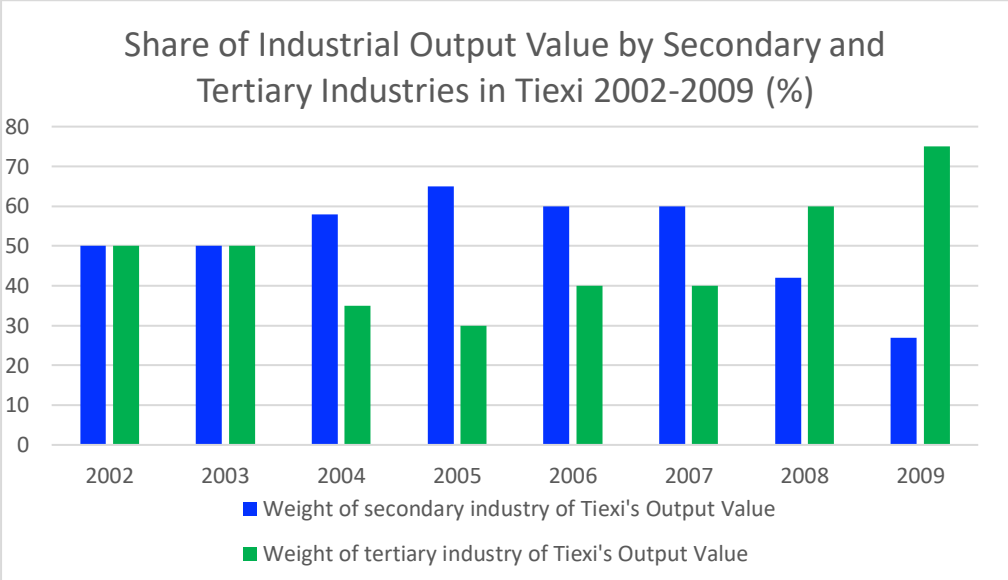

Table 14: Tiexi's secondary and tertiary share of industrial output value in the period 2002-2009. Source: WANG, Mark and Zhiming Chen and Pingyu Zhang and Lianjun Tong and Yanji Ma, Old Industrial Cities Seeking New Road of Industrialization: Models of Revitalizing Northeast China, Singapore, World Scientific Publishing, 2014

The upgrade of the secondary industry and the development of the tertiary one produced a large number of employment opportunities, and thus the unemployment problem graving the area

in the 1990s was officially solved. Indeed, between 2005 and 2009 an average of 10,000 persons per year have moved into the New Tiexi district.

The implementation of the reforms described above made the Tiexi district gradually shift from an old manufacturing zone into a modern service industry with a strong manufacturing industry zone. Thus, the old Tiexi district had officially ended its almost 100-year-long industry history and was successfully converted into a new one characterized by useful commercial services. In 2011 there were only 3 large industrial enterprises left to represent the legacy of old Tiexi.

The reforms in Tiexi taught China the importance of merging, which together with the conversion of the land resource was able to solve the problems of finding money and of management of the high unemployment rate. The so-called "Tiexi Model" left behind the old reform practice which only focused on enterprises in exchange for a profound and systematic transition strategy for the entire city. The deterioration syndrome which was affecting the Tiexi district is definitely not uncommon in China, especially in the Northeast. Nevertheless, unfortunately the reforms enacted in this district can't be copied directly in other Chinese cities. As a matter of fact, Tiexi had also some unique features, like the location of the district closed to Shenyang's CBD, which really helped and strongly supported the reforms. Sadly, such peculiarities cannot be duplicated in other old industrial bases.[326]

3.2.2 Dalian's new development model

As already seen in the previous chapters, Dalian was destined to become a very important city in the Northeast. Dalian was known to be the water gateway to the outside world for China's Northeast. With the establishment of the RPC, the government wanted to make it even more exceptional. During the first FYP period (1953-1957), Dalian obtained an annual investment of 86.3 million yuan for its heavy industry sector. These heavy industry-oriented investments developed a solid foundation for Dalian's economic development. In 1978, Dalian's ratio of output value by

[326] WANG, *Old Industrial Cities…*, cit., p.89-92

primary, secondary and tertiary industries was respectively 16:66:18, while the ratio between light and heavy industry was 31.5:68.5. [327]

In 1984, this port city was listed as one of China's 14 coastal cities, and thus Dalian became a Special Economic Zone. Moreover, it was one of the few cities in China whose economic and urban plans were directly managed by the central government[328]. Besides, in 1985 Dalian was allowed to directly conduct foreign trade and cooperation. As a result, Dalian's GDP increased from 4.2 billion yuan in 1978 to 100 billion yuan in 2000 and to 2,000 billion yuan in 2005. In 2009, the city was listed within China's top 6 cities for comprehensive development. In short, it is clear that Dalian didn't really face the same difficulties of many other important cities of the Northeast. Indeed, it was part of the central government's agenda since the very start of the reform and opening up. As a result, Dalian's urban economic transformation model really differs from all the other cities' one in the Northeast.

The so-called "Dalian Model" has two main components. First, Dalian has founded various zones, i.e. industrial parks[329] and high technology zones, as nests for development of specific industries, just like other Chinese coastal cities did. Second, Dalian on one hand has strengthen its heavy industries, and on the other it also managed to achieve fast growth in the service sector and other new economic areas.

As mentioned above, the development of the industrial structure of Dalian began since the beginning of the opening up, officially in 1984. Since then, it was characterized by two trends. First, already by 1992 the services sector registered a steady increase while the secondary one was gradually declining. Second, from 1978 to 1990 the shares of the heavy industry slightly dropped.

During the 1980s, since Dalian evolved into a SEZ, it became a very attractive place for foreign investment. Besides, the city's industrial structure was altered over this period. Food and textile industries' development were accelerated, and the development of the electrical industry was

[327] Ibidem, p.93

[328] This system is called the "municipality with independent planning status" (计划单列市). According to it, the city's overall development is aligned to achieve the central government's plan.

[329] An "industrial park" is an area whose purpose is industrial development. By grouping various types of industrial activities within one designated area, firms can benefit from economies of scale in terms of construction, common facilities and land development.

strongly supported. By the year 1991, Dalian light industry grew annually by 19.8%. In the meanwhile, private and foreign-owned economy also increased in size rapidly.

However, in this period, the city's faced some problems too. The main problems for its sustainable industrial development were low productivity and institutional barriers, which were common problems in the Northeast. Before 1990, over 65% of Dalian's enterprises were SOEs, and therefore also Dalian suffered the problems related to the "Northeast Phenomenon", no matter the coastal preferential policies. Nevertheless, when the SOEs' reforms of the 1990s took place, their implementation in Dalian ended up being viewed as the most successful reform case. As a matter of facts, Dalian was able to successfully transform the ownership of SOEs with little social cost. This was thanks to the fact that surplus workers were promised new jobs that at the same time were being created through the development of new sectors. In any case, it is better to remember that Dalian had a strong competitive advantage compared to other north-eastern cities, as it was provided with the open coastal city status and also tourist resources. Its municipal government managed to develop the tourist sector in order to provide jobs, and thus the unemployment rate in Dalian remained the lowest of the region. Moreover, Dalian enjoyed very favorable conditions for the economic development. Indeed, it was a coastal city provided with excellent port facilities, and long-standing relationship with major ports of the world. Dalian port handled over 90% of the Northeast containers and over 70% of the sea cargo.[330]

After Deng Xiaoping's famous visit of South China in 1992, Dalian introduced a new idea called the "managing Dalian", which implied increasing in "management" strategies in order to upgrade the tertiary sector and producer services. The first step involved creating a business-friendly environment and a green city or garden city. Indeed, between 1993 and 2000, Dalian built over 230 gardens and about 20 km^2 lawns and public open spaces. Moreover, all the high polluting and high-energy consuming factories were relocated away from the city center, into purposely designed industrial park or zone. Furthermore, these factories were imposed minimum environmental standards such as emission ones. Besides, similarly to the Tiexi district, Dalian also converted the land previously occupied by the factories in the city center into land used for commerce and

[330] WANG, *Old Industrial Cities…*, cit., p.94-95

residential purposes. The money coming from the sale of the land (3.1 billion yuan for the factories and 1.7-billion-yuan profit for the municipal government by the year 2001) were then used for social welfare programs such as job creating projects and providing help for low-income families.

As the data above show, unlike other coastal cities, heavy industry was the key economic sector in Dalian. Indeed, it was one of China's industrial bases, provided with a complete set of industry sectors and a sturdy industrial chain. During Mao's era, the number of industry enterprises in the city increased from 183 to 1,390. As for the industry output value, it increased from 1.16 billion yuan in 1953 to 6.36 billion yuan in 1978. The main economic areas in which Dalian excelled were the heavy machinery manufacturing, electrical machinery manufacturing, machine tool manufacturing, locomotives manufacturing, and ship building. What made Dalian unique compared to other cities in the region was that it kept on strengthening its heavy industrial sector. Indeed, in 2003 Dalian ranked first in Liaoning province according to the industry output value of enterprises above the designated scale (it reached 154.24 billion yuan). Many of Dalian enterprises had a competitive advantage at the national level, such as the Dalian Heavy Industry Co. and the Dalian Machine Tool Co. Regarding the Information Technology (IT) industry, it kept a good momentum in Dalian. Indeed, in 2010 Dalian produced 22.5% of Liaoning's total industrial value.[331]

With the reform and opening up, Dalian undertook many projects to further expand its advantages in developing an export-oriented economy: Economic and Technology Development Zone, New and High-technology Industry Park, New Software Industry Base, Free Trade Zone, and Tourism and Resort Zone. These areas and parks obviously attracted large amounts of foreign investment. Thanks to them the city was able to make use of foreign investment, import technology, promote reform of the economic system and upgrade industrial structure. By 2003, about 9,110 enterprises in Dalian had received foreign investments with a total of 2.11 billion US$. In the same year, the enterprises that obtained FDIs managed to achieve a gross profit of 3.8 billion yuan and a production value of 79.06 billion yuan, which was an increase of 15.5 and 11.9 times respectively from 1992.

[331] Ibidem, p.95-96

By the year 2003, Dalian's ratio of primary, secondary and tertiary industries was of 8.9:47.9:43.2, and the new tech and high-tech branches were rapidly developing and gradually becoming new economic development sectors for the city. Nevertheless, the pre-2003 economic development in Dalian was still path dependent. Indeed, the city's industrial growth was largely based on the expansion of the scale of production and was not enough dependent on innovation and R&D. With the introduction of the "*revitalize the Northeast*" program, Dalian proposed the "*one center, four bases*" strategy. "One center" referred to Dalian becoming the international transport hub for the Northeast, while "four bases" referred to four industries: shipbuilding, modern equipment manufacturing, petrochemical and electrical and software industry. The first three were already industries in which Dalian had a competitive advantage, but they were to be upgraded: they had to cut down pollution, to reduce material and energy consumption and to increase technology level.[332]

Between 2004 and 2010, Dalian spent about 64 billion yuan to upgrade its shipment capacity and port facilities, so that it could become an international shipping center in Northeast China. As a result, international trading rapidly increased, and the accumulated self-managed exportation and importation amount was 233.028 billion US$ between 2003 and 2010. By the year 2012, Dalian port was classified as the 19th largest container port in the world. Regarding the "four bases", they all registered a very rapid growth. In 2011, their share of Dalian's total value-added industrial output accounted for 58%. Dalian managed to establish the largest software industrial zone in China, which obviously attracted some of the world's software giants.[333]

Besides, since the revitalization program of 2003, the tertiary industry in Dalian grew at an annual rate of almost 14% and its added value reached 216.75 billion yuan in 2010.

The major problems of Dalian's economy were the high dependence on importuned energy and other natural resources, and the fact that Dalian's enterprises lack of self-innovation capabilities. As for the resource dependency, what the city should enforce energy savings and emission reductions, reduce energy consumption per production unit, develop a low-carbon economy, a green economy, a renewable energy economy and promote energy-saving technology and products. Regarding

[332] Ibidem, p.96-100
[333] WANG, *Old Industrial Cities…*, cit., p.101

Dalian's enterprises' deficit in self-innovation, the city should enhance its industries to be upstream of the global production chain, enhance its self-innovation capabilities, and increase the contribution of technology and science in order to increase economic growth. At the same time, Dalian's traditional key industries needed to be constantly reinforced and upgraded technology-wise.[334]

In conclusion, Dalian's story points out the importance of the special policies granted by the central government which strongly affected the transformation of its economy. Since the opening up, Dalian was the most privileged city in the Northeast by the new open-door policy.

3.3 Heilongjiang Province: Daqing and its model of industrial chain extension

Heilongjiang province's city of Daqing is located between Harbin and Qiqihar. The city didn't exist before its oilfield was set up in 1959 and named Daqing 大庆 which means "big celebration", as the government was celebrating oil drilling. The city and its oilfield became important not only because its oil reserves were gigantic and because of the fact that Daqing was, and still is, China's largest oil production base, but also because the city had satisfied China's need of oil after the restrictions on imports after 1959. In short, Daqing became a big city basically overnight, when thousands of workers and technicians were moved there to work at the great oilfield.[335]

Moreover, from 1964 and then during the whole period of the Cultural Revolution, Mao made Daqing the national model for industrialization with the call "In industry, learn from Daqing" (工业学大庆).

Figure 10: Struggle for the creation of ten Daqing oilfields 为创建十来个"大庆"油田而斗争 Source: Chineseposter.net

Daqing city was a typical product of Mao's planned economy, and thus its economy was dominantly owned by the State. Indeed, still by the mid-1990s, 90% of the city's GDP was produced by the state sector.

[334] Ibidem, p.103-106
[335] WANG, *Old Industrial Cities…*, cit., p.109

Statistics show that, since its establishment, Daqing oilfield has provided China 2 billion tons of oil, and over 27 years it maintained an annual production level of about 50 million tons. Thus, from the information mentioned so far it can be deduced that Daqing was more than a typical resource-based city, and that its growth model created lots of institutional and structural conflicts. As a result, the local government started since the 1990s to actively look for a possible pathway for industrial transition.

The annual oil production of about 50 million tons of oil registered during Mao's era was maintained until 2002. Nevertheless, since the beginning of the reform and opening up, due to the long period of extensive exploiting, proven oil reserves increased rate began to slowdown, and newly discovered proven reserves remained far less compared to the oil production amount for most years since the 1970s. Moreover, the oil field was entering a high water cut stage, which made drilling more difficult. As a result, the production method and technology needed to be changed: indeed, 94.4% of oil wells adopted mechanical drilling instead of the previously used flowing well by 1990. Between 1978 and 1989, statistics display that Daqing's electricity consumption rose, the cost of production per ton of oil increased from 18.94 yuan to 108.5 yuan, and the profit per ton dropped from 79.03 yuan to 10.04 yuan. This growth in the production cost was the driving force for Daqing to start an economic transition.[336]

Thanks to the fact that Daqing is the largest oil production base, and also thanks to its historical "celebrity-city" status, its industrial transition issue immediately attracted the central government's attention when the above described issues arose. These considerations alone are sufficient for Daqing not to become a ghost town, however, also other factors put the city into a favorable position for the adoption of an oil-production chain[337]. First of all, the rich oil resource of Daqing could provide long-term support for the oil gas industrial chain extension. For this reason, in 2004 it was set the goal to keep the oil production and drilling sustainable for another century. At the same time, also Daqing rich natural gas resource could provide the same support: it was an estimated total of 1,170 billion m^3 of gas at the beginning of the new century. Second, Daqing's solid

[336] Ibidem, p.110-111

[337] Indeed, an industrial chain extension is a common practice for oil-based cities like Daqing, since it is easily possible to vertically extend such industrial chain and then horizontally expand their operations.

petrochemical background, which has been continuously growing since the 1960s, was definitely an advantage for the oil/gas industrial chain extension. Third, Daqing's high-skilled petrochemical experts and workers and their excellent technical knowledge were going to be a big support for the industrial chain extension. Fourth, Daqing was the most important profit source for the Chinese state-owned oil giant PetroChina[338], and thus the sustainability of its production could impact both the energy security of China and the development of the enterprise as a whole. Therefore, Daqing's situation attracted high attention of both the central government and PetroChina. Fifth, Daqing had the possibility to use its oil resource as the backbone of urban economy in order to support the growth of newly established industries and the extended set of industrial chains.[339]

The transition in Daqing city officially began in the early 1990s. Its restructuring plans were supported by both the State Council and the provincial government. The marking stone of Daqing's economic transition occurred in 1992, when the State Council approved for the city the set-up of a national level High-Tech Industrial Zone in order to motivate the technological innovation of petrochemical and petroleum enterprises. Afterwards, the city called attention on the following areas to promote industrial chain extension: purposefully decrease Daqing's oil production and making use of overseas oil resource; extend oil/gas industrial chain; institutional reforms in ownership structure, enterprise organizational structure and management structure; enhance independent innovation ability and in turn improving industrial core competitiveness by promoting the integration of colleges and institutions with enterprises, establishing industry zones, guiding companies to increase R&D inputs, completing a public technology service system.

The industrial chain extension can have two forms: vertical extension, which adds new production process through technical innovation to existing industries, and horizontal extension, that implies the import of industries closely related to the existing industries or the import of whole new industries. Daqing performed both. On the vertical level, Daqing promoted its petrochemical industry in order to increase the value of its products. The city adjusted its production process by reducing petroleum production and at the same time increasing the production of basic organic

[338] PetroChina Company Limited 中国石油天然气股份有限公司 is a Chinese oil and gas company which was founded in 1999. Today the company is Asia's largest oil and gas producer.
[339] WANG, *Old Industrial Cities…*, cit., p.114-116

petrochemical products like three benzene and three alkene products in order to extend industrial chain for propylene, ethylene and arene. Meanwhile, Daqing also promoted the gas-chemical industry as a dominant part of the high technology industry zone. Instead, on the horizontal level, Daqing promoted the development of industries derived for oil processing and exploring (petrochemical and petroleum instruments manufacturing industry, oil logistics industry and oil engineering technique industry). Concurrently, the city developed agricultural products processing industry, agricultural material industry, pharmaceutical industry, and new material industry. Such non-oil related industries promoted the diversification of Daqing's economy, and they were forecasted to reduce the loss brought by the oil production cut in the future.

Daqing's transformation brought many achievements. First, with the industrial structure adjustment its economic growth sped up and big progresses were accomplished. The extension of the city's industrial chain has significantly increased the oil/gas industry's added value and led to a stable and rising GDP value. Second, it was optimized the ownership structure and there was a rapid local economic growth. Thanks to the industrial extension non-public-owned economy gradually became a new driving-force for Daqing's economy. Third, the reform sped up the pace of opening up and also improved the dynamic inter-regional cooperation. Indeed, in 2010 Daqing was listed in the top 50 Chinese cities that have investment potential and in 2011 in top 200 attractive cities worldwide. Besides, by 2014, Daqing managed to have over 100 companies performing international trading, and 38 of the top 500 corporations internationally have invested in the city. Fourth, Daqing's urban environment greatly improved. Its spatial framework based itself on the purpose of building a natural, ecological, modern and livable city. Thus, actions were taken regarding water changing, waste clearing and revetment and greening of ponds, etc. Moreover, the city's infrastructure became more comprehensive and its public service functions were significantly upgraded.

Nevertheless, four main challenges were slowing down Daqing's revitalization by the beginning of 2010s. First, unfortunately some forms of institutional barriers remained. The main cause was that oil was still a strategic and important resource for China, and thus the central government's grip was still very tight. Hence, Daqing remained the resource-based city with the highest proportion of state-owned economy in the Northeast. Second, Daqing was still characterized by a low level of industry. Although the non-oil sector was able to gain much growth, the oil economy

continued to be dominant, accounting in 2010 for about 52% of Daqing's GDP. Therefore, the extensive production and management methods needed to be further improved. Third, there was a lack of long-term stable national policy support. Fourth, newly established industries were facing tough competition. Therefore, an overall planning and coordination on a macro level by the central government and also PetroChina was needed.

In order to improve Daqing's economy, the city needs to continuously promote institutional reforms and enhance dynamic economic development. It should reform the management system of central-government-controlled enterprises, improve corporate governance of such enterprises, and promote diversity of investment bodies. This way it will integrate resources of petrochemical enterprises to enhance their market competitiveness. Besides, Daqing should promote the development of multiple ownership economy, and should also work on the fiscal relationship with the central government and the provincial one in order to increase the financial aid and tax benefits from these upper levels. In addition, the support for new enterprises and new sectors (industries like equipment manufacturing, modern agricultural, new material and high-end service) should be continuative. Moreover, the city should perfect the policy support system, further clearing the rights and responsibilities of the interest bodies.[340]

In conclusion, it can be said that the revitalization program for Daqing managed to reach a good level of success. The city relevant role on a national level given by its huge oil reserves definitely helped and gave Daqing a competitive advantage compared to other resource-cities in the Northeast. Obviously, at the end of the 2000s, there was still much work to be done in terms of development of this industrial base. However, the city's model was definitely going to play an important example role for other resource-based cities that are not yet at the draining stage.

3.4 Jilin's low carbon economy

Since the founding of the PRC, Jilin city has become an important heavy industry city. Indeed, when China planned the so-called '156 priority projects' supported by the Soviet Union in the first

[340] WANG, *Old Industrial Cities…*, cit., p.134-137

Five-Year Plan period (1953-1957), 8 of such projects were destined for Jilin. These projects concerned chemical fertilizer, carbide and fuel production, and moreover, even the completion of China's first commercial hydroelectric power, Fengman Dam[341], which was originally built by the Japanese in 1937. Besides, these plans provided to the city of Jilin the preliminary foundation for the development of its petrochemical industries. Over time, Jilin established six pillar industries: petrochemical, automobiles, agricultural products, pharmaceutical, production of electricity and gas, and pulp and paper. In 2009 its top three industries, i.e. petrochemical, automobiles and agricultural products processing, accounted for over 65% of the top six industries' output.[342]

In 2005 the Songhua River pollution incident in Jilin occurred, which affected the environmental safety and security of both China and Russia. Unfortunately, such incident affected millions of Chinese people's drinking water resources, and at the same time it triggered for potential China-Russia environmental conflict. Even before the incident, Jilin was responsible for the water pollution in the river, especially its petrochemical industrial park. This state of affairs was one of the main reasons why China recognized Jilin city as one of the top 10 "low carbon" pilot cities in January 2010 at the first Low Carbon China Forum.

In 2008 the World Wide Fund for Nature (WWF) promoted a new initiative: the low carbon city initiative. In 2009, at the United Nations Framework Convention on Climate Change 15th Conference of Parties which was held in Copenhagen (known as Cop 15), China stated that it would be fully committed to reduce carbon emissions per unit of GDP by about 40-45% by the year 2020 compared to 2005. Afterwards, as mentioned above, China selected 10 cities where to enact the project. These cities had to try to form a new economic environment where emission reductions and energy savings are parallel to the economic growth. On a practical level, the plan implied the development of low-carbon cities, low-carbon communities, low-carbon industries, low-carbon rural areas, expand low-carbon trading, reduce carbon emission and promote carbon recycling. Generally speaking, this project put many challenges to Chinese cities, especially as on one hand they were in

[341] The dam of Fengman on the Second Songhua River is distant about 20 km from Jilin City.
[342] WANG, *Old Industrial Cities…*, cit., p.167

the early economic stage of development, and on the other, many of them were reliant on heavy industries, which typically are high consumers of energy and have low energy efficiency.[343]

With the beginning of the new century, Jilin city experienced a growth thanks to the revitalization program of the Northeast, especially its secondary and tertiary sectors which saw a growth rate of 12.5% and 14.4% respectively. In 2010, Jilin's total DP reached 180 billion yuan and the GDP ratio by primary, secondary and tertiary industries was respectively 11:50:39. Even if since the 1990s the tertiary sector in Jilin was increasing its share in total industrial output value, indeed secondary industry was still producing over 40%. Within the secondary sector, 70% of the total industrial output value was produced by heavy industry and the rest 30% by light industry. Thus, Jilin was still the typical north-eastern heavy industrial base and still suffered the same common problems of other heavy industrial cities: high CO_2 emission, high-energy consumption and industrial pollution. Hence, the conversion into a low carbon city was going to be very challenging for Jilin.

The first challenge that Jilin had to overcome was the energy consumption intensity. However, fortunately Jilin had access to natural resources that could be used to support the low carbon city's target: indeed, Jilin was rich in hydro-energy resources. A total of eighteen rivers including Songhua River, Mudan River, Lalin River and their tributaries, are present in Jilin province. When combined all together they reach a potential of up to 23.5 million kW power resources. Fengman hydropower station by itself, with about 3 million kW of existing hydropower capacity, accounts for 53% of hydropower installed capacity in the Northeast's power grid. In Jilin hydroelectric power accounted for 1/3 of the total electricity generated by the city. Nevertheless, such a large amount of clean energy didn't really stop Jilin city from using non-renewable sources of energy: in 2010 its consumption of oil and coal accounted for 41% and 27% respectively, while hydro power still only accounted for 12%. The only way to adjust this situation was to change Jilin's energy consumption structure. As a result, the city actively committed to elaborate projects for the development of new energies: a 4 million kW nuclear power plant, a solar photovoltaic project and one related to wind power. Besides, Jilin managed to establish China's largest bio-ethanol

[343] Ibidem, p.163-166

production base. In short, the city invested heavily into developing low-carbon energy, including solar energy, wind energy, hydro energy, nuclear energy, biomass energy and natural gas water compound. All these developments aimed at reshaping Jilin's energy consumption structure.

The second challenging task for Jilin was to lower the carbon emission levels in the city and also in the province. The challenge was to meet the standard for low carbon cities set by the Chinese Academy of Social Sciences (CASS) in 2010. As per 2009 data, Jilin's overall industrial carbon emission per unit of added value was over 2.6 times of national average. Indeed, in Jilin province and Jilin city emission levels in all industrial sectors were higher than the national average.

In order to become a low carbon city, in Jilin city the low carbon program was incorporated into the five-year plan. No other city in China took this measure. For supporting the city's conversion, some special policies were embodied, and Jilin municipal government was given special privileges and a certain autonomy to reach "low-carbon" goals. In 2010, the city published its own low carbon development plan and established a new governing body, the Low-Carbon Leading Group, within its municipal government. From then on, Jilin city's main priority has been to become a low-carbon city and to convert its economy into low carbon economy.[344]

On a practical level, Jilin first of all set new standard for carbon emission and for energy efficiency of different enterprises. At the same time, enterprises were encouraged to move to the established industrial parks. The options for enterprises were Jilin Chemical Industrial Circular Economy Demonstration Zone (JCICEDZ), Kaidi Low Carbon Circular Economic Industrial Demonstration Zone (KLCCEIDZ) and Saudi Industrial Park. Once enterprises moved to the parks, they had to agree to invest in new technologies which were going to support the enterprises in achieving the parks' energy efficiency and carbon emissions criteria. The financial incentives and other special policies used to entice the enterprises to move into the parks were very attractive. By 2013, over 200 chemical enterprises relocated to JCICEDZ. 29 of them failed to reach the required environmental targets and were forced to close down. The zone's aim was to establish a low cost, non-polluting or less-polluting and high-efficient ecological industrial chain. In JCICEDZ several new industrial chains were created based on the byproducts of oil refining like ethylene, fine

[344] WANG, *Old Industrial Cities…*, cit., p.170-173

chemicals and fertilizers. Within these industrial parks, through cooperation from different government bodies and the implementation of innovative management systems, three levels of circular economies were achieved: inter-park circular, circular within park and enterprises' internal circular. The goal was to reuse the materials totally through the lengthening of the industrial chains.

At the same time, in order to offer several incentives for foreigners to invest in Jilin, especially in the low carbon parks, the central and Jilin provincial governments released their own policies and regulations: "Basic Policies to Attract Foreign Investment to Jilin City" and "Jilin Municipal Government's Land Transfer Fee Policy". Such policies made all government bodies provide services 24/7 to all investors, especially the Development Zone Management Council. Besides, the municipal government made it possible for companies to safely borrow from the banks with discounted fees and lower rates. Moreover, tax reduction and financial support were used to attract foreign funds, and banks had to give priority loans with lower interest rates to the industrial parks.[345]

Additionally, for reaching a low-carbon economy Jilin had to enact some industrial structural adjustments and also promote industrial technology improvement. Thus, first of all the city needed to eliminate all the outdated production lines, and upgrade and import more environmentally friendly equipment. Hence, petrochemical, electricity, steel, automobile, and transportation industries needed to remove low-efficiency products, upgrade equipment and import new and more "green" devices. For example, the Jilin Petrochemical Company Fertilizer Factory upgraded its water pump and also optimized the water supply, which resulted in saving 440,000 kW/hour of electricity a year. Besides, by the early 2010s, Jilin already managed to achieve significant progress: it eliminated 1 million tons of steel production capacity from electric-arc furnace and small furnaces, and about 1.5 million tons of cement production capacity from wet rotary, hollow and shaft kilns.

In conclusion, Jilin managed to successfully start its journey towards the reduction of industrial energy consumption and at the same time it increased the development of clean energy in order to reduce carbon emission levels. Jilin was able to develop a circular economy, which reduces carbon emissions and supports the increase in the efficiency of material reuse. Indeed, in its industrial parks, materials were completely utilized and there was an overall reduction in carbon

[345] Ibidem, p.173-178

emissions. Moreover, Jilin pushed for industry structural adjustment. The municipal government offered incentives and support to big energy industries and enterprises rather than penalties. As a result, thanks to 12 major energy-saving projects 215,000 tons of standard coal equivalent energy was saved. Besides, Jilin established an energy consumption and carbon emission assessment system for all key industrial products. If enterprises don't meet standards, they are first given an extended deadline, and after that they receive a financial penalty and even face the possibility of being closed down. In summary, Jilin was able to achieve a lot in a very short period of time. However, the carbon reduction actions were still in the early stage of its process in the early 2010s, while developing a low carbon city is long-term project.[346]

[346] WANG, *Old Industrial Cities…*, cit., p.178-180

FOURTH CHAPTER

ASSESSING THE IMPACT AND THE ACHIEVEMENTS OF THE REVITALIZATION PLAN

1. The Northeast's revitalization plan: An assessment

In the first few years since the 2003 plan was enacted, the overall evaluation was generally positive. Indeed, the "revive the northeast" strategy has produced some positive effects on boosting the Northeast's economy. Between 2004 and 2006, the annual growth rate of the region's GDP increased from 9.9% (2001-2003) to 12.9%, surpassing the national average by 2.6%. Yet, in terms of the Northeast's share in national GDP, progress was relatively insignificant (in 2003 it accounted for 9.3% and in 2006 for 9.4%). However, each province had a different performance.[347]

Regarding Liaoning province, in the two years after the plan (2004-2006) its GDP grew by 13.6% per annum. In the same period, its foreign trade grew fast at 23% per annum surpassing the 2005 target in 2004 (between 2001 and 2003 it was only 12.2%). In contrast, its intake of FDI plummeted with an average of -0.6% between 2004 and 2006 as opposed to the positive growth of 10.3% reached at the beginning of the decade. As for SOEs' reforms, in that "revitalizing" period Liaoning province carried out measures of shutdown and bankruptcy against 110 SOEs in serious debt, which accounted for 84% of all SOEs shut down or bankrupted in the northeast. Additionally, 85% of Liaoning's large and medium-sized SOEs adopted ownership diversification schemes in order to reduce the overall share of state ownership. As for the rate of growth in the private sector, it amounted an annual average of 17.1% between 2004 and 2006, over-fulfilling the target of 15%.[348]

As for Jilin province, during the 2004-06 period, its GDP grew by 13.1% per annum, overtaking the growth target of 10%. In the same period, the primary, secondary and tertiary sectors registered a strong growth. In terms of external economic relations, Jilin's foreign trade grew slower

[347] CHUNG, *Assessing the "Revive the Northeast" …*, cit., p.121
[348] Ibidem, p.121-122

with an average of 9.3% annum (compared to 35.4% during 2001-03), whereas FDI inflows marked a sharp rise with 34.2% per annum (as opposed to a negative growth of -1.9% during 2001-03). When it comes to SOEs' reforms, rapid progress was made in Jilin. In early 2005, 816 large and medium-sized SOEs were already officially owned by the province and sub-provincial governments. The fact that Jilin's goal according SOEs' reform was accomplished so quickly and very few of these SOEs went into bankruptcy could be largely because the provincial government really took the program seriously since the beginning.[349]

In closing, Heilongjiang province's performance was perceived to be fairly successful but lagging far behind that of Liaoning province. The GDP target for 2005 amounted 520 billion yuan and was successfully accomplished one year early. As for 2006, the GDP reached 622 billion yuan. Thus, Heilongjiang's GDP grew by 12% per annum between 2004 and 2006, overtaking the original target of 10%. During the 2003-2006 period, Heilongjiang's foreign trade grew fast at a rate of 34.2% per annum and the volume of trade rose from 6.8 to 12.9 billion US$. In terms of FDI, the annual rate of increase was 18.4% from 2003 to 2006, as opposed to a mere 5.4% in the previous period. The inflow of domestic capital into Heilongjiang also shot up sharply with 23.1 billion yuan in 2005 alone (a 59% increase over 2004). As for SOEs' reforms, Heilongjiang province's number of state-owned and state holding firms had already declined from 2,524 in 1998 and 1,588 in 2000. After the enactment of the revitalization plan, the province's SOEs lowered to 947 in 2004 and 693 in 2005. Besides, between 2004 and 2005, respectively 45 and 92 province-owned enterprises had their ownership transformed, and 130 SOEs went into bankruptcy. Yet, by the beginning of 2006, fewer than 20% of SOEs had gone through ownership diversification.[350]

In short, looking at the first two-three years after 2003, positive assessments notwithstanding, the Northeast was facing many challenges. Dismissing the residues of planned economy, diehard conservatism and state ownership in the region was a daunting problem that had to be thoroughly overcome in order for the program to be able to reach its full success. Yet, norms and culture change very slowly, if they ever do.

[349] Ibidem, p.123
[350] Ibidem, p.123-124

In June 2005, the General Office of the State Council issued the document "Implementation Opinions on Promoting the Further Opening of the Old Northeast Industrial Base" (关于促进东北老工业基地进一步扩大对外开放的实施意见) in order to encourage foreign investment in the reorganization and transformation of SOEs, and speed up system and mechanism innovation.[351]

When in 2008 the Global Financial Crisis outbroke, Beijing issued the "2008-09 Economic Stimulus Program", which provided for the pouring of about 4 trillion yuan (594 billion US$) into the Northeast as a central government's stimulus to arrest the expected economic slowdown. Indeed, taking Liaoning province as an example, its growth jumped in the following two years to 21.3% in 2009 and 20.4% in 2010. However, in 2011 the province's growth slowed sharply and reached only 11.7%. Indeed, those money, among other things, mostly helped some SOEs write off their massive debts, but failed to stimulate any actual structural reforms to eliminate inefficiency and mismanagement.[352] Besides, this huge influx of cash pushed the Northeast to produce more than the market actually needed. Accordingly, overcapacity showed up as another issue for the region's economy. For reference, in the first 10 months of 2016, the Liaoning government had to close down 44 coal mines, and steel capacity was reduced by 13.61 million tons, which is more than Canada's annual steel production, in order to meet the national agenda of overcapacity cutting. Similar actions were taken in Jilin province and Heilongjiang province as well.[353]

In September 2009, the State Council issued "Opinions of the State Council on Further Implementing the Strategy of Revitalizing the Old Industrial Bases Including Northeast China" (关于进一步实施东北地区等老工业基地振兴战略的若干意见), proposing reforms in many aspects, including optimizing the economic structure, establishing a modern industrial system, enhance

[351] HUANG Qun Hui and SHI Ying 黄群慧，石颖, "Dongbei sansheng gongye jingji xiaxing de yuanyin fenxi ji duice jianyi" 东北三省工业经济下行的原因分析及对策建议 (Causal Analysis and Countermeasures of Industrial Economic Downturn in the Three Provinces in Northeast), Study & Exploration, 2016, p.100

[352] Elaine Chan, *China's Northeastern Rust Belt Was Once 'Eldest Son', Now Struggling as Runt of The Litter*, in "South China Morning Post", 2019, Copyright © 2020 South China Morning Post Publishers Ltd. All rights reserved, link, 8 September 2020

[353] Qiyang Niu, *Can Russia Save Northeast China's Economy?*, in "The Diplomat", 2017, © 2020 DIPLOMAT MEDIA INC. ALL RIGHTS RESERVED, link , 21 July 2020

environmental restoration and ecological protection, and accelerating technological progress in the Northeast.[354]

Hence, at the beginning of the "12th Five-Year Plan" period (2011-2015), the industrial growth rate of the three northeastern provinces was basically higher than or equal to the national industrial growth rate. Indeed, in 2011, Heilongjiang province's industrial growth rate was slightly lower than the national level by 0.4%, Liaoning province's rate was 1% higher than the national level, and Jilin province's one was 4.9% higher than the national level.

Besides, in 2012, the central government passed the “12th Five-Year Plan for Revitalizing the Northeast Region”. This period was seen on one hand to be an important one for stabilizing and also improving the revitalization achievements, and on the other it was thought to be a critical moment for laying solid foundations for further development. The directions included in the plan were: 1) to develop a modern and stable agricultural system in order to ensure the nation's food security and also to improve living conditions in rural areas; 2) to keep on modernizing the industrial system, i.e. optimizing traditional industry and speed up the development of new industries, especially the service one; 3) to promote the growth of industrial areas and to optimize the spatial allocation of city development; 4) to develop a long-term mechanism for sustainable development of north-eastern resource based cities; 5) to improve infrastructure by building a comprehensive transportation system and a clean energy one; 6) to focus on reducing the use of resources and emissions of energy, to promote saving energy and to protect important environmental zones like grassland, forest, wetland and rivers; 7) to take a set of measures to increase employment opportunities, to promote the reform of shanty towns and to provide guaranteed house construction programs; 8) to continue deepen reform of SOEs, to promote the development of non-public economy, to increase the region's level of opening-up and to extend the region's trade with Northeast Asia.[355]

In the ten years since the implementation of the revitalization strategy, the state has issued a number of targeted support policies around shantytown transformation, rural infrastructure construction, industrial cluster development, replacement industries, and Northeast Asia opening

[354] HUANG Qun Hui and SHI Ying 黄群慧，石颖, “Dongbei sansheng gongye…, cit., p.100-101
[355] WANG, *Old Industrial Cities…*, cit., p.43

up and cooperation. In this period, enterprises in the Northeast region, especially industrial ones, achieved rapid output expansion. Besides, the number of enterprises increased rapidly, which promoted the rapid economic development of the region. Statistics show that in the 10 years from 2003 to 2013, the total nominal GDP of the three northeastern provinces increased from 1.3 trillion yuan to 5.8 trillion yuan, an increase of 4.6 times. At the same time, the average annual growth rate remained at 13.49%, which was significantly higher than the national average. Besides, the income of urban and rural residents increased significantly.[356]

Additionally, in 2013 the government decided to increase the number of its Free Trade Zones (FTZ). Luckily for the Northeast region, one of the new FTZ was going to be established in Liaoning province.

Notwithstanding, after 2013, a downward pressure on the Northeast region's economy continued to increase. It is commonly believed that the long-standing manufacturing-oriented economic structure of the Northeast made the region too dependent on outside markets. Indeed, China's general economic downturn from 2011 involved a significantly reduced domestic market demand for products such as coal, steel, and cement, which have always been the pillars of the Northeast's economy.[357] In 2014 and 2015, the main economic indicators were unsatisfactory, and economic growth showed a sharp decline. The Northeast problem had once again become prominent, and it was baptized as the "new Northeast phenomenon."[358] Moreover, it should be point out that in 2017 Governor Chen Qiufa of Liaoning Province admitted that some local officials cooked the province's economic statistics for the period from 2011 and 2014. Therefore, the real economic situation of the province, and who knows maybe of the whole region, perhaps was even worse.[359]

Since the Northeast was facing the same problem once more, in August 2014 the State Council issued the "Opinions of the State Council on Several Major Policy Measures to Support the Revitalization of Northeast China in the Near Future" (国务院关于近期支持东北振兴若干重大政策

[356] HUANG Qun Hui and SHI Ying 黄群慧，石颖, Dongbei sansheng gongye…, cit., p.101

[357] Qiyang Niu, *Can Russia Save Northeast China's Economy?*, in "The Diplomat", 2017, © 2020 DIPLOMAT MEDIA INC. ALL RIGHTS RESERVED, link , 21 July 2020

[358] HUANG Qun Hui and SHI Ying 黄群慧，石颖, "Dongbei sansheng gongye…, cit., p.101

[359] Sherisse Pham, *Chinese Province Admits Falsifying Economic Data for Years*, in "CNNMoney", 2017, © 2020 Cable News Network. A Warner Media Company. All Rights Reserved, link , 20 September 2020

举措的意见), which proposed 11 aspects and 35 policy measures including activating the market, deepening reforms, promoting innovation and pilot reforms of SOEs. However, the overall north-eastern situation didn't change that much.

Indeed, in 2015 the downward pressure on the economy of Liaoning, Jilin, and Heilongjiang increased. The GDP of the three northeastern provinces accounted for 8.58% of the country's total, a percentage which was even lower than the 11% of 2002. Since the region was an old industrial base, industrial decline was once again the main reason for the economic decline of the three northeast provinces. Moreover, by 2015, the growth rates of industrial added value in Liaoning, Heilongjiang, and Jilin were -4.8%, 0.4% and 5.3% respectively, which were all lower than the national average growth rate of 6.1%. In terms of absolute ranking, except for Hong Kong and Macau, among the 31 provinces, municipalities and autonomous regions in the country, Liaoning Province ranked first from the bottom, Heilongjiang Province ranked 4th from the bottom, and Jilin province was the more optimistic given that it ranked 10th from the bottom. On the whole, the industrial economic situation in the three northeast provinces was grim and worrying. As a result, already in June 2015 the National Development and Reform Commission issued the document "Implementation Opinions on Promoting the Innovation and Entrepreneurship Development of the Old Northeast Industrial Base and Creating New Competitive Advantages"(关于促进东北老工业基地创新创业发展、打造竞争新优势的实施意见), which put forward specific measures in terms of innovation and entrepreneurship, institutional mechanisms, promotion of mass entrepreneurship, technological innovation systems, policies and organizational guarantees, and actively promote the development of the old Northeast industrial base from factor-driven to innovation-driven change.[360]

In the following year, 2016, Beijing issued the "Three-Year Rolling Plan" which implied the investment of 1.6 trillion RMB (232 billion US$) in the Northeast. This investment aimed on one hand at promoting administrative reform and on the other at improving the local investment environment for the private sector in order to optimize the Northeast's economic structure.[361]

[360] HUANG Qun Hui and SHI Ying 黄群慧，石颖, Dongbei sansheng gongye…, cit., p.101

[361] Qiyang Niu, *Can Russia Save Northeast China's Economy?*, in "The Diplomat", 2017, © 2020 DIPLOMAT MEDIA INC. ALL RIGHTS RESERVED, link , 21 July 2020

Besides, at the end of the year the Politburo of the CPC Central Committee deliberated and approved the "Several Opinions of the Central Committee of the CPC and the State Council on the Comprehensive Revitalization of Old Industrial Bases in Northeast China" (中共中央国务院关于全面振兴东北地区等老工业基地的若干意见). Such document clarified the strategic positioning, development goals and development concepts of the Northeast region for the period 2016-2020. Indeed, on one hand, the CPC proposed that the industry of Northeast region should move to the mid-to-high end by 2020, and that the three regions should also try to achieve the goal of building a comprehensively well-off society within the same year. On the other, the Northeast should strive in order to become an important national economic support belt, to develop a major technological equipment strategy and to turn into an advanced equipment manufacturing base with international competitiveness by 2030.[362]

In short, in response to the “new Northeast phenomenon”, a new round of Northeast revitalization strategies emerged. Besides, the three north-eastern provinces made corresponding arrangements based on their own specific characteristics. For example, Heilongjiang put more emphasis on green agriculture and food security. Jilin Province used large SOEs such as FAW and Jilin Petrochemical to promote integrated development with the new economy. Finally, Liaoning Province's equipment manufacturing industry and also its industrial and mining enterprises were all strengthening industrial upgrading and developing high-end manufacturing.[363]

Surprisingly, in the short-term the overall economy of the Northeast began to improve. For example, in 2016 the GDP growth rate of Jilin Province exceeded the national average for the first time in two years. Moreover, the factory price index of industrial products in Liaoning Province rose by 0.9%, ending nearly four years of negative growth.

However, the factors restricting the long-term development of the Northeast region fundamentally remained unsolved: the population of the Northeast region was still outflowing, especially high-quality talents; the gap between the quality of urbanization and the economically developed areas was still obvious; there were still some "zombie" companies with outdated

[362] HUANG Qun Hui and SHI Ying 黄群慧，石颖, “Dongbei sansheng gongye…, cit., p.101
[363] Sun Jiuwen 孙久文, “Xin shídài dongbei …, cit., p.22

production capacity. Taking Liaoning as an example, the Paulson Institute estimated that the average debt to equity ratio of the province's SOEs in recent years was on average more than 50% higher than it was in the 2000s. Besides, data show that the domestic market share of the Liaoning's industrial goods had also declined since 2000, especially because of local protectionism, which destroys competitiveness. Therefore, the Northeast region still needed some sort of reform and revitalization program.

1.1 Core issues undermining the revitalization of the Northeast

The development of the Northeast region maintains a high degree of correlation with policies. Indeed, during the period when industrial policies are intensively effective, the economic development is in a good state of affairs. Afterwards, as the effect of the policy decays and the promotion of the economy declines, regional development is exposed to difficulties, and the so-called "Northeast Phenomena" and "New Northeast Phenomena" show up. As a matter of fact, the problems in the Northeast region cannot be simply attributed to the failure of both the revitalization and the industrial policies. Instead, such issues are the result of the combined effects of flaws in the formulation of industrial policies, deviations in implementation, and the Northeast's own general problems as an old industrial base.[364]

Indeed, scholars believe that the long-standing deep system, mechanism, and structural contradictions in the Northeast economy have not been completely resolved yet. The root causes are structural problems and institutional obstacles to the Northeast economic development, which unfortunately are still present in the region. This view has gained broad consensus among all sectors of society. On one hand, structural problems were mainly manifested in: irrational economic structure characterized by resource-based and primary product processing, insufficient technological innovation, low level of industrial development and disconnection from the market, as well as large-scale investment consumption, financial structure imbalance, etc. On the other hand, the institutional obstacles mainly included: the consolidation of industrial monopoly and of policy

[364] Sun Jiuwen 孙久文, "Xin shídài dongbei …, cit., p.22

methods, the institutional inertia and reform inertia of traditional planned economy, the substitution of administrative power for economic power, and the lack of market economy culture.[365]

First, in terms of industrial structure, the proportion of capital-intensive or resource-intensive industries was too high, while the proportion of service and high-tech industries was too low. Even after the implementation of the revitalization strategy, due to the severe constraints of outdated concepts, some people interpreted the revitalization of the old industrial base as merely revitalizing the industry, and the service industry was in a subordinate and passive position of industry.

In regard to the proportion of heavy industry, in 2006, the output value of Northeast heavy industry accounted for about 80% of the regional industrial output value, which was higher than the national average of about 70%, and also higher than the average level of the Yangtze River Delta and the Pearl River Delta: in 2005, Jiangsu, Zhejiang and Guangdong's percentages were 67.32%, 56.39%, and 56.32% respectively, and it was about 72.92% in Shanghai. After 2011, the degree of heavy industrialization in Northeast China has been reduced. Wine, beverage and refined tea manufacturing, furniture, papermaking, medicine, food and other light industries have entered the top five industries. Nevertheless, oil and natural gas, petroleum, automobiles, electricity and heat, ferrous and non-metal resources and energy-based industries were still the top five major industries in the Northeast. As a result, in 2014, Heilongjiang's heavy chemical industry accounted for about 80% of the province's industrial output value, of which the energy industry accounted for 54%. As for Jilin province, in Changchun the automobile manufacturing industry accounted for 60% of the industrial added value (in 2008 at its peak it reached 67.8%). Among the enterprises above designated size in Liaoning, heavy industry assets accounted for 85.3%, main business income accounted for 79.3%, and profits and taxes accounted for 79%.[366]

Indeed, looking at the data related to 2015, the added value of the primary, secondary, and tertiary industries in Liaoning Province accounted for 8.3%, 46.6%, and 45.1% of the regional GDP,

[365] HE Jun 和军, "Dongbei jingji de jiegou, tizhi guanjian zhang'ai yu tupo lujing" 东北经济的结构、体制关键障碍与突破路径 (The Key Obstacles and Breakthrough Paths of the Structure and System of the Northeast Economy), Contemporary Economic Research, 2019, p.96

[366] HE Jun 和军, "Dongbei jingji de jiegou…, cit., p.99

respectively. The primary, secondary and tertiary industries in Jilin Province accounted for 11.2%, 51.4%, and 37.4% respectively, and finally in Heilongjiang Province the primary, secondary and tertiary industries accounted for 17.5%, 31.8%, and 50.7%.[367]

Nevertheless, despite increased investments, technological transformation, and company system reforms, many large-scale backbone enterprises such as China FAW, Anshan Iron and Steel, Benxi Iron and Steel, Harbin Electric, Daqing Petrochemical, Shenyang Machine Tool, Shenyang Blower, Dalian Shipbuilding, etc., have shown a declining trend in terms of the proportion of the total industrial output value of the region in the country, from 16.41% in 1978 to 4.64% in 2017. This reflected the fact that the secondary industry sector in the Northeast was generally declining. Besides, it is better to note that in the 2010s the developed southern provinces have gradually replaced and passed north-eastern enterprises even in their traditional competitive industries, such as ferrous metals and equipment manufacturing. For reference, in the chemical raw materials and chemical product manufacturing industry, the output value of Jilin was only 136.084 billion yuan in 2017, which was only 24.64% of Zhejiang and 8.70% of Jiangsu. Moreover, the second-ranked ferrous metal industry in Liaoning has an output value less than 1/3 of that of Jiangsu.[368]

Regarding high-tech industries, no matter the introduction of the revitalization plan, data show that from 1999 to 2012 the proportion of high-tech industries in the Northeast region surprisingly fell from 7.6% to 4.8%, a decrease of 2.8%, while the proportion of national high-tech industries rose from 4.5% to 11%, an increase of 6.5%.[369] Indeed, around 2013, the Northeast lagged behind the national average regarding new technologies and products. Besides, although the ratio has later increased in 2017, Liaoning's one, which was the highest value, was actually less than half of that of Zhejiang. This was directly related to the low R&D investments and the low R&D achievements of the three north-eastern provinces. Taking the proportion of R&D expenditure in GDP and the number of invention patents per 10,000 people as examples, around 1990, the three north-eastern provinces were generally higher than the three provinces of Jiangsu, Zhejiang and Guangdong. In 2003, they were generally close, but the gap has been widening since then. Indeed,

[367] HUANG Qun Hui and SHI Ying 黄群慧，石颖, "Dongbei sansheng gongye…, cit., p.102
[368] HE Jun 和军, "Dongbei jingji de jiegou…, cit., p.98-100
[369] HUANG Qun Hui and SHI Ying 黄群慧，石颖, "Dongbei sansheng gongye…, cit., p.102

looking at the number of R&D institutions, in 2014 there were 27,000 industrial enterprises above designated size in the Northeast, and R&D institutions accounted for only 3.57%, which was far below the national average of 8.07%. Afterwards, by 2017, in Liaoning province, which was the province that was spending the most among the three, the R&D expenditures proportion of GDP was 1.17%. On the other hand, both Jilin and Heilongjiang provinces were investing less than 1%, while the three provinces of Jiangsu, Zhejiang and Guangdong were all at about 2%. In 2017, the number of invention patents per 10,000 people in Liaoning, Jilin, and Heilongjiang provinces were respectively 4.69, 2.86, and 2.80. In the three provinces of Jiangsu, Zhejiang and Guangdong were 23.29, 17.50, and 16.35, thus the highest difference was about 7 times. None of the three provinces has reached the national average 8.96 by 2019. Because of these reasons, the output value of strategic emerging and high-tech industries such as new materials, new energy, biotechnology, robotics, computer electronic equipment and so on, in the Northeast was not high, and its market share and competitiveness were declining year by year. Taking the year 2017 as an example, the sales revenue of new high-tech industries in the three north-eastern provinces of Liaoning, Heilongjiang, and Jilin accounted for 1.90%, 0.92% and 0.70% respectively of total industrial business revenue. These percentages were far lower than those of Jiangsu, Zhejiang and Guangdong of 5.94%, 5.20%, 13.96% respectively and also the 4.73% of the national average.[370]

The second issue was a long-standing one in the Northeast and was related to the institutional mechanism. The proportion of the state-owned economy in Northeast China was still too large, affecting the vitality of the economy, and the proportion of the private economy was too low. In addition, the government wasn't really committed to the optimization of the environment for entrepreneurial innovation and for the development of small and medium-sized enterprises. SOEs have always been in a dominant position, and the lagging development of the private economy has gradually become a long-standing problem in the economic development of the three Northeast provinces. No matter how state-owned enterprises were poorly managed or how large their deficits were, these SOEs have been mostly kept alive by government investment, thanks to their numerous employees and deep relationships with the region's political elites. Despite being the real sustainable

[370] HE Jun 和军, "Dongbei jingji de jiegou…, cit., p.100-101

growth points for the Northeast's economy, the private sector and service industry unfortunately couldn't compete with SOEs both in terms of attracting investment and market share.[371] Besides, this excessive proportion of the state-owned economy has led to a series of economic problems: prioritizing the use of resources and forming monopolies, difficulty in giving full play to the active role of market mechanisms, difficulties in structural adjustment, transformation and upgrading, and so on.[372]

The proportion of state-owned economy in Northeast China has dropped from 2/3 at the beginning of the 21st century to about half at the beginning of the 2010s. Between 2003 and 2013, the non-state-owned and foreign-owned economy in the Northeast region showed a continuous upward trend, and the overall proportion was roughly the same as that of the central region. However, since 2013, the Northeast has actually shown a downward trend. With the exception of Liaoning Province, Heilongjiang and Jilin provinces still accounted for a higher proportion of state-owned economy than the national average. In 2014, the private economy of Liaoning, Jilin, and Heilongjiang Provinces accounted for 55%, 51% and 53% respectively of the regional GDP, which were 10, 14 and 12 percentage points lower than the national average (65%).[373] Among the "Top 500 Chinese Private Enterprises in 2015" selected by the All-China Federation of Industry and Commerce, only 8 companies from the three north-eastern provinces were on the list, while there was a total of 229 companies from the economically developed Jiangsu and Zhejiang. Indeed, taking Liaoning Province as an example, among the 12,304 industrial enterprises above designated size present in the province in 2015, 606 were state-holding enterprises. Although they accounted for about 5% of all enterprises, they contained 1/3 of the employed population of all industrial enterprises above designated size and owned about 48.3% of the assets.[374] By the end of 2018, there were about 1,750 central enterprises and affiliated enterprises in Liaoning province, with assets of 2 trillion yuan, accounting for 47% of the total assets of enterprises above designated size in the province, and about 700,000 employees. In the same year, the sales income of central enterprises in Jilin accounted for

[371] Qiyang Niu, *Can Russia Save Northeast China's Economy?*, in "The Diplomat", 2017, © 2020 DIPLOMAT MEDIA INC. ALL RIGHTS RESERVED, link , 21 July 2020
[372] HE Jun 和军, "Dongbei jingji de jiegou…, cit., p.100-101
[373] HUANG Qun Hui and SHI Ying 黄群慧，石颖, "Dongbei sansheng gongye…, cit., p.103
[374] Sun Jiuwen 孙久文, "Xin shídài dongbei …, cit., p.23

more than 90% of the main operating income of the industrial enterprises in the province. Finally, the central enterprises in Heilongjiang also accounted for more than 60% of the industrial enterprises in the province.[375]

Moreover, the efficiency of the SOEs was too low. For reference, in 2014 among the 10 major SOEs in Jilin Province, except for the automobile and machinery industries, the operating income profit margins of the other 8 industries were lower than the average level of the national SOEs in the same industry. In addition, the number of jobs created by the private economy was still too low.[376]

The third problem affecting the revitalization program was related to the fact that the Northeast was depending too much on large-scale investments, which furthermore were still concentrated in traditional industries. Data from 2003 to 2014 show that since the implementation of the revitalizing plan of 2003, the proportion of investment in the three northeastern provinces in GDP rose from 28.22% in 2002 to 76.87% in 2014, and even reached 83.22% in one year. At the same time, the average annual growth rate of investment was more than 30%. Both the growth rate of investment and the proportion of investment in GDP were much higher than the national average. Thus, it can be seen that the economic growth of the Northeast region was highly dependent on investment, and investment was a key factor in the economic growth trend of the Northeast region. However, in the first half of the 2010s, with the increasing pressure on real estate inventory, the inability to absorb excess capacity, and the change in the high growth trend of the heavy chemical industry, the motivation to invest in the region was insufficient. Thus, large-scale investments were no longer possible and thus there is no stimulation to the regional economic growth. The reduction in investment in these traditional industries is the direct cause of the economic downturn in the Northeast. Furthermore, the efficiency of transforming investment into economic growth was relatively low. Funds often did not flow to projects that could bring good returns to investors, and the problem of low investment returns was even more serious.[377]

The fourth core issue was the serious problem of population loss in Northeast China, which in turn was affecting its economic growth. Between 2010 and 2015, the natural population growth

[375] HE Jun 和军, "Dongbei jingji de jiegou…, cit., p.103-104
[376] HUANG Qun Hui and SHI Ying 黄群慧，石颖, "Dongbei sansheng gongye…, cit., p.103
[377] Ibidem, p.102-103

rate of the three north-eastern provinces was lower than the national average, especially Liaoning Province, where population growth was once negative. Indeed, the population of the three north-eastern provinces declined rapidly, and the labor force could not be effectively replenished. In addition, the population aging problem in Northeast China was more serious than in other parts of the country. Further, the 2010 census data showed that, detracting the inflow population from people outflow, the net outflow was 1.8 million. A large part of the outflowing population was young people. This was mainly due to the labor surplus present in the Northeast, and thus more and more young people were leaving in order to find employment opportunities elsewhere. However, the root cause lied in the lack of attractiveness of the overall environment of the Northeast for young people. Indeed, there was a serious loss of talents. Leading talents and top experts from enterprises and scientific research institutions were short of successors. The problem was that, although the Northeast has always had a solid foundation for theoretical innovation and also many domestic first-class scientific research institutions and a number of high-level colleges and universities, the management system of these institutions lacked innovation enthusiasm and initiative, and the integration of technological innovation.

Moreover, a related problem was that research institutes were not closely connected with local enterprises and governments, and thus a functional collaborative innovation capability of "integration of industry, university and research" had yet to be developed.

The fifth and last, but definitely not the least, problem was the low degree of opening up of the Northeast. In 2014, the GDP of the three provinces accounted for 9% of the national economy, and the total import and export volume accounted for 3.6% of the national total. The total transit trade volume was only 16.6% of Guangdong, 31.8% of Jiangsu, and 64.7% of Shandong. The degree of dependence on foreign trade was 19.8%, which was 28.2 percentage points lower than the national average. The low degree of opening to the outside world was still a major shortcoming in the economic development of the Northeast in the mid 2010s, especially as it causes a lack of motivation towards reforms.[378]

[378] HUANG Qun Hui and SHI Ying 黄群慧，石颖, "Dongbei sansheng gongye…, cit., p.104

2. Future prospects of the Northeast region

2.1 Suggestions for a true change in the Northeast

Until the late 2010s, the central government's revitalization strategy for the Northeast has basically only offered the same solutions applied in the other regions of China. These strategies included: foreign investment, free trade zones, and corporatization of public assets. However, all these policies didn't guarantee long-term economic benefits in the region.

The essence of the strategy of revitalizing the Northeast by the end of the 2010s was to promote the transformation and upgrading its industries by solving systemic obstacles, and in the end, promote the Northeast in order to achieve a well-off society in sync with the whole country, and to be at the forefront of China's economic modernization by 2030. The Northeast region needed to focus on deepening supply-side structural reforms, starting from two aspects of common and individual issues, and actively promote institutional reforms and strategic adjustments to economic structures.

What the Chinese government has to accept is the fact that the revitalization of the Northeast simply can't be a short-term task, rather, it is destined to be a long-drawn-out process. The breakthrough path mainly includes the following aspects.

First, both the transformation and upgrading of heavy and chemical industries and the expansion of emerging industries must be tenacious. The important thing for the Northeast is to no longer continue to follow the old road. Instead, the region should: promote the simultaneous development of basic heavy industry and deep processing heavy industry; give play to the basic advantages of heavy chemical industry in the old base, and focus on the development of electronic information equipment; improve the processing depth of the industry and the added value of products. The Northeast region should focus on the construction of the four leading industries of high-end equipment manufacturing industry, new energy industry, new material industry and biological industry. Furthermore, it should cultivate and develop three leading industries of new energy automobile industry, energy conservation and environmental protection industry, and new generation information technology industry. Moreover, it could promote the integration of heavy

chemical industry and high-tech industry and expand new products and markets through various methods such as high-tech grafting and transformation. This way its traditional manufacturing could increase the added value of products, launch new products, realize equipment modernization, and obtain new vitality.[379]

Second, the three north-eastern provinces should accelerate the reform of SOEs and promote marketization. Especially, the focus should be given to the three aspects of central and local integration, mixed ownership, and redundant staff. Regarding the SOEs in the three north-eastern provinces, their reform should be further deepened. Furthermore, the efficiency of state-owned capital operation and enterprise management should be upgraded and also the modern enterprise system and the state-owned asset supervision system should be improved. Besides, mixed ownership reform should be used as a breakthrough in the reform of SOEs. Through this reform it should be established an effective corporate governance structure in order to stimulate the internal motivation of enterprises and improve the overall economic efficiency level. Moreover, The Northeast should eliminate the institutional "parasitic" relationship between private enterprises and state-owned enterprises, and truly give prominence to the role of private enterprises in promoting economic transformation and upgrading. Besides, the government should actively encourage the development of the private economy, give full play to the advantages of the private sector in absorbing employment. Indeed, the government should provide private enterprises with active financing support and with a good investment environment in order to stimulate the economic vitality of the Northeast region.[380]

Third, it is necessary to optimize government services and create a good business environment. In accordance with the requirements of the 19th National Congress of the Communist Party of China of October 2017, China in general must deepen the reform of decentralization, management and service, and also improve the level of government governance and build a service-oriented government that satisfies the people. Besides, the government should further promote the

[379] HUANG Qun Hui and SHI Ying 黄群慧，石颖, "Dongbei sansheng gongye…, cit., p.105-106
[380] Ibidem, p.105-106

open government affairs, the "Internet +"[381] e-government, the "do it right away"[382] and "run at most once"[383]. In addition, it should create an efficient and convenient government affairs environment, and ensure practical results through scientific performance evaluation. It is also important to lower the barriers to market access and carefully create a fair competition and a meticulous business service environment. Further, the tax and fee reduction policy should be implemented in order to effectively reduce the cost of the real economy. Finally, the positioning of the government's public functions should be clarified, and the level of public service capabilities should be improved.[384]

Fourth, the region should improve corporate innovation, promote the innovation of science and technology and also the fusion of the two. In 2016, the total profits of high-tech industry enterprises in the eastern, central, western and north-eastern regions of China accounted respectively for 69.7%, 14.4%, 12%, and 3.9% of the national total. In 2012 such proportion in the Northeast accounted for 4.84%, and thus there was a significative drop. Thus, in order to improve the situation of the Northeast region, local governments should create policy conditions conducive to innovation and entrepreneurship. Moreover, they should encourage innovative activities of industrial enterprises, attach importance to the protection of intellectual property rights, stimulate scientific and technological talents' enthusiasm for innovation, actively improve related infrastructure, and vigorously attract high-quality innovative and entrepreneurial talents. Besides, enterprises should be encouraged to increase investment in science and technology through preferential methods such as deduction of R&D expenses. A good idea for the Northeast region could be to promote and coordinate the establishment of a regional science and technology innovation resource sharing platform, especially in fields such as high-end equipment manufacturing, new materials, energy saving and environmental protection, new energy and new energy vehicles, etc.

[381] "Internet +" (互联网+) refers to a new business format developed by the Internet under the impetus of Innovation 2.0 (information age, the innovative form of the knowledge society). "Internet +" uses its own advantages to optimize, upgrade and transform traditional industries, so that traditional industries can adapt to the current new development, and ultimately promote the continuous development of society.

[382] "Do it right away" (马上就办) was a motto created by Xi Jinping during the 1990s when he was the secretary of the Fuzhou Municipal Party Committee.

[383] The "run once at most" (最多跑一次) is a reform which involves government governance, public management, local government innovation and other fields in order to comprehensively improve the level of facilitation of government services, optimize the business environment, and solve the difficulties of the masses in handling affairs. In Jilin province it was implemented in October 2018, and in Liaoning province in September 2019.

[384] HE Jun 和军, "Dongbei jingji de jiegou…, cit., p.105

Resources should be integrated in order to form a number of professional innovation alliances, and to optimize the formation of a multi-party collaboration mechanism for risk sharing and benefit sharing. Moreover, given the Northeast's unique characterization, it should actively implement the "Made in China 2025" strategy, whose aim is to transform China into a manufacturing power leading the development of the world's manufacturing industry.[385]

At the same time, the Northeast's growth mode should switch from relying on investments to rely on "innovation". Indeed, development economists believe that, in the middle and late stages of industrialization, innovation gradually becomes the main driving force for economic development and industrial upgrading. In the innovation-driven stage, enterprises, especially private enterprises, will become the protagonists of the development momentum. The building block innovation model will switch economic development's focus from quantity to the development of quality. Furthermore, regarding the Northeast, the central government and the local ones should eradicate the traditional fixed asset investment preferences, and on the other hand increase investments in strategic emerging industries and high-end equipment manufacturing, and also in tertiary industries. Besides, the efficiency and ability of fixed asset investment should be improved in order to stimulate the regional economy.[386]

Fifth, opening up should become a driving force for the revitalization of Northeast China. For example, the three northeastern provinces should become to really seize the strategic opportunity of the "Belt and Road Initiative 一带一路"[387] in order to accelerate the pace of opening up. The countries along the "Belt and Road" are mostly developing countries with low income levels, and as a result their demand for equipment manufacturing industry is gradually escalating. Indeed, the strong demand for infrastructure construction and equipment manufacturing products is one of main ways for most of such developing countries to tap their economic potential and increase their income levels. On the other hand, the traditional advantageous industries in Northeast China such as steel, energy, equipment manufacturing, and other industries are facing the problem of overcapacity. To

[385] HUANG Qun Hui and SHI Ying 黄群慧，石颖, "Dongbei sansheng gongye…, cit., p.104
[386] Ibidem, p.105-106
[387] The Belt and Road Initiative (BRI), known as 一带一路 in Chinese, is a global infrastructure development strategy adopted by the Chinese government in 2013.

rectify this situation the region should seize the development opportunities of the "Belt and Road" strategy, actively expand the market, establish production bases overseas, and reduce their over-reliance on the domestic market.[388]

Sixth, Northeast China should build high-quality brands and enhance industrial competitiveness. It should focus on improving the development level of strategic industries such as aerospace equipment, advanced rail transit, new energy vehicles, industrial robots and intelligent equipment, agricultural machinery equipment, biomedicine and high-performance medical equipment, etc. Moreover, it should continuously improve the quality of Northeast's manufacturing. The region should fully take advantage of the value of its unique characteristics and create a "Northeast Brand" for these key industries and characteristic products. With the help of technological means such as the Internet and big data, the Northeast region could adapt to the needs of industrial upgrading and consumption upgrading, promote industrial innovation, continuously introduce new products that adapt to the upgrading of demand, build well-known regional products and brands and recreate the industrial competitiveness of the region.[389]

Seventh, the Northeast region should make better use of its own scientific research and its talent advantages to promote the collaboration between government, industry and academia. From a macro perspective, the government (both central and local if necessary) must provide policy support, increase support for the industry-university-research cooperation system through fiscal expenditures and policy preferences, and indirectly intervene government-industry-university cooperation through social welfare construction. Instead, from the micro level, it is necessary to guide the path and value realization of technological innovation in the equipment manufacturing industry, guide universities and other scientific research places to market scientific and technological achievements, and gradually establish an innovation system closely linked to the advantageous industries of the equipment manufacturing industry. At the same time, it is necessary to seize the opportunities brought about by the development of new technologies, especially to create an integration model of the equipment manufacturing industry and a new generation of information

[388] HUANG Qun Hui and SHI Ying 黄群慧，石颖, "Dongbei sansheng gongye…, cit., p.107
[389] HE Jun 和军, "Dongbei jingji de jiegou…, cit., p.105

technology represented by artificial intelligence. The incentive effect of the transformation of scientific and technological achievements can be used to improve the technology of equipment manufacturing products for countries along the "Belt and Road" content.[390]

In terms of talent training, colleges and universities should be the mainstay to cultivate newer high-tech and international talents. At the same time, the government should implement the talent settlement policy and focus on restricting the current "brain drain phenomenon". In the market environment, on the one hand, it is necessary to build a good domestic market environment through the construction of relevant laws and regulations, and fully mobilize the initiative and creativity of all parties. On the other hand, it is necessary to connect on a deeper level with the international market. Basically, in order to promote the globalization of the equipment manufacturing industry in the Northeast, further support is needed. First, the government should take the initiative to enhance communication and cooperation with countries along the “Belt and Road”, establish a good cooperation mechanism, and provide investment and financing support and good information services for the equipment manufacturing industry to “go global 走出去”. Second, it is necessary to streamline the complicated procedures for the approval of various projects and improve the efficiency of administrative review of “going out”. Finally, it is necessary to provide more overseas preferential policies for equipment manufacturing enterprises that "go global" and provide more support in tax reduction and exemption.[391] At the same time, local governments should actively promote various policies and measures, for example, increase financial institution reforms, provide financing support for enterprises who want to "go global", and conduct in-depth policy communication with the governments of investing countries to ensure that enterprises can actually "go global", and thus provide enterprises with a good foreign investment environment.

Eighth, some scholars believe that the social and cultural concepts of the Northeast have had a prominent negative impact on the economic development of the Northeast. Thus, the Northeast should change its mindset and resolutely remove backward concepts such as "*guanbenwei* 官本位",

[390] LI Chuan and LIU Zheng 李钏, 刘正, “Dongbei diqu zhuangbei zhizaoye yu yidaiyilu yanxian guojia hubuxing fazhanyanjiu” 东北地区装备制造业与“一带一路”沿线国家互补性发展研究 (Research on the Complementary Development of Equipment Manufacturing Industry in Northeast China and Countries along the Belt and Road), Jilin University, 2020, p.77

[391] ibidem

that is to use official status as the sole judge of a person's social worth, "*deng kao yao* 等靠要", which means "wait" for state aid funds, "rely on" higher-level financial allocations and "require" poverty alleviation funds, and also "*daguofan* 大锅饭", i.e. the system that rewards everyone regardless of merit. Instead, the Northeast should promote the spirit of innovation and entrepreneurship in the whole society, and create a Northeast culture of "*chuang gai chuang* 闯改创", i.e. "break, reform and create". It is important to promote the spirit of contract, establish integrity files, and have zero tolerance for all kinds of fraud that seriously violate the spirit of contract, and promote social trustworthy performances.[392] In addition, it is also important to pay attention to cultivating the entrepreneurial market and give prominence to the role of entrepreneurs. In the Northeast economy, the first thing that needs to be boosted is the spirit of entrepreneurs, pushing them to the front line. Indeed, the biggest obstacle facing the Northeast's economic development comes from social concepts. The revitalization of the region must first rely on entrepreneurs with advanced ideas to change the backward social consciousness of the Northeast. Only when outstanding entrepreneurs will become real market players can the micro-foundation for the government to implement macro-control over the market be established.[393]

Ninth and last but definitely not least, since many issues are deeply tied up with the interests of north-eastern political elites, a higher level of political reform is needed in order to effectively solve the Northeast's economic problems.[394]

2.2 Are relations with Russia helping with the development of Northeast China?

As demonstrated in the previous two chapters, looking back at the history of China's Northeast, Russia, among other foreign countries, strongly supported the development of this Chinese region. The question thus is: has Russia been assisting the Northeast since the reform and opening up?

[392] HE Jun 和军, "Dongbei jingji de jiegou…, cit., p.105
[393] HUANG Qun Hui and SHI Ying 黄群慧，石颖, "Dongbei sansheng gongye…, cit., p.107
[394] Qiyang Niu, *Can Russia Save Northeast China's Economy?*, in "The Diplomat", 2017, © 2020 DIPLOMAT MEDIA INC. ALL RIGHTS RESERVED, link , 21 July 2020

After the death of Mao Zedong, with the PRC no longer espousing the anti-revisionist notion, relations between China and Russia became gradually normalized. Nevertheless, in 1979 the PRC launched the Sino-Vietnamese War, and since Vietnam was a Soviet ally, this certainly didn't help with the relationship between the two countries. Moreover, Soviet leader Mikhail Gorbachev actively criticized the post-Maoist CCP for allowing PRC millionaires to have lost the socialist path. In short, relations between China and Russia were poor until the fall of the Soviet Union in 1991. Afterwards, by the end of 1992, Russian President Boris Yeltsin made his first official visit to China. From then on, China-Russia relationships developed progressively.[395]

Looking at the situation in the Far East, after the collapse of the USSR, the Far Eastern economy deteriorated to such an extent that the basic livelihood of local residents had to rely on economic and trade collaboration with neighboring countries. Accordingly, many Chinese tradesmen appeared in the Russian Far East. At the beginning of the 1990s, in 1992 and 1993 specifically, the trade volume between the Far East and Heilongjiang Province of China reached the amount of 2.1 billion US$. Hence, during the 1990s, border trade became the main form of economic interaction between Russia and China in the Far East. However, this economic interaction between the two countries was mostly driven bottom-up. Indeed, the two governments lacked regulation and guidance for trans-border trade, which even led to certain negative ramifications.[396]

Afterwards, on 23 September 2009 the "*Program of Cooperation between the Northeast of the People's Republic of China and the Far East and Eastern Siberia of the Russian Federation (2009-2018)*" was signed by then Chinese president Hu Jintao and then Russian president Dmitry Medvedev. The goal of the Program was to coordinate efforts for implementing the regional development strategies of China and Russia. Originally, the program included a total of 208 key projects, 97 of which were located in Russia and required 44.03 billion US$, and the other 111 addressed to China which required planned investment of 9.87 billion US$. Generally speaking, the objectives identified were: development of cooperation zones; implementation of key regional

[395] DUEBEN Bjoern Alexander, *China-Russia Relations after the Cold War: The Process of Institution-Building and Its Impact on the Evolution of Bilateral Cooperation*, London, Department of International Relations of the London School of Economics and Political Science, 2013, p.45-48

[396] Feng Shaolei and Cui Heng, *Developing the Far East and Chinese-Russian Relations: New Perceptions and New Practices*, in "Russia in Global Affairs", 2019, © Russia in Global Affairs, 2002 – 2020, link, 20 September 2020

cooperation projects; construction and reconstruction of border infrastructure; interregional cooperation in environmental protection; cooperation in the transportation sphere; strengthening of Chinese–Russian working cooperation; cooperation at the level of tourism; and cooperation at the humanitarian level.[397]

Despite the fact that both sides put huge efforts into promoting the cooperative projects between Northeast China and the Russian Far East, their implementation lagged behind expectation. Indeed, by the end of 2016, 104 major projects with the total investment of 47.9 billion US$ were expected to be completed. However, only 25 projects (which cumulatively required an investment of 11.77 billion US$) were actually implemented. Hence, the project success rate only reached a percentage of 28%. Reality showed that genuine bilateral cooperation projects were basically ignored, and their outputs were rather scarce. Hence, practice deviated from the original intention of solidifying economic ties and strengthening the foundation of Russian-Chinese relations through a real cooperation between the two countries.[398]

As a result, in 2018 the cooperation program (2009-2018) finished without achieving much success. As a matter of fact, the plan, which was hastily crafted, lacked analysis and detail, and included a random assortment of disconnected projects.

From the Northeast's point of view, the Program initially appeared to be Heilongjiang Province's chance for an economic rejuvenation through integration with the Russian Far East. In contrast, since the reform and opening up period, Russia sought to link the Russian Far East to China's wealthier coastal region, hoping to get investment and business partners. Indeed, at 2016 trade show held in Shanghai called "Access Meeting China-Russia: Annual Investment Road Show" (中俄项目路演接洽会), Russia stated her intentions to attract coastal China's investors and thus that she wanted to avoid Heilongjiang-Russian Far East integration. Therefore, at the 2017 meeting of the Intergovernmental Commission for Cooperation of the Northeast and the Far East and Baikal Region of Russia, it was decided to abandon the 2009-2018 Program and to develop a new one.

[397] D.A. Izotov and D.V. Suslov, *So Far Only Intentions: First Results of the Program for Cooperation Between Eastern Regions of Russia and Northeast China (2009-2018)*, 2012, p.3-5

[398] Feng Shaolei and Cui Heng, *Developing the Far East and Chinese-Russian Relations: New Perceptions and New Practices*, in "Russia in Global Affairs", 2019, © Russia in Global Affairs, 2002 – 2020, link, 20 September 2020

China was very disappointed that Russia had only implemented a small part of the over 200 projects included in the Program, especially since such attitude caused China large economic losses. Chinese analysts studied in detail what had gone wrong, principally because China was concerned that Russia could possibly repeat this pattern in the Belt and Road Initiative, blocking or delaying projects.[399]

At the beginning of 2018, during the meeting of the Intergovernmental Commission it was introduced a new initiative, the "*Years of China-Russia Local Cooperation and Exchange 2018 and 2019*", which purpose was to invigorate Sino-Russian local-level economic relations with the usual activities in trade, industry, investment, agriculture, and cultural exchanges. Actually, even some key infrastructure projects present in the previous 2009-2018 Program were implemented. Such cooperation resulted in the construction of some bridges like the auto one across the Amur River from Heihe to Blagoveshchensk and the railroad bridge between Tongjiang (Heilongjiang) and Nizhneleninsk (Jewish Autonomous Region), which was needed to ship iron ore from the Kimkano-Sutarskiy mine on the Russian side to the Chinese side for processing. Both bridges were officially launched in 2020.

Besides, in 2016 negotiations for a very important project began and at the 2018 Eastern Economic Forum (EEF), Russia and China signed a new agreement, the "*Program for development of Russian-Chinese cooperation in trade, economic and investment spheres in the Far East of the Russian Federation (2018-2024)*". Actually, in this new program there was no implication of economic integration between Russia's Far East and China's Northeast. Nevertheless, Heilongjiang province will yet benefit from it because of the development of the international transport corridors named "Primorye-1" (Harbin-Mudanjiang-Suifenhe-Pogranichny-Ussuriysk-Vladivostok / Nakhodka) which will indeed give Heilongjiang's exports access to Asia-Pacific markets. Instead, the corridor "Primorye-2" (Changchun – Jilin – Hunchun – Zarubino port) will benefit Jilin province.[400]

Before, products from Heilongjiang and Jilin had to go through Bohai Bay, which is more than 997,9 kilometers away via a congested railway, to be shipped overseas. The cost in time and money made it difficult to transfer the overcapacity of the Northeast outside of the region. Thanks

[399] Gaye Christoffersen, *Chinese Northeast-Russian Far East Regional Cooperation: Old and New Programs*, in "The Asia Dialogue", 2019, © 2018 Asia Research Institute Created by Macho Themes, link, 20 September 2020
[400] Ibidem

to Primorye corridors, these costs are going to be significantly reduced. Hence, these corridors could relieve the overcapacity issue of northeast China, and therefore bring a new light to the region's troubled economy. In addition, once connected through the Sea of Japan with major Chinese ports in the south, northeast China will be able to integrate with China's "One Belt, One Road Initiative" and open up a much broader external market for its products.[401] Besides, according to the deputy chairman of the People's Government of Heilongjiang Province of China, Li Haitao, once Primorye-1 and Primorye-2 will become fully operational, the transit of goods through the ports of Primorye will increase from the level of about 23 million tons a year to over 60 million tons. Moreover, in general, those corridors on one hand will allow China to save time and money on freight, while on the other they will attract Chinese investors to Russia's Far East.[402]

Afterwards, in June 2019, during Xi Jinping's visit to St. Petersburg, Xi and Russian President Putin discussed about local cooperation in the Far East. Xi in his written interview with the Russian media, stated that the Chinese Northeast-Russian Far East cooperation was going to be a success. On the other hand, Putin announced in his press statement that he agreed to create two more Sino-Russian interregional cooperation mechanisms.[403]

Furthermore, another very important sphere in which China and Russia are developing a deep cooperation is the energy sector.

The two countries began to discuss about a deal regarding gas supply approximately at the beginning of the new millennium. After almost ten years, in 2014, China National Petroleum Corp (CNPC) and Russia's Gazprom signed a 30-year, 400 billion US$ deal.[404] Constructions kicked off in June 2015 and were forecasted to be completed by 2020. It was the first natural gas pipeline between China and Russia and also the first cross-border gas pipeline in China's Northeast. Such deal connected the world's largest natural gas supplier to the most potential natural gas consumer market.

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[401] Qiyang Niu, *Can Russia Save Northeast China's Economy?*, in "The Diplomat", 2017, © 2020 DIPLOMAT MEDIA INC. ALL RIGHTS RESERVED, link , 21 July 2020

[402] Dmitry Bokarev, *Russia and China are Exploring New Horizons of Economic Cooperation*, in "New Eastern Outlook", 2017, link, 20 September 2020

[403] Gaye Christoffersen, *Chinese Northeast-Russian Far East Regional Cooperation: Old and New Programs*, in "The Asia Dialogue", 2019, © 2018 Asia Research Institute Created by Macho Themes, link, 20 September 2020

[404] Lucy Hornby and Jamil Anderlini, *China and Russia Sing $400bn Gas Deal*, in "Financial Times", 2014, Copyright The Financial Times Limited 2020. All rights reserved., link, 20 September 2020

Besides, at the time, the agreement was also a sign of stronger Sino-Russian ties, while relations between Moscow and the West were deteriorating. [405]

After five years of construction, on 2 December 2019 the China-Russia East Route Gas Pipeline has started transporting gas to China, and the Northeast immediately started consuming Russian gas. This event marked a breakthrough in the deepening energy cooperation and thus also the strategic partnership between China and Russia. The natural-gas pipeline runs across 3,000 kilometers of Russian land and 3,371 kilometers of Chinese land, and its goal is to transport 38 billion m^3 of gas to China every year. The Chinese part of the pipeline passes through eight provinces and one municipality, from Heilongjiang Province in the north to Shanghai in the east. The natural gas transported through this pipeline is not only supplied to China, but also to consumers in Russia's Far East. For cities along the pipeline's route, this project was able to create jobs and bring in more income for the locals, hence further promoting the economic and social development in both Russia and China.[406]

In conclusion, although so far history showed that joint Sino-Russian projects could actually end up not being carried out or it could take decades to finish them, Russia's current eastward policy seems set to accelerate cooperation with China, especially economic ones. Thanks to its geographical position, the Northeast is benefitting of such improving relations, and hopefully it will even more in the future.

2.3 Some new promising projects and policies

Since the beginning of Xi Jinping's administration some different interesting policies and initiatives have been put into motion in China. One of these is the well-known 2013's "Belt and Road Initiative"(BRI), also known as One Belt One Road 一带一路, which is a strategy regarding global infrastructure development which invests nearly 71 countries that account for half the world's population and a quarter of global GDP. Xi called for the building of a 21st Century "Silk Road

[405] *China-Russia East-Route Natural Gas Pipeline Goes into Operation*, In "CGTN", 2019, Copyright © 2018 CGTN, link, 20 September 2020

[406] Li Qingsi, *The China-Russia East Pipeline Could Redraw Northeast Asia's Energy Supply*, in "Global Asia", 2020, Copyright © 2016 by the East Asia Foundation. All rights reserved, link, 20 September 2020

Economic Belt" and a 21st Century "Maritime Silk Road", collectively referred to as One Belt, One Road (OBOR), where the "belt" stands for overland corridors and the "road" for maritime shipping lanes.[407] Apart from developing the western and coastal regions, the BRI is also supposed to play an important role in revitalizing economically underperforming provinces in the Northeast, as well as other poor regions in the south-west.

Let's thus look at an analysis of the economic effects of imports and exports between the three north-eastern provinces and the countries along the "Belt and Road" in the last few years. In 2018, the imports and exports of Liaoning, Heilongjiang, and Jilin provinces to countries along the "Belt and Road" were RMB 200.67 billion, RMB 139.25 billion, and RMB 38 billion respectively. Thanks to this data it can be seen how the import and export trade between the three north-eastern provinces and the countries along the "Belt and Road" is gradually becoming a driving force for the development of the Northeast as a whole. Thus, this initiative is strongly helping the Northeast region to upgrade its degree of opening up to the international trade.[408]

It is interesting to look at Liaoning province specifically, especially since it is the province with the most exports to Asia, Oceania and Eastern Europe in the Northeast region. In 2018, the total value of imports and exports of the province with countries along the "Belt and Road" far exceeded its trade volume with traditional trading partners such as the United States, South Korea, and Russia. In particular, currently affected by the escalation of Sino-US trade frictions, Liaoning's imports and exports to the United States have shown a significant decline. At the same time, Liaoning Province's exports to the EU and North America have also declined in 2019. Instead, in 2019 the trade between Liaoning Province and the countries along the "Belt and Road" increased by 5%. It can be even calculated its trade dependence on countries along the "Belt and Road" from 2016 to 2019. During those years, the GDP of Liaoning Province amounted respectively 2,224.47 billion yuan in 2016, 2,344.2 billion yuan in 2017, 2,531.54 billion yuan in 2018 and 2,490.95 billion yuan in 2019.

[407] Lily Kuo and Niko Kommenda, *What is China's Belt and Road Initiative?*, in "The Guardian", 2018, © 2020 Guardian News & Media Limited or its affiliated companies. All rights reserved., link, 21 September 2020

[408] Zhang Bo 张波 and Gao Lianting 高连廷, Liaoning yu "yidai yilu" yanxian guojia jin chukou de jingji xiaoying ji fazhan qianjing yanjiu 辽宁与"一带一路"沿线国家进出口的经济效应及发展前景研究 (Research on the economic effects and development prospects of import and export between Liaoning and the countries along the "Belt and Road"), Shenyang, School of Economics and Management - Shenyang Aerospace University, 2020, p.10-12

As for the import and export trade volume between Liaoning Province and the countries along the “Belt and Road” in the same period, it amounted 159.48 billion yuan in 2016, 174.65 billion yuan in 2017, 200.67 billion yuan in 2018 and 210.7 billion yuan in 2019. The calculation method consists in taking the total value of imports and exports and then dividing it by the GDP multiplied by 100%. This way the trade dependence of Liaoning on the countries along the “Belt and Road” from 2016 to 2019 was 7.17%, 7.29%, 7.93% and 8.46%, which denotes an upward trend. In short, by 2019 the “One Belt, One Road Initiative" was already having a good influence on the economy of the Northeast and was only destined to have further impact on it.[409]

Moreover, the "One Belt One Road Initiative" is a favorable opportunity for China, Japan and South Korea to strengthen their economic and trade cooperation. Since the reform and the opening, thanks to the special policies applied to the city, Dalian was able to develop a solid economic and trade cooperation with these two East-Asian countries. Over time, Japan became Dalian's largest import and export trading partner, and South Korea its third largest partner. In 2019, Japan, spurred on by the “One Belt, One Road Initiative", has invested and established more than 4,800 companies in Dalian, with an actual investment amount of 18.62 billion US$, ranking second among the sources of investment in Dalian. It covered investment fields such as advanced manufacturing, electronic information, and modern logistics. Besides, Dalian companies invested in 93 projects in Japan, with an agreed investment amount of 576 million US$. As a pioneer in economic and trade cooperation with Japan and South Korea, in the future Dalian should further integrate into cooperation with Japan and South Korea, improve the level of two-way investment and industrial cooperation, create an upgraded version of trade and investment cooperation, promote regional cooperation in Northeast Asia, and realize the integration of Northeast Asia and its regional economy.[410]

Besides, putting aside the BRI, other stimulating projects promoted both locally and centrally have been put into action in the last few years in China's Northeast.

[409] Ibidem, p.10-12

[410] Chang Hong 常虹, Yi dai yi lu bejing xia dalian yu ri han jingmao hezuo yanjiu “一带一路”背景下大连与日韩经贸合作研究 (Research on Economic and Trade Cooperation between Dalian and Japan and South Korea under the Background of "One Belt One Road"), Dalian, School of International Economics and Trade - Liaoning University of International Business and Economics, 2020, p.14-15

Looking specifically at the city of Dalian, in recent years, the Dalian Municipal Government and Lushunkou District have issued a series of documents to promote the development of cross-border e-commerce, encouraging and supporting the rapid development of "cross-border e-commerce + manufacturing industry", "cross-border e-commerce + agriculture", "Internet + cultural tourism industry", etc. The construction of Liaoning Free Trade Zone has definitely brought new opportunities to the development of the province and the Northeast in general. Especially, in the Lushunkou District of Dalian, the FTZ helped developing its cross-border e-commerce. Indeed, in July 2019, there were about 43,000 newly registered companies in the Liaoning Free Trade Zone, and about 190 foreign-invested companies in Northeast Asia have settled in the zone. There are more than 150 online cross-border e-commerce platform companies in Dalian, with a cross-border e-commerce transaction volume of about 300 million US$. The exports of Dalian's cross-border e-commerce comprehensive pilot zone account for more than 90% of the province's cross-border e-commerce exports.[411]

Last but not least, luckily, after years of requests and negotiations, on 26 August 2019, the overall plan of the China (Heilongjiang) Pilot Free Trade Zone was approved by the state, and on August 30, the unveiling ceremony and the construction mobilization meeting were held. Heilongjiang is one of six pilot FTZ established in strategic border regions in 2019. The expanded free trade zones are supposed to help ease the economic pressure caused by the Trump administration, which indeed imposed 15% tariffs on 112 billion US$ worth of Chinese imported goods in 2019.[412] Some senior officials said that, the newly established FTZ will undertake more market-oriented reforms to reinvigorate the Northeast region and deepen trade ties with partners participating in the "Belt and Road Initiative" (BRI). Besides, the FTZ will also help China improve trade ties with neighboring countries by transforming the region into a major logistics center. The 119.9 km2 of the Heilongjiang FTZ will be divided into three parts: the first part of 80 km2 will be in

[411] Chen Zhiying 陈志影 and Zhang Ying 张英, Dalian shi lushun kou qu kua jing dian shang fazhan de jiyu yu tiaozhan fen xi 大连市旅顺口区跨境电商发展的机遇与挑 (Opportunities and challenges for cross-border e-commerce development in Lushunkou District, Dalian), Dalian, Liaoning University of International Business and Economics, 2020, p.38-40

[412] Vusala Abbasova, *China's New Free Trade Zone Is Boosting Economic Ties With Russia*, in "Caspian News", 2019, CASPIANNEWS.COM © 2020 Caspian News, link, 21 September 2020

the provincial capital of Harbin, the second of about 20 km2 in China's largest border city of Heihe, and the third almost 20 km2 in Suifenhe. It is expected that Harbin will facilitate activities with Russia in high technology, biomedicine, finance, the production of new materials, and also tourism. On the other hand, Heihe will focus on energy cooperation and the production of environmentally friendly products, as well as the development of border infrastructure. Finally, Suifenhe will be mainly engaged in the import of grain and wood. In 2018, trade between Heilongjiang and Russia reached 122.06 billion yuan (17.08 billion US$), and hence accounted for nearly 18% of China's total trade volume with Russia.

Maybe the greatest hope of the province is that the FTZ will step up collaboration with Russia by encouraging domestic companies to expand overseas and by facilitating the movement of people across the border, thus upgrading the area's real economy. Indeed, already in 2018, trade between Heilongjiang and Russia reached 122.06 billion yuan (17.08 billion US$), accounting thus nearly 18% of China's total trade volume with Russia. Imagine how these numbers could improve with the help of the FTZ. Heilongjiang's Party secretary Zhang Qingwei said that in the next step the province will consolidate its advantages in importing energy and resource commodities from Russia. Moreover, a number of cross-border industrial parks will be built.[413]

3. Conclusion

In September 2018, Chinese President Xi Jinping undertook an extensive inspection tour of China's three north-eastern provinces, Liaoning, Jilin and Heilongjiang. Just like other world leaders before him, Xi looked at the so-called "rust belt[414]" of the country as a potential basis of support to make China great again. Whether Xi's tour will be enough to jumpstart fresh and long-lasting revitalization results is yet to be seen.[415]

[413] Zhong Nan, *Heilongjiang Free trade Zone to Help Reinvigorate Northeast*, in "China Daily", 2019, Copyright 1995 - 2020. All rights reserved., link, 21 September 2020

[414] The term "rust belt" was first used for a region of the U.S. that has been experiencing industrial decline starting around 1980, and since then it was used in order to describe similar industrial declining areas of other countries in the world.

[415] NATHAN Attrill, *Why Northeast China's 'Rust Belt' Is Crucial to Xi Jinping's 'Chinese Dream'*, in "The New Lens", 2018, link, 15 September 2020

No matter if it was thanks to President Xi Jinping's influence or not, what is important thing is that already in the first quarter of 2019, the economies of the three north-eastern provinces showed an increase: Liaoning by 6.1%, Heilongjiang by 5.3% and Jilin by 2.4%, indicating a steady recovery compared to huge drop reached in 2015.

Moreover, a large number of multinational enterprises, such as Saudi Aramco, Bavarian Motor Works and Intel Corp. have all enlarged their investments in the Northeast of China. Slowly but effectively, the industrial structure of the region is managing to transform from resources-reliant to technology-oriented, resulting in a stronger economic resilience and a relevant growth in both traditional and hi-tech industries. Additionally, as seen above, in the last few years some new promising policies and projects were put together, which give cause to hope in a real revitalization of the Northeast.

Then suddenly, in 2020 the outbreak of the COVID-19 pandemic has upset the whole world: it caused heavy loss of lives and the deepest global recession in eight decades, and it also inflicted enormous damage on jobs and welfare worldwide. The world's economy has been severely impacted and unfortunately no one knows when this crisis will end and especially when we will be able to fully recover from it.

According to data released by the Chinese National Bureau of Statistics, in January and February of 2020, the value added of Chinese industrial enterprises above designated size fell by 13.5%. Among them, SOEs fell by 7.9%, and private enterprises fell by more than 20%.

Although currently the epidemic is kept under control in China, the epidemic continues to spread globally and presents a trend of multiple outbreaks, which will indeed cause long-term impacts on domestic manufacturing and international trade and bring huge losses. Although Chinese companies have basically got rid of the direct impact of the epidemic, they will still face severe challenges in the process of economic recovery. Just like in the rest of the world, some Chinese companies have experienced serious survival problems, such as breaking the capital chain, being on the verge of bankruptcy, or actually have to file for bankruptcy. [416]

[416] Zhao Shukuan 赵树宽 and Shao Dong 邵东 and Wang Long 王泷 and Li Shimeng 李师萌 and Li Jiayi 李佳逸, Xinguan feiyan yiqing gui jilinsheng qiye de yingxiang ji duice jianyi---jiyu dui jilin sheng 336 jia qi ye de wenjuan diaocha 新冠肺炎疫情对吉林省 企业的影响及对策建议———基于对吉林省 336 家企业的问卷调查 (The impact of the new crown

Looking at the current Northeast situation up closely, some interesting studies have tried to show the first effects of the pandemic. Specifically, a survey on some companies in Jilin province, the overall situation of the agricultural sector of Heilongjiang and finally how some small-medium enterprises reacted to the pandemic in Liaoning province will be shown.

In March 2020, in Jilin Province 336 companies[417] were asked to answer to a questionnaire survey about their situation in relation to the pandemic. In terms of overall corporate losses, most corporate managers stated that their production and operation activities were affected by the epidemic to varying degrees of burdens and difficulties. Among them, 6.65% of the companies were facing serious difficulties and were at risk of bankruptcy, 15.17% were severely affected by the epidemic, and their production and business activities were blocked. On the other hand, 41.67% of the companies have suffered a certain degree of loss, which has brought certain difficulties, but they should still be able to survive and 25.6% of the companies said they were slightly affected, but that the situation was generally stable. Finally, 10.91% of companies believed that they have not been affected by the epidemic. Regarding different industries, it was found that companies with a large decline in profits were mainly distributed in the secondary and tertiary industries, and corporate profits in the primary industry were relatively less damaged. However, this was mainly thanks to the fact that when the epidemic occurred it was the off-season for the agricultural sector.[418]

On the other hand, there is Heilongjiang Province, which is a major agricultural province in China and an important national commodity grain production base. Indeed, the province's grain output from 2011 to 2019 ranked first in the country. However, the outbreak of the COVID-19 epidemic in early 2020 has had a serious impact on the agricultural development of Heilongjiang Province, which was on the rise before the pandemic. As a matter of fact, it has had varying degrees of impact on the preparation of spring ploughing in Heilongjiang Province, livestock production in

pneumonia epidemic on enterprises in Jilin Province and countermeasures and suggestions——Based on a questionnaire survey of 336 enterprises in Jilin Province), Changchun, Jilin University Journal Social Sciences Edition, 2020, p.60

[417] Among the 336 enterprises, 66 of them were SOEs, 235 were private enterprises, 16 were companies with mixed ownership, 16 were foreign-funded enterprises or Sino-foreign joint ventures, and 3 were characterized by other kinds of ownership. Besides, according to the size of such enterprises, micro-enterprises accounted for 12.2%, small-scale enterprises for 51.8%, medium-sized enterprises for 20.8%, large-scale enterprises for 9.8%, and super-large companies for 5.4%.

[418] Ibidem, p.60-61

the breeding industry, rural tourism and the stability of agricultural product prices. Indeed, due to the pandemic, the province suffered of insufficient supply of production materials for spring ploughing. Moreover, it was affected by the decline in the fertilizer market already by the end of 2019. In addition, the supply of rural labor and agricultural machinery operation services required for spring plowing also encountered varying degrees of obstacles because of COVID-19. Statistics as of the end of February show that only about 70% of the agricultural resources needed for spring plowing in the province was able to be raised. Besides, also the breeding industry was affected by the pandemic. Indeed, people have reduced their meat consumption out of self-prevention considerations, resulting in a decline in market demand for the industry. In addition, during the epidemic, the prices of agricultural products have changed significantly, mainly due to changes in distribution channels and demand markets.[419]

Last but not least, a survey was conducted in March 2020 among 232 SMEs[420] in Liaoning province in order to assess the consequences of the lockdown and the COVID-19 pandemic in general. Liaoning Province is one of the provinces with better epidemic control, and hence many enterprises were able to resume work pretty soon. Indeed, among the survey subjects, 50.74% of enterprises had resumed work[421] already by March. Generally speaking, the survey shows that most SMEs in Liaoning Province were deeply affected by the epidemic, with great pressure to survive, and certain difficulties in business operations. Operating costs have risen, the shutdown of upstream companies has led to rising raw material prices, and the increase in manpower and raw material costs has caused companies to face pressure on cash flow and difficulty in capital turnover. As a matter of fact, 44.12% of SMEs are facing severe pressure on cash flow, which has caused an increasing shortage of operating funds for small and medium-sized enterprises that have been troubled by financing difficulties and expensive financing. About half of the companies have difficulty operating for more than 4 months under current cash flow. Besides, further research found that a prolonged suspension

[419] Han Ping 韩平 and Xu Xiaoxia 许晓霞, Xinguan feiyan yiqing dui heilongjiang nongye de yingxiang ji yingdui cuoshi 新冠肺炎疫情对黑龙江农业的影响及应对措施 (The impact of the new crown pneumonia epidemic on Heilongjiang's agriculture and countermeasures), Harbin, Harbin University of Commerce, 2020, p. 13-16

[420] Of these 232 SMEs, 27.21% are SOEs and 44.12% are private enterprises, while foreign-funded enterprises and joint ventures account for 8.82% and 6.62% respectively.

[421] The resumption rate of work in SOEs is better (62.16%) than that of private enterprises (43.44%). However, it is worth mentioning that the resumption rate of joint ventures reached 77.78%.

of production and production cuts will result in the loss of customers and orders for many SMEs. Indeed, especially in Liaoning Province, the customer stickiness of SMEs is relatively poor, and more than half of the customers are not highly dependent on the company's products. Moreover, under the epidemic prevention and control, SMEs in Liaoning Province are also facing severe supply chain difficulties: 45.59% of the enterprises indicated that the supply chain was interrupted and could not carry out normal production work, especially in production and circulation enterprises. In short, the survey showed that different types of enterprises were affected by the pandemic to different degrees, but their difficulties and policy demands are broadly similar.[422]

The Provincial Governments of the three north-eastern provinces have tried their best to maintain a stable economic situation. On February 6, 2020, Liaoning Province issued the "*Notice of Several Policies and Measures to Support the Production and Operation of Small and Medium-sized Enterprises in Response to the Pneumonia Epidemic of the Novel Coronavirus Infection in Liaoning Province*" and introduced 25 measures including fiscal discounts, tax reductions, refunds of social insurance premiums, and rent reductions. At the same time, the Jilin Provincial Government has issued various assistance and support policies such as social insurance tax reduction or deferred payment in order to help companies deal with the impact of the epidemic, reduce losses, and resume production and business activities as soon as possible. At last, Heilongjiang Province also enacted similar supporting policies.

Nevertheless, these studies point out that since local governments' assistance policies were still relatively simple, their efforts needed to be strengthened. Generally speaking, suggestions to local governments are to coordinate the epidemic's prevention and control and on the other promote economic development, establish a normalized response mechanism, and push enterprises to establish a new emergency system. Besides, they should assess the impact of the pandemic on companies, evaluate their actual needs, and implement precise governance. Moreover, each province

[422] Li Qianlin 李芊霖 and Wang Shiquan 王世权, Xinguan yiqing chongji xia zhongxiao qiye ruhe yingdui weiji?--Jiyu liaoning sheng zhongxiao qiye de wenjuan diaocha 新冠疫情冲击下中小企业如何应对危机?——基于辽宁省中小企业的问卷调查 (How do SMEs respond to the crisis under the impact of the new crown epidemic?——Based on a questionnaire survey of SMEs in Liaoning Province), Shenyang, Northeastern University, 2020, p.12-20

should take measures based on actual conditions and its own characteristics, from policy support, platform construction, channel guarantees and other aspects.[423]

In general, it is better to point out that the studies described above have examined specifically the first period of 2020, when the lockdown occurred, and the situation was almost untenable. From then on, many other policies at both the central and local levels have helped the reboot and the improvement of China's economic situation.

Looking at the first half of 2020, in July for China the World Bank's reported a GDP contraction by 1.6% as a result of the 6.8% reduction in growth rate in the first quarter of the year. Such slowdown marks the slowest expansion for the country since 1976. Indeed, while on one hand by mid-summer economic activity had started to rebound and supply side constraints had eased, on the other domestic and external demand remained fragile and in turn restrained the pace of recovery, regardless of the swift measures taken to contain the economic fallout. In general, by mid-summer the WB thought it was likely that the shock will leave the Chinese economy scarred.[424]

Nevertheless, China's economic growth in the second quarter showed a gradual recovery, in fact, the GDP reached 45.66 trillion yuan with 3.2% growth year-on-year. At the time of writing this thesis the report related to the third quarter of 2020 still needs to be drafted. However, forecasts state that the Chinese economic recovery is expected to return to a relatively normal state by the end of Q3.[425]

In conclusion, nowadays, regardless of the great achievements of the revitalization program, the Northeast region is still relatively lagging behind, especially if compared to other regions of China. Moreover, the current epidemic situation is still unclear, and there are still major risks and threats to the recovery and development of not only China's economy but the whole world's one. Obviously, it is better to remember that revitalization can't be accomplished in one stroke. It is still necessary for the Northeast to promote the reform of SOEs, to fill the deficiency in development, prevent possible risks, optimize the market environment, emancipate the mind and pursuit a high level of

[423] Zhao Shukuan 赵树宽 and Shao Dong 邵东 and Wang Long 王泷 and Li Shimeng 李师萌 and Li Jiayi 李佳逸, Xinguan feiyan yiqing …, cit., p.60-61
[424] World Bank, *China Economic Update – July 2020*, in "World Bank", 2020, © 2020 The World Bank Group, All Rights Reserved, link, 26 September 2020
[425] PwC, *China Economic Quarterly Q2/Q3 2020*, in "PWCCN", 2020, © 2003 - Mon Sep 28 09:24:35 UTC 2020 PwC. All rights reserved, link, 28 September 2020

innovation. In short, the Northeast still has to solve its unique and peculiar problems deriving from its historical status of industrial base.[426] What the Northeast region needs to do is to boost confidence, strengthen the cooperation among the three provinces and actively respond to all the adversity. Who knows, maybe the centuries-old pride of the region and the promising policies and projects that made it believe into a brighter and more open future before the occurrence of the COVID-19 pandemic (BRI, Heilongjiang's FTZ, Russian-Chinese 2018-2024 Coordination Program) might even help the Northeast overcoming these challenging times.

[426] *Revitalization of Northeast China*, in "Beijing Review", 2019, link, 15 September 2020

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