

## De-Industrialization in West Siberia Was 'Tertiarization' realized in the 1990s?

Norio HORIE

Associate Professor

Center for Far Eastern Studies, Toyama University

horie@eco.toyama-u.ac.jp

### Abstract

This paper focuses on the disparity among subjects in West Siberia. The disparity has been generated by the deterioration of the industry in Kuznetsko-Altai Economic Sub-region and the outward orientation of natural resource extraction in West Siberia Economic Sub-region in 1990s. The blue-color recession not only accelerated the decline of employment in industry, but also restrained the expansion of service sector in Kuznetsko-Altai Economic Sub-region. Finally I consider the need of interdependence among subjects and revival of manufacturing as an alternative way to provide employment in West Siberia.

### Introduction

Siberia, which resembles Canada in area, population, and population density, contains two economic regions: the West Siberia Economic Region and the East Siberia Economic Region. West Siberia, which we focus on in this paper, contains seven subjects<sup>1</sup>: Tumen Oblast, Tomsk Oblast, Omsk Oblast, Novosibirsk Oblast, Kemerovo Oblast, Altai Krai, and Altai Republic. Tumen Oblast includes the Yamalo-Nenetskii and the Khanti-Mansiiskii autonomous areas (Fig. 1).

The area of West Siberia is about 2.43 million km<sup>2</sup>, about 14% of the territories of the Russian Federation. The population of about 15.51 million people represents about 10% of the Russian federation's total population.

West Siberia has two faces. One is that of an oil and gas source for European Russia that serves as a provider of hard currency. The other is that of one of the main military industrial centers of Russia, which dates back to the period of the Second World War when European Russia evacuated its military plants to the east. These two facets now represent the cause of economic disparities between subjects in West Siberia. These disparities can be observed geographically between the resource-rich northern sub-region of West Siberia and the resource-poor southern

---

\*Financial support from the Japan Society for the promotion of Science (grant number 13730033) is gratefully acknowledged. I am grateful to Sergei Vladimirovich Kazantsev, Institute of Economics & Industrial Engineering of SB RAS for helpful comments and suggestions. And I wish to thank the referees of FES for useful comments. All opinions and remaining errors are mine.

<sup>1</sup> When I use the term 'subject', it means an *Oblast, Krai, or Republic* that is a unit of the Russian Federation. To simplify our analysis, I do not analyze autonomous areas (*okrug*) independently.



Figure 1 Subjects in West Siberia

sub-region of West Siberia.

In the following section of this paper, I explain how the disparities among subjects in West Siberia arose mainly due to the natural resource endowments and industrial structure of each subject's area.

In the third section, I examine the employment destruction in West Siberia that has accompanied the process of de-industrialization. During the course of employment destruction, not only has industrial employment declined, but the expansion of service-sector employment in the depressed subjects has been difficult to achieve. A key factor in Russia's economic restructuring is expected to be a movement away from the secondary sector, which dominated during the era of the planned Soviet economy, to the tertiary sector which has been neglected. However, an economic transition to a service-based market economy will not mean there is no opportunity for the secondary sector of the economy to prosper. The service sector is not isolated from the industrial sector. Rather, it is integrated with an industrial system's development and depends strongly on a healthy industrial sector. Hence, I will discuss the difficulty of expanding the tertiary sector in West Siberia while blue-collar recession persists.

In the final section, I consider the proposals of researchers in Novosibirsk to restore the economic vitality of West Siberia. The lack of industrial interdependence and economic cooperation among subjects in West Siberia, and the need for a buoyant secondary sector will be discussed.

### **Dual Economy in West Siberia**

Russia's great depression during the 1990s can be attributed to the existence of a dual economy, in which the mineral-resource sector is extremely strong and internationally competitive, whereas the manufacturing sector is outdated and uncompetitive, as Tabata (2000, p.392) reported. In West Siberia, a dual economy exists not only in terms of these two economic sectors, but also in geographic terms since the northern economic sub-region has specialized in the mineral-resource sector and the southern economic sub-region has specialized in the manufacturing sector.

West Siberia's northern economic sub-region is called the West Siberia (Ob'-Irtysk) Economic Sub-region, and includes Tumen Oblast, Omsk Oblast, and Tomsk oblast. The southern sub-region is called the Kuznetsko-Altai Economic Sub-region, and includes Altai Krai, Altai Republic, Kemerovo Oblast, and Novosibirsk Oblast (Morozova, 1999, pp.372-378). The concept of economic sub-regions was used to plan regional industrialization under Soviet economic planning, and while it now has no concrete administrative meaning it has been useful for academic interest or to give geographical meaning to statistical units. Federal districts were established in 2000, so even the geographical meaning for statistical purposes has faded, but today's regional economic structures have been shaped by the past regional industrialization programs, and are not yet free from the concept of economic regions and the sub-regions based on the Territorial Production Complex (TPC).

The TPC was originally the basis of a planning method encompassing an economic and spatial

aggregate that was to be developed in accordance with a specified plan (De Souza, p.4). It applied to a geographically compact area where this planning approach was intended to efficiently utilize the local natural resources.

Based on the vast West Siberian TPC, the West Siberia Economic Sub-region was formed in the Soviet era. It is often described as the world's largest storehouse of oil and gas, but the oil and gas reserves are located in the northern part of the West Siberia Economic Sub-region, and most of the related industries are located in the southern zone along the Trans-Siberian railway. For example, the oil-refining industry and the related chemical industry are located in Omsk, which is in the southern part of the West Siberia Economic Sub-region.

The Kuznetsko-Altai Economic Sub-region in the southern part of West Siberia is based on industrial development that relies on coal from Kuzbass, the fuel base for eastern Russia that supports the steel industry in Novokuznetsk and machinery production in Novosibirsk. The coal industry supports about 800 thousand workers in Russia, and is going through a painful restructuring.

The local economies of the West Siberia and Kuznetsko-Altai Economic Sub-regions were expected to become closely integrated. The oil and gas of the West Siberia TPC should have flowed to Kuzbass, and the machinery, instruments, pipes, construction materials, and chemicals made in Kuzbass should have supported the development of the West Siberia TPC. The West Siberia Sub-region holds nine-tenths of Russia's natural gas and three-quarters of its oil. However, these natural resources are 'exported' to the European part of Russia and on to Western countries. While they have contributed greatly to Russia's foreign currency earnings, their extraction has contributed little to industrial development in the Kuznetsko-Altai Economic Sub-region.

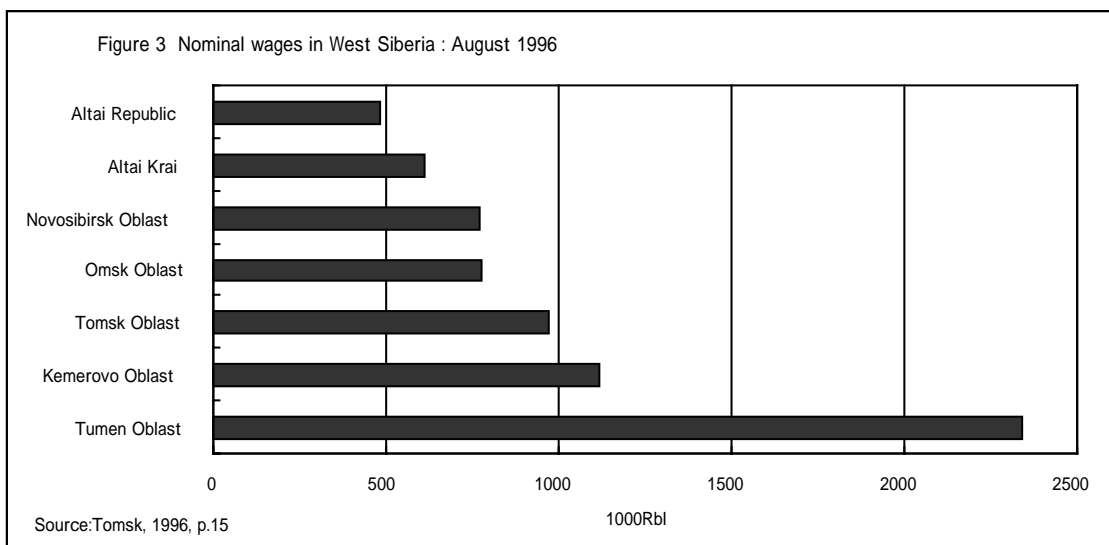
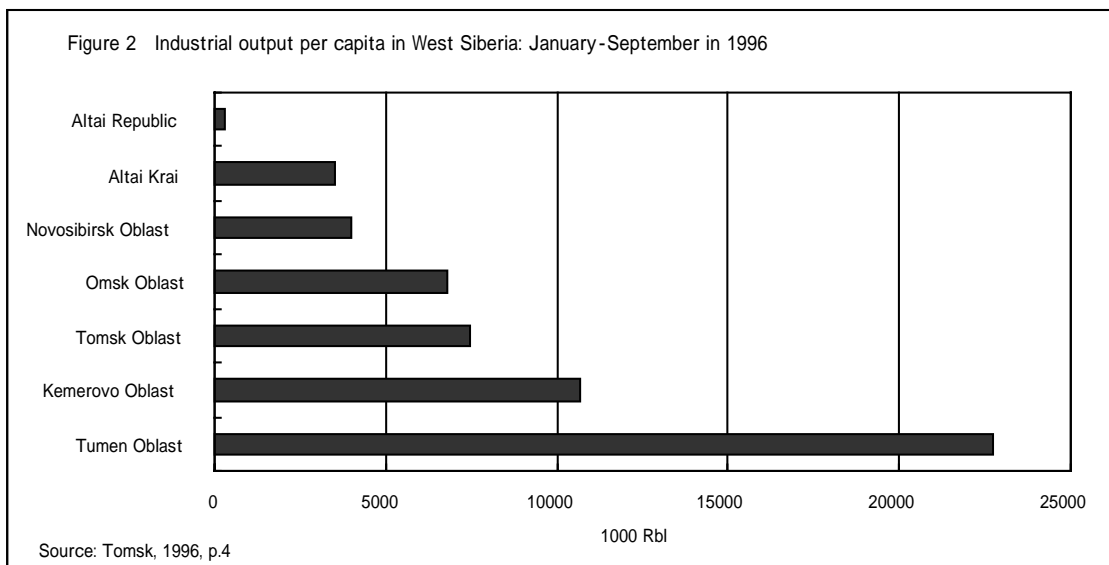
The difference in economic power between the coal-dependent Kuznetsko-Altai Economic Sub-region and the oil & gas-dependent West Siberia Economic Sub-region is reflected in the unbalanced development of the subjects in West Siberia. Figure 2 ranks their per capita industrial output. The per capita industrial output of Tumen Oblast in the north was about 73 times that of Altai Republic and six times that of Novosibirsk Oblast in the south in 1996. The ranking of the subjects in terms of nominal wages follows the same pattern (Fig. 3). The nominal wages of Tumen Oblast were five times those of Altai Republic and three times those of Novosibirsk Oblast in 1996. These discrepancies are mainly due to the simple absence or presence of commercial oil and gas reserves.

However, the income disparity among subjects in West Siberia can also be attributed to the Soviet legacy of regional economic development such as the TPCs<sup>2</sup>. In the sense that the regional economic development is an inherited product of Soviet planning, the imbalance in the economic structure and the disparities among subjects in West Siberia is not a new problem.

Since the collapse of the USSR, though, the imbalance has increased. The industrial output in Kuznetsko-Altai Economic Sub-region has fallen dramatically with the decline of the

---

<sup>2</sup> As Van Selm (1998, p.605) shows, local differences in the economic structure of Russia are caused partly by differences in the local endowments of natural resources, labor, and capital, and partly by Soviet planners' tendency to concentrate the output of a particular product in a few large factories.



military-industrial complex (MIC) and its support for regional companies producing machinery, instruments, radio-electronics, and aviation, nuclear, and chemical products. The conversion of MIC components to civilian production in Siberia has been slower than in the European part of Russia. No appropriate regional program for MIC conversion has been implemented, and Khomelianskii (1997, p.114) insists that the absence of the appropriate programme for MIC conversion has caused the catastrophic decline of industry in Novosibirsk. Generally speaking, regions that happened to be specialized in a “winning” industry have performed much better than regions that had a “losing” industry (Van Selm 1998). In West Siberia, the West Siberia Economic Sub-region has been a winner, and the Kuznetsko-Altai Economic Sub-region has been a loser.

In the next section, I will explain how this imbalance in the regional economic structure affects employment in West Siberia, especially how it prevents new jobs in the service sector replacing lost jobs in industry.

### **De-Industrialization in West Siberia**

The post-industrial society is a term widely used to describe the trend in advanced countries towards the service sector becoming responsible for an increasing share of output and employment. The conditions that must be met for the service sector to expand are generally assumed to be the existence of consumers with rising incomes that are moving up their hierarchy of needs and seeking to fulfill more sophisticated needs and desires, and an increasing division of labour in the economy that results in a larger role for indirect labour in the production and distribution of goods.

One difficulty in Russia's transition to a service-based market economy from 1992 to 1998 has been that a proportional labour movement from the industrial sector to the service sector would have to take place alongside severe industrial decline and negative income growth. Therefore, we cannot argue that Russia's industrial adjustment and move towards a service economy should have followed the post-industrial pattern. In Russia, the service sector has developed through the rise of retail and wholesale trade sectors which are traditional parts of the economy. It is misleading to describe the trend in Russia as being towards the service economy of a post-industrial society based only on the service sector representing a rising share of the economy, as Kuboniwa(1999, p.87) pointed out.

Despite these reservations, the increasing share of the service sector is big enough to surprise. Just two years after the collapse of the Soviet planned economy the service-output share of GDP exceeded the share of industrial output in Russia. Unfortunately, this was not only because the service sector was expanding, but owed much to the collapse of the industrial sector. This tendency persisted throughout the 1990s with Russia's 1999 industrial output being 33% lower than the 1993 level. Particularly depressed regions experienced much deeper declines. For example, industrial output fell by 42% in Novosibirsk.

Russia's recession can be characterized as mainly a blue-collar recession, and it has had a greater impact on regional labour markets in the industrial provinces of Siberia and the Far East

than in the European part of Russia. To effect industrial restructuring and adjustment, labour needs to be able to move not only between enterprises within an industry but also between industries (Brown, 1993). Enabling movement from the manufacturing sector to the service sector is one way to achieve this. However, my studies have shown that during a severe blue-collar recession the subjects in West Siberia cannot generate employment even in the service sector. Of course, my findings do not mean there is no possibility of a future increase in employment realized through workers moving from industry to the service sector, but I will show how difficult it is for subjects dependent on a specific specialized industry like machine building to achieve this.

To examine the trends in sectoral employment changes provided by regional statistics, I roughly divided the economy into three sectors. The primary sector includes agriculture and forestry<sup>3</sup>. The secondary sector includes industry and construction. The tertiary sector includes other branches of the economy, and is equivalent to the service sector.

The employment decline from 1991 to 1998 in Novosibirsk Oblast was extremely severe. The rate of employment decline in Novosibirsk Oblast ranked eighth among all federal subjects. Russia has thirteen subjects which have a metropolitan city of over a million citizens, and Novosibirsk city – the third biggest of these – recorded the highest rate of employment decline. The fact that Novosibirsk Oblast has a metropolitan city is important, because service-sector development depends on achieving a certain economic scale as measured by the number of consumers where the service sector is located. However, having a city large enough to support a growing service sector is not sufficient during a blue-collar recession. It is also notable that the employment destruction in Altai Krai, Altai Republic, Novosibirsk Oblast, and Kemerovo Oblast (the Kuznetsko-Altai Economic Sub-region), was much greater than in Tumen Oblast, Tomsk Oblast, and Omsk Oblast (the West Siberia Economic Sub-region). This suggests that the Soviet legacy of spatial specialization of industry has greatly contributed to the present regional disparity in employment.

Figure 4 shows how each sector's employment changed in West Siberia from 1990 to 1998. The rate of decrease in primary sector employment in West Siberia was more than double the federal average. Altai Republic, which has a significant agricultural sector, had the most moderate decrease in West Siberia. The most characteristic indicators of West Siberian employment destruction, though, are in the secondary and tertiary sectors.

As Fig. 4 shows, there was a significant disparity in the secondary sector employment destruction between the West Siberia and the Kuznetsko-Altai Economic Sub-regions. The Altai Krai and Novosibirsk Oblast economies are built around the machine-building and metalworking industries. In 1998, 41.2% of all industrial production workers in Altai Krai were concentrated in these industries, and the equivalent figure in Novosibirsk Oblast was 47.2%. The federal average was 36.7%<sup>4</sup>.

Employment destruction within the secondary sector has not occurred homogeneously. I will focus on the machine-building and metalworking industries, though, because they are crucial

---

<sup>3</sup> The primary sector usually includes extractive industries such as mining and crude oil extraction. Unfortunately the referenced data does not show the figures of the extractive branch of industrial sector.

<sup>4</sup> These data are from Goskomstat Rossii, 1999, *Trud i Zaniatost' v Rossii*.

Figure 4 Employment Structural Change: 1990-1998

	Russian Federation	Moscow City	West Siberia	Altai	Kemerovo Oblast	Novosibirsk Oblast	Omsk Oblast	Tomsk Oblast	Tumen Oblast
Primary Sector	-10.1%	-52.6%	-24.4%	-15.3%	-37.5%	-27.3%	-21.0%	-26.8%	-35.0%
Secondary Sector	-39.7%	-17.2%	-38.4%	-48.3%	-38.7%	-50.3%	-37.2%	-29.3%	-24.9%
Tertiary Sector	5.9%	5.1%	4.8%	0.8%	-1.3%	-2.0%	9.3%	2.3%	15.7%
Wholesale & retail Trade, Catering,	57.7%	74.4%	44.4%	23.1%	29.2%	36.4%	59.8%	65.3%	64.1%
Net Change	-15.5%	-2.8%	-17.1%	-21.6%	-22.5%	-25.0%	-13.9%	-13.0%	-5.3%

Altai is the sum total of Altai Krai and Altai Republic.

Source : Goskomstat, Trud i Zaniatost' v Rossii 1999

providers of employment in the Kuznetsko-Altai Economic Sub-region, and the main source of employment destruction there. The data from Novosibirsk Oblast demonstrate why this was a major problem – employment in machine-building and metalworking in Novosibirsk in 1998 was 49.4% of the 1993 level, meaning that half of the jobs in those industries disappeared in just five years. Machine-building and metalworking were the hardest hit of the secondary industries in terms of employment destruction in Novosibirsk.

West Siberia's employment growth in the tertiary sector was below the Russian average from 1990 to 1998. The West Siberia Economic Sub-region was responsible for what growth there was in tertiary sector employment, while Novosibirsk Oblast and Kemerovo Oblast in the Kuznetsko-Altai Economic Sub-region showed falling employment in this sector. Altai showed a tiny employment increase in the tertiary sector.

The Russian tertiary sector has been expanded by retail and wholesale trade activity as mentioned. West Siberian employment in retail and wholesale trade has also grown slightly, but the federal subjects in West Siberia differ widely in their rate of growth in this branch of the economy with the subjects of the Kuznetsko-Altai Economic Sub-region doing much worse than those of the West Siberia Economic Sub-region. The employment growth in Altai, Kemerovo Oblast, and Novosibirsk Oblast in the Kuznetsko-Altai Economic Sub-region was far more modest than the Russian and West Siberian averages, while Omsk, Tomsk, and Tumen Oblasts in the West Siberia Economic Sub-region were above the Russian average

The employment destruction in their secondary sector has meant the subjects in the Kuznetsko-Altai Economic Sub-region have been unable to expand employment, even in the tertiary sector, to replace jobs lost in manufacturing. In the context of labour market adjustment during the transition to a market economy, the service sector is expected to act as a saucer that catches the labour being spilled from the manufacturing sector. In other words, inter-industry labour mobility should be promoted. However, in the Soviet-type industrial regions where employment and income depend on the manufacturing sector, the demand for labour in the service sector has been limited by the real income decline caused by employment destruction in the manufacturing sector. The more severe the employment destruction in the manufacturing sector becomes, the more any employment increase in the service sector is restrained. It is a vicious circle of employment destruction in Russia's peripheral manufacturing regions.

What is worse, labour mobility from the manufacturing sector to the service sector is unlikely to improve workers' wages because the average wage in the service sector is lower than in the manufacturing sector. Also, the workers from the manufacturing sector who find work in the service sector are often employed under unstable conditions. For example, while employment in Novosibirsk's tertiary sector fell from 1990 to 1998, the number of self-employed expanded. Table 1 shows the difference between the number of employed given in the labour-balance data set and the number of employed in enterprises and organizations. This difference equals one-fifth of the total number employed, and 60.7% of these workers are self-employed (including private domestic servants). However, confidence in the belief that self-employment is a prospective source of many new jobs and should be promoted to support local labour markets (Kuz'min, 2001, pp.181-183) is

often exaggerated. While a minority of these self-employed workers may be engaged in economically competitive businesses, most are engaged in subsistence self-employment aimed at warding off starvation rather than exploiting promising new opportunities (Clarke, 1998, p.55) or are active in the black market.<sup>5</sup> Under such conditions, the expansion of employment through self-employment while the overall service sector remains stagnant cannot be described as a promising form of job creation.

Table1. Primary job status

	Number of persons (x1000)	%
Average number of employed registered in enterprises & organizations	906.2	80.8
Average number of non-registered employed	215.3	19.2 ( 100 )
Short-time workers on contract	6.1	( 2.8 )
Civil Code Agreement	14.1	( 6.5 )
Foreign workers	1.7	( 0.8 )
Peasants and farmers	14.1	( 6.5 )
Self-employed	130.7	( 60.7 )
Private domestic servants	48.1	( 22.3 )
Religion	0.5	( 0.2 )

Source: Goskomstat Rossii Novosibirskii Oblastnoi Komitet Gosudarstvennoi Statistiki, 2000, Novosibirskaiia Oblast' v Tsifrah: Statisticheskii Sbornik Chast' 2 1994-1999 gody, p.20

Note: the data from the labour resource balance

Obviously, a service sector must be created in response to demand, but there is little demand for the products of a service sector in areas where the blue-collar recession is driving down relative income year by year, and so there is little opportunity to create new jobs to offset those lost from the manufacturing sector. It is easy to insist that jobs should be created in new industries to replace old jobs lost through industrial decline, but the job-creation potential is not equal across the regions of Russia. The potential is greatest in specific areas such as international cities, resource-based or resource-related subjects, and gateway subjects. The areas where old industry still dominates remain in a vicious circle of employment destruction.

What does this mean for West Siberia? As I explained above, the vicious circle of employment destruction is mainly caused by the decreased industrial potential in the Kuznetsko-Altai Economic Sub-region. Far from Moscow, such a peripheral region cannot rely on service-sector growth to survive. To break the circle, the prosperity of the regional industry is very important. This would not only prevent employment destruction in industry, but would also promote service-sector growth by providing the income to buy those services. The most practical way to promote regional development in West Siberia and prevent employment destruction there is thus to re-develop the industry in the Kuznetsko-Altai Economic Sub-region.

<sup>5</sup> See the interview in EKO 1998, No.1, p.133.

## **Research into Re-industrialization**

I have described the regional disparity in West Siberia using older geographic concepts like TPC, economic sub-regions, and West Siberia. As Bradshaw & Treyvish (2000, p.34) suggest, these concepts are part of the Soviet heritage and have become a source of disagreement and a means of identifying particular schools of thought. Despite such attitudes towards these concepts, the disparities among the subjects in West Siberia have widened according to a pattern that matches the old geographical scheme.

After the collapse of the USSR, the spatial grand design based on the TPC faded away. In turn, federal programmes of regional development have been assigned, but the implementation of these programmes has not been guaranteed (Granberg, 2000, pp.160-161). Whether using the old geographic scheme or not, the lack of a grand design for regional development in the 1990s has permitted the deterioration of the potential of West Siberian industry.

The Novosibirsk Economic School, represented by the Institute of Economics & Industrial Engineering (Institute of Economics & Organization of Industrial Production) of the Siberian Branch of the Russian Academy of Science, has made the development of a regional grand design for Siberia an important subject for study during the USSR era and today in the new Russia. Their findings have implications for the direction of Siberian development concerning the re-development of the secondary sector.

Their first important finding concerning Siberian development is the need for unity within Siberia. A weak point of the West Siberian economy is the weakness of structural economic ties among the provinces. West Siberia's natural resources are not processed where they are extracted. Instead, they are transported to the other regions or abroad, so they don't produce any forward linkage effect in West Siberia. West Siberia's share of Russia's primary oil refining is less than 10%, even though more than 70% of Russia's oil is extracted in West Siberia (Kazantsev 2001, p.12). West Siberia has long been regarded as no more than a storehouse of resources to be exploited for the benefit of western Russia and for export as pointed out by Granberg (1989, p.296).

The Novosibirsk Economic School has sought to strengthen the weak economic ties among the subjects in Siberia, and to encourage them to use their resources for their own economic development. As Seliberstov (1996, p.13) suggested, the most negative result of the Soviet economic complex as a single national economy is the weak economic integration in the Siberian region.

Research has been done to examine the scenarios proposed by the Novosibirsk Economic School for the re-industrialization of Siberia. Granberg (1989) has found a serious imbalance in the Siberian economic structure, and has reported on the delayed schedule for developing the means needed for the complex processing of minerals extracted in Siberia. He also focused on cultivating dynamic manufacturing industries based on the natural resources of Siberia. He proposed three avenues for Siberian re-industrialization. The first is to accelerate the development of production units for comprehensive processing of extracted raw materials. The key issue for this avenue is the interregional distribution of the increased raw materials extraction so as to raise the share of

Siberian consumption without reducing supplies to the already established circle of consumers in other regions (Granberg 1989, p.300). The second is to promote development of machinery production to meet the region's demand. Relatively little mass-scale construction is needed, but modernization and re-specialization of existing machine building enterprises is essential to respond to regional demand. The third is to accelerate the development of production infrastructure and a number of supply industries, whose development has traditionally lagged in Siberia (Granberg 1989, p.301).

Similar suggestions for Siberian re-industrialization can be found in proposals made by the Novosibirsk Economic School in the 1990s. Kazantsev proposed two scenarios for short-term Siberian economic development; the first was to preserve the orientation of the national economy towards the production of raw materials mainly for export, and the second was to direct the national economy towards meeting the needs of the domestic market. In the second scenario, the growth in raw materials output would depend mainly on domestic demand, and most of the need for machinery and consumer goods should be met by domestic producers (Kazantsev 2001, p.14). He emphasized the latter scenario, and it also focused on re-industrialization that is oriented towards the modernization and restructuring of existing machine building enterprises in Siberia.

On the other hand, the federal programme "Siberia", which the Novosibirsk Economic School proposed as a grand design for Siberian development, states the tasks to be completed: 1) Strengthening the economic integration of Siberia's regions, 2) Improving the mechanism of economic interaction between the members of the Inter-regional association "Siberian Accord", 3) Improving the mechanism of accumulation and use of resources intended for the programme, taking into account the participants' interests, 4) Addressing excessive regional asymmetry in the level of economic development and quality of life in Siberia, 5) Strengthening horizontal industrial relationships in Siberia, achieved by the rational spatial organization of industrial capacity, 6) Developing projects in the near north to enable rational use of resources, environmental protection, etc, 7) Creating communication measures to access the world market, 8) Attracting foreign investment and foreign trade from the Asia-Pacific region (See Seliverstov, 1999, pp.9-10). In short, unity of the Siberia region, dissolving the disparities among subjects in Siberia, preserving the industrial capacity, and an outward policy (internationalization of Siberia) is the core of the programme.

Note that moves toward Siberian unity are usually initiated by the depressed subjects or the resource-poor subjects. Omsk Oblast, which depends deeply on Tumen Oblast for its industrial survival, has often engaged in talks to join the Ural Federal District since Tumen Oblast was incorporated into that district. (For example, see *Komersant Sibir'*, 8 June, 2001)<sup>6</sup>. The context of

---

<sup>6</sup> The Siberia Federal District contains Altai Republic, Altai Krai, Kemerovo Oblast, Novosibirsk Oblast, Omsk Oblast, Tomsk Oblast in West Siberia, and Republic of Buriatia, Republic of Tyva, Republic of Khakasia, Krasnoyarsk Krai (including Taimyr and Evenki autonomous area), Irkutsk Oblast (including the Ust-Ordynskii Buriat autonomous area), Chita Oblast (including the Aga-Buriatia autonomous area) in East Siberia. Tumen Oblast in West Siberia incorporated itself into the Ural Federal District. The establishment of the Siberia Federal District itself does not mean realization of the unity of Siberia. It is the coordination of Siberian politics and economy from above. The realization of unity should be accompanied by a regional initiative which can be addressed as coordination from the bottom (Seliverstov, 2000). In Siberia, the Siberian Accord, the Siberian Branch of the Russian Academy of Science, and local governments have played a role in the regional initiative.

Siberian unity, in the end, always leads to the discussion as to how to use the natural resources of the resource-rich subjects for all in Siberia. For resource-poor subjects, when considering the proposals of each subject in West Siberia to implement the programme, seeking to preserve the potential of their mechanical engineering enterprises is a crucial point of their proposal (Seliverstov, 1999, p.12).

The present situation of industry in West Siberia makes it hard not only to modernize and improve machine-building enterprises, but also to preserve the potential of their technological base. For example, it has been reported that for many major machine-building enterprises wishing to convert from MIC production, it is not yet clear which plants can survive and which products are needed to society (Kazantsev, 1998, p.34, 1995, p.125).

Is there any way to preserve the secondary sector as an engine for regional economic development? It is true that a key component of the restructuring of the Russian economy is the process of 'tertiarization' (Bradshaw, Stenning & Sutherland, 1998, p.157). However, there are compelling reasons why it is necessary to preserve and re-develop the secondary sector in West Siberia. As I have discussed above, the income and employment disparities between the Kuznetsko-Altai Economic Sub-region and the West Siberia Economic Sub-region will widen without re-development of the secondary sector in the Kuznetsko-Altai Economic Sub-region and reinforcement of the interdependence between the raw material suppliers in the West Siberia Economic Sub-region and the secondary sector in the Kuznetsko-Altai Economic Sub-region. Tertiarization without a revival of the secondary sector would lead to fragile economic development in West Siberian.

In this paper, I have explained how the deterioration of industry in the Kuznetsko-Altai Economic Sub-region and the outward orientation of natural resource extraction in the West Siberia Economic Sub-region have increased economic disparities between these two economic sub-regions. The employment destruction in the industry of the Kuznetsko-Altai Economic Sub-region has led to a vicious circle of employment loss throughout the regional economy. As a result, employment substitution enabled by development of the service sector has been restrained. In conclusion, I believe that reinforcement of the inter-dependence among subjects in West Siberia is needed, and the key sector which should be re-developed is the secondary sector in the Kuznetsko-Altai Economic Sub-region, as the Novosibirsk Economic School has claimed.

In the discourse concerning the economic transition from a planned economy to a market economy, the ability to generate new jobs to replace jobs lost through restructuring has often been exaggerated. If we consider the existing conditions of the industrial structure, we should see that a policy to promote the creation of new economic sectors to provide employment is not the only option. There is also the alternative of modifying, modernizing, promoting, and re-developing sectors that have provided jobs in the past to meet the demand not of the MIC, but the demand of domestic consumers.

## References

Bradshaw, Michael, Stenning, Alison, & Sutherland, Douglas (1998)

Economic Restructuring and Regional Change in Russia, in *Theorizing Transition*, edited by John Pickles & Adrian Smith, Routledge

Bradshaw, Michael and Treyvish, Andrey (2000)

“Russia’s Regions in the ‘Triple Transition’”, in: Philip Hanson & Michael Bradshaw (Eds.), *Regional Economic Change in Russia*, Edward Elgar

Brown, Annette, N. (1993)

“A Note on Industrial Adjustment and Regional Labor Market in Russia”, *Comparative Economic Studies*, Vol.35, No.4, Winter

Clarke, Simon (1998)

“Structural Adjustment without Mass Unemployment? Lessons from Russia”, in: *Structural Adjustment without Mass Unemployment?*, Edward Elgar, pp.9-86

De Souza, Peter (1989)

*Territorial Production Complexes in the Soviet Union*, Gothenburg

Granberg, Alexandr (1989)

“The Restructuring of the Soviet Economy and Prospects for Siberia’s Development”, *International Regional Science Review*, Vol.12, No.3, pp.291-304

Granberg, Alexander (2000)

“Regional Development and regional policy in the New Russia”, in: Hans Westlund, Alexander Granberg, Folke Snichars (Eds.), *Regional Development in Russia*, Edward Elgar, pp.123-165

Kazantsev, Sergei (1995)

“Oboronnyi Kompleks Rossii: Naiti Svoiu Nishu na Rynke”, *EKO*, No.8, pp.117-127 (in Russian)

Kazantsev, Sergei (1997)

“Sibir’ k 2001 godu”, *EKO*, No.10 (280), pp.40-52 (in Russian)

Kazantsev, Sergei (1998)

“Observation on the ongoing conversion of Defense-related firms to Civilian Production in Siberia”, in: Tadashi Yoshida & Hiroki Oka (Eds.), *Facets of Transformation of the Northeast Asian Countries*, Tohoku University

Kazantsev, Sergei (2001)

“Siberian Regions Economic Development”, *INAS Research Annual Vol.26*, Institute of Northeast Asian Studies, Toyama University, pp.1-14

Khomelianskii, B. Kh (1997)

“Novosibirskaia Oblast’: Konkurentosposobno, no...”, *EKO*, No.3 (273), pp.113-124 (in Russian)

Kuboniwa, Masaaki & Shinichiro Tabata (eds.) (1999)

*Russian Economy at the Cross Roads: Transition to Market and SNA*, Aoki-shoten (in Japanese)

Kuz’min, Stanislav (2001)

*Zaniatost’: Strategii Rossii, URSS, Moscow* (in Russian)

Morozova, Tat’iana (1999)

Regional'naiia Ekonomika, Iuniti (in Russian)

Seliverstov, Viacheslav (1996)

"Conceptual Issues in the Development of the Federal Targeted programme 'Sibir'", Region: Economics and Sociology, No.4, pp.3-19 (in Russian)

Seliverstov, Viacheslav (1999)

"The development of Siberia under Economic and Political Transformation in Russia", in: Hiroki Oka (Ed.) Facets of Transformation of the Northeast Asian Countries , Center for Northeast Asian Studies, Tohoku University, pp.1-27

Seliverstov, Viacheslav (2000)

"Mify i Realii: Sibirskogo edinsva", Komersant-Sibir', 19 May (in Russian)

Tabata, Shinichiro (2000)

"The Great Russian Depression of the 1990s: Observations on Causes and Implications", Post-Soviet Geography and Economics, Vol.41, No.6, pp.389-398

Tomsk (1996)

"Monitoring Sotsial'no-ekonomicheskogo razvitiia regionov Sibirskogo soglasheniia za ianvar'-sentiabr' 1996 goda", Goskomstat Rossii, Tomskii Oblastnoi Komitet Gosstatistiki (in Russian)

Van Selm, Bert (1998)

"Economic Performance in Russia's Regions", Europe-Asia Studies, Vol.50, No.4, pp.603-618