A Critical Review of Existing Approaches to Siberia: Relevance to Siberian Economic Development^{*}

IK JOONG YOUN^{**} AND BERNHARD SELIGER^{***}

Russia went through major political and economic changes in the 1990s. Siberia, historically a resource-colony, also began autonomous economic development. However, economic development did not succeed as planned and resulted in total failure. Siberia still holds the same meaning to Russia, as a colony that provides natural resources. But the exploitation of Siberia's rich resources is not enough to entice policymakers and scientists to develop Siberia until it reaches its full economic potential. This leads to a concentration of research in the economic analysis of resources, energy, transport, environment, agriculture, and forestry. The focus on institutional transformation is very typical in the discussion about Central Europe, Eastern Europe, and Russia's transformation, while micro-institutional analyses remain silent about Siberia. Emerging research on fiscal federalism and regionalization in Russia can provide basic elements of a micro-institutional theory, but elements such as a framework for education, local administration, and infrastructure are still wanting.

Keywords: Siberia, economic development, micro-institutional factors, resource economies, resource colony, regional economy

^{*} This paper has been supported by the Korea Research Foundation (KRF-2002-072-BM2076).

^{**} First author. Direct all correspondence to Ik Joong Youn, Assistant Professor, Department of International Relations, Hallym Institute of Advanced International Studies, 906-18 Daechi-dong, Kangnam-gu, Seoul, 135-841, Korea; Tel: 82-2-3453-7831; E-mail: youn@hallym.ac.kr

^{***} Bernhard Seliger, Director, Hanns Seidel Foundation, Seoul Office, 501, Soe Young Bldg. 64-1 Hannam-1-dong, Yongsan-gu, Seoul, 140-886, Korea; Tel: 82-2-790-5344; E-mail: seliger@hss.or.kr

1. INTRODUCTION

Russia went through major political and economic changes in the 1990s. Siberia, historically a resource-colony, also began autonomous economic development.

The changes in the center seemed to announce a new Russia integrated in the trend of globalization with the potential to catch up with the Western world economy. Russia was also reaping the fruits of the peace dividend of reduced military spending, trying to become a respected and valued partner in the Western world. The regional changes seemed to install a new system of federalism, voluntary organization with free access, participation, and even secession possibilities. As described by Boris Yeltsin, "grabbing as much power as they can" seemed to be the most suitable description for Russia at that time. The implications for Siberia were voiced by Michael Bradshaw (1992), who saw a number of *desideration* for Siberian development, including: a fair share of resources in the "new Siberian resource bonanza"; a rejuvenation of resource industries; Siberia's full economic sovereignty; a new political status of autonomy (as part of federal system); and a regional economic strategy, balancing regional and central interests.¹

As part of the Russian Federation, Siberia had to live with two disappointments. First, the process of Russia's economic transformation proved to be much harder than expected, developing into a chain of smaller and bigger political and economic crises and severely restricting the implementation of new economic and regional policies. Russia experienced a dramatic fall in living standards and even severe problems of poverty, far more extreme than in the other transitioning countries in Central and Eastern Europe.² Second, the political crisis also affected the emerging federal structure, going through a phase of "chaotic federalism" in which competences were allocated according to the strongest. Hopes for balancing regional and central interests (see Schneider 2000) ended during the period of virtual re-centralization under Putin, which was widely approved as an instrument to end the former chaos.

Siberia's position today still remains that of a resource colony, even with changes in the political power structure (it would be misleading to speak of the installation of a democracy in the Western sense, especially at the regional level) and the introduction of a specific form of market economy.³ This is also handled in research on Siberia, focusing on Siberian issues in business, politics, and science. In both domestic and international business, the focus is rational, as profits can mostly be expected by exploiting Siberia's rich resources that also lead a clear direction for business research.⁴ For policymakers and scientists who were eager to develop Siberia's full economic potential, it is crucial to have additional interest in regional development beyond resource exploitation.

It is interesting that non-Russian, Western research focuses on geopolitical and geo-economic concerns over Siberia and its resources. The focus, however, did not change throughout the 1990s and did not touch on domestic economic development. This leads to a concentration of research in the economic analysis of resources,

energy, transport, environment, agriculture, and forestry. The focus on institutional transformation so typical for the discussion of transformation of Central and Eastern Europe and Russia as a whole did not emerge. Thus, a micro-institutional analysis of Siberian development remains missing. Emerging research on fiscal federalism and regionalization in Russia can provide basic elements of such a micro-institutional theory. Other elements, such as a framework for education, local administration, and infrastructure need to be added.

This paper reviews Western approaches to Siberia's economic development in the above-mentioned fields.⁵ The contribution of these research approaches to Siberian economic development is analyzed, followed by a less prominent discussion. They are important institutional factors for Siberian economic development (Section 3). The paper concludes with a new research agenda that will be helpful to Siberia as an emerging economic region, integrated into the greater Russian and Northeast Asian economic arenas (Section 4).

II. EXISTING (WESTERN) APPROACHES TO ECONOMIC DEVELOPMENT IN SIBERIA

In 1994, under the title of *America's Earth Day supergift: Siberia*, an author described Siberia in a drastic manner, one that many others would agree upon albeit less drastically.

"Like the American West of the 1800s, Siberia's environment is threatened by reckless economic development. Lake Baikal and the Angara River are dying from pollution. soil erosion is destroying agricultural land, air pollution is poisoning the people, and toxic mining wastes are simply dumped. Russia lacks the technology, expertise and will to protect environmental values. Poverty and hardship encourage extensive logging, mining and drilling with little thought for the long-term consequences. Responsible management by the nonprofit and for-profit sectors provides the path to responsible greenness. This requires institutions that provide incentives to consider ecology and community as well as economic values. I recommend we create a public, quasi-governmental corporation to purchase Siberia from Russia." (Baden 1994)

This description of Siberia points out some of the region's problems but focuses on Siberia as a resource colony in two distinct respects. The focus is on resources, not on regional development and corresponding solutions; a "quasi-governmental" organization is again centralized and state-led, rather than incorporating a decentralized approach. This is the approach to Siberia that will prevail in Western and Russian thinking alike. For example, a Russian source formulates the problem as follows:

At present Siberia exceeds the national per capita gross domestic product more than 1.2 times. This puts it to one of the leading places in the national economy. A strategy is being elaborated to provide Siberia's active role in solving the national tasks, supplying the needs of Russia's domestic market and exporting its resources; creation in Siberia by the year 2020 of a self-sufficient integrated economy as a part of the common national economic space and providing comfortable habitation and high living standards for its inhabitants. These tasks can be fulfilled with governmental participation in a number of directions of priority, primarily in elaboration and adoption of legislation supporting its social-economic sphere. (Dobretsov et al. 2001)

Both the Russian and US cases mention the importance of a regional approach ("community approach" in the first, "self-sufficient integrated economy" in the second), as well as an institutional approach ("Institutions that provide incentives" in the first, "legislation supporting its social-economic sphere" in the second). The focus on resources and on a centralized development plan became clear. This is not a coincidence, but is a common viewpoint for much research on Siberia's economic development. The following paragraphs illustrate some of the dominant questions resulting from this viewpoint.⁶

The first large group of publications concern Siberia's resources, their extension and development.⁷ A number of them discusses the state of Siberian resources (see Karrasch 1995 and especially the bibliography of Murray 1997a), the geo-political role of these resources (see Klüter 1994; Dienes et al. 1994; and Murray and Bradshaw 1997), and Siberia's development chances due to its rich endowment of natural resources (Bradshaw and Lynn 1996; Lynn 1996). Oil and gas are the two resources that gain the most attention in Siberian economic development. The numerous studies on Russia's oil and gas industry include sectoral overviews (see Astrov 2003), studies on the state of the gas industry (Biggar 2002 and Wein 1996a, 1996b specifically on Western Siberia) and the oil industry (Considine and Kerr 2002; Sagers 2001), gas sector policy (Locatelli 2002), oil sector policy (Lane 1999), the development of large, internationally important companies in the field (Liutho 2001), and sub-regional studies focusing on Western Siberia, Eastern Siberia, or the Far East (Sagers 1995). Reviewed literature include works on the geo-economic importance of Russian energy (Morse and Richard 2002) and all issues related to foreign legal (Shulga 2001) and political (Heinrich et al. 2002) aspects.

Resources apart from the energy sector form a part of Siberia's rich endowment and gained the attention of the researchers (see Bond and Levine 2001) for the nickel and platinum industry. Among these resources, the forest sector is ultimately the most important factor. Siberia accounts for 40% of Russian forest resources. Russia accounts for one-half of the world's coniferous forests. As a global supplier,

environmental resources are very important, the economic impact and development possibility of Siberia's forests (see Gerloff 1994; Murray 1997b; Obersteiner 1998a; Backmann and Zausaev 1998; Backmann 1999) have important environmental implications. As such, a large project named the Siberian Forest Study was carried out by the International Institute for Applied Systems Analysis, or IIASA (see, for example, Blauberg 1995; Obersteiner 1995, 1998b; Nilsson et al. 1996). While of lesser interest, fisheries (see Murray 1997b and the case study of Wilson 2002) and agriculture (see the case studies of Tanneberger 1997 for Western Siberia; Bychkova et al. 1998 for the Far East) are also investigated in the research.

One of the gravest problems resulting from Siberia's status as a resource-rich region is the overexploitation of resources and the possibility of pollution. A number of scientific studies took place but NGOs based in the West are active in studying pollution and ways to overcome environmental problems. One of the foremost problems is the exact measurement of the ecological state in regional studies (see Flück 1996 and Wein 2002 for the Baikal region) or in measuring the ecological impact of Siberia for the world climate, alongside the Central Siberian forest project (Schmullius and Wagner 2000; European Space Agency 2003).

Land use among natives and industry is another important issue (Forbes 1999; Habeck 2002; Ziker 2002; Frühauf and Meinel 2003). Sectoral environmental problems, especially in the oil industry, are analyzed and new market-compatible solutions proposed (Smirnov 1994; Gavigan 1996). Nuclear waste related to mining and the military is another specific problem (Robinson and Cook 1995; Böhmer and Nilsen 1995; American University 1996a, 1996b). NGOs focus on the roles and potential of Siberia's new ecological movement (see the issue devoted to the Siberian ecological movement of *Give and Take*, ISAR 2003). The chances of developmental aid in the field of environment are also discussed (Opp and Haase 2000).

Siberia's environmental problems can be seen as one of the legacies of central planning and socialism. The impact of central planning over the Siberian economy has also been a topic for studies (for example, Brock 1999). Among the legacies, the asymmetric industrialization with territorial production complexes at its heart was of special interest in the wake of Siberia's transformation (De Souza 1989; Bandman and Linge 1991). These problems in the 1990s were rather obsolete and the changes of the inherited industry structure became an important issue. In this respect, the conversion of the military industry to civilian production gained particular attention (see Opitz 1993; Musienko 1994; Amosenok and Bazhanov 1994). Today, conversion is partly achieved. Other parts of the Siberian armament industry survived and found new and attractive markets for their products.

With the transformation of the political and economic system, the industry structure distorted by political decision-making was affected and the old social safety net based on company welfare and full employment broke down (see Meek 1994). Siberia's social transformation consisted of a number of problems, including migration, the decline and transformation of the urban social environment, educational problems,

and foremost, the redefinition of space and identity in space for its indigenous and actual population. Industrial policy and the wage structure of the centrally planned Soviet Union led to migratory flows to Siberia for strategic and economic reasons, the trend partly reversed during its transformation. Consequently, migration became an important issue (see Sutherland and Hanson 2000; Heleniak 1995, 1997), especially the depopulation of Northern Siberia (see Göler 2002; Heleniak 1999). Migration was even seen as the central issue for Siberia's economic revitalization, as the population patterns achieved in the Soviet times are a major hurdle to utilizing Siberia's natural resource endowment (Gaddy and Hill 2003). Cities, which often had been large industrial-plants-cum-housing, had to be redefined and the social attractiveness of cities measured (Portnov 1998). The decline of state-sponsored education facilities, most prominently Akademgorodok, had a far reaching impact also on the quality of life and migration (Castells and Hall 1994).

More than just changing welfare provisions, transformation also led to a renewed debate on the identity of Siberia: was it still Russia, and did it belong to the native (indigenous) people? Or was it a part of Northeast Asia (at least the Far East)? These were some of the questions debated (see Kotkin and Wolff 1995; Fondahl 1996). The role of indigenous people, their identity and rights regarding the environment and resources (Heintze 1993; Anderson 2002), and their formation in the new society (Yakimov and Morrison 1995) were discussed from anthropological and sociological points of view, but the political and economical topic of Siberian separatism was also touched upon (Chichlo 1994). Additionally, the role of minorities in Siberia resulting from the Stalin's policy overpopulation was addressed (see Klüter 1992).

Transportation was one of Siberia's problems that originated since the original conquest of Siberia in the sixteenth century, later resulting in the construction of one of the world's largest transportation routes, the Trans-Siberian railway (TSR). Soviet central planning left a difficult legacy in form of the BAM (Reymann 1992). However, the vision of Siberia as a transport corridor for goods from East to West and vice versa was very attractive, as well as the transport of Siberian resources to both regions. For Europe, this especially meant energy transport (see Meinhardt et al. 2002). Since the first signs of opening in North Korea, there was much discussion about the link to the East and the realization of the "iron silk road," linking Europe and East Asia's trading nations (Korea, Japan, and China) through the Trans-Korean-railway (TKR), Trans-Mongolian-railway (TMR), and Trans-Siberian railway (TSR) (see Lee 2001; Simonia 2001). This still remains a vague concept full of technical, economic, and political problems.

This brief review of existing literature shows that Western research and the debate over Siberia's development raised a number of questions as well as provided a number of answers. The research, however, was dominated by resources (and to a smaller extent, industrial), economic, geographic, sociological, and anthropological sectors. The turn towards institutional economics, characteristic of the

transformation debate in Central and Eastern Europe as well as Russian central state, did not take place. Some of the issues that could be addressed in such a debate are discussed in the following section.

III. MICRO AND MICRO-INSTITUTIONAL FACTORS IN SIBERIAN ECONOMIC DEVELOPMENT

The transformation of Russia's economic system and the dismantling of central planning, while beginning in earnest some years later than in Central and Eastern Europe, followed a similar pattern in Siberia. Several central planning legacies needed to be overcome: 1) economic priorities changed from the over-emphasis of heavy industry to a consumer-oriented economy⁸; 2) the old pattern of extensive growth led to a dead end; and 3) the industrial structure suffered from degradation and economic obsolescence. There was a considerable technological gap with to OECD countries, but the greatest challenge was the change from the Soviet bureaucratic society and incentive system to a market economy system characterized by entrepreneurship; from the *homo sovieticus* to the *homo agens* of the market economy (see Seliger 2000).

In transformation, especially in the early blueprints of reformers and international agencies, the challenges were underestimated. While liberalization and deregulation proceeded according to faster ("shock therapy") or slower ("gradualism") designs, the institutional structure necessary for the market economy did not develop – instead, Russia ended in a "bad institutional equilibrium" (Sutela 2001).⁹ The state was on the one hand too strong, i.e., still too involved in the economy via intervention and the bureaucracy, and on the other hand it was too weak, meaning that there was a low degree of law enforcement leading to high uncertainty. Ericson (2000, 7) speaks of the "re-feudalisation" of the Russian economy. Salient features include: traditional forms of legitimating power; a weak center; strong local authorities without the development of a system of proper decentralization; networks of fealty and obligation reducing uncertainty; and markets only existing on the margins and monopolized or closely regulated by local authorities. Furthermore, discretion of authorities with regard to the law is great, property rights are diffuse, and power is personalized and not functional.

The unexpected manner of transformation led to a reconsideration of reforming tasks at the central level as well as at the level of center-region relations. At the central level, the necessity of a political system characterized by the separation of power (for example, in the long-lasting conflict about monetary policy), transparency (especially in privatization policy), and competition became clear, also showing ways for policy reform (see contributions in Welfens 2002). The pivotal role of institutions in state transformation is accepted now and difficulties in implementing institutional changes found increased attention (see Seliger 2002). In addition to

changes at the central state level, the relationship between the center and regions, the emerging system of federalism, and the emerging economic structure in space was of particular academic interest. Studies of the relationship between political power and regional economic change (see the early contribution of Hanson 1994) pointed out the impact of institutions on economic development. Other studies included the localization of Russia (Müller 1997; Stavrakis et al. 1997), and there was even a trend towards a "Russia of the regions" (Nicholson 1999), leading to a new spatial economic structure (see Harter and Easter 2000). Russian federalism however, was highly uneven between strong and weak regions and problems regarding federalism increased (Kirkov 1998, Schneider 1999). Fiscal relations to the center were a bone of contention (see Kouznetsova et al. 1999). Competition among regions could not work in a beneficial way (Herrmann Pillath 2000), since Russian federalism was "market distorting" (Eckhardt 2002) and highly asymmetric, with some regions gaining almost complete autonomy from the center and others still in the center's grip due to the regional power balance.

Relatively few studies are concerned with Siberia's regionalization (an exception is Stadelbauer 1996; for the Novosibirsk region, Kirkov 1997). Regarding institutional changes, only the Siberian agreement with the prospect of complete institutional reorganization gained some attention (Hughes 1994). Thornton (2002) discusses institutional change in the Russian Far East. One of the most interesting studies of institutional change on the regional level is that of Stack (1998), which makes a comparison of historical and evolutionary neo-institutionalized explanations for regional change. Stack (1998) identifies three institutions related to rent seeking that emerged in the Russian regions due to incomplete transformation towards a market economy: 1) the new regions act as *krysa* ("roof", granting protection to rents of constituents); 2) *chozjain*, or "boss" (using selective incentives to organize constituents for its benefit, i.e., to extract rents from constituents); and constituents again work as *tyl* (back-up, support for the region's lobbying efforts). In addition to conflicts with the center, conflicts typically occurred around the Siberian regions. This existed in almost all the analyzed regions, mainly concerning federal and regional shares of taxes. The two major conflicts between various forms conflict were those of regional organization (for example, *krai* and autonomous *okrug* with their respective property rights for industries) and conflicts about border policies in the Far East.

Stack (1998) is mainly preoccupied with Siberian regions pointing to the direction of research the institutional development of Siberian regions.¹⁰ This analysis can be broken down into three groups of questions, namely: 1) questions of globalization and geo-economics relevant to the region; 2) the analysis of macro-institutional factors affecting the regions; and 3) the analysis of micro-institutional, regional factors. The first group of factors include the international trade integration of Siberian regions, which is especially important for the Far Eastern region (Valencia 1995; and Seliger 1999). The roles of resources, production processes, and trans-na-

tional location competition need to be included. The impact of geopolitical and geo-economic factors, including federal foreign policy, is high for border regions and regions with rich resources. Therefore, the understanding of regional institutional development is relevant, but foreign policies of the regions, which became important since the mid-1990s, should be also analyzed (see the overview for Russia, Melvin 1996).

Among the macro-institutional factors affecting the region, the general direction of federal economic policy was the center of the transformation (the market economy and its specific types). The emergence at the center needs to be understood. Secondly, the legal basis and actual enforcement of center-region relations should be included, as well as the center's financial system and the emerging system of fiscal federalism. Enforcement of new legislation in the regional context has often been one of the weak links in the Russian federal system. Re-centralization under Putin reduced this problem to some extent, but led to the new problem of the restriction of autonomous regional development.

The last, and until now, the mostly neglected group of factors could be called micro-institutional factors. This refers to emerging institutional arrangements at the regional level. It has been pointed out in the transformation theory debate that the development and impact of formal institutions can only be understood when seen in relation to informal institutions and cultural embeddedness. This is even truer at the regional level than the national level. Siberia sometimes loses relations to the center and the large number of autonomous and semi-autonomous sub-regions, the latter group's backgrounds varying culturally, ethnically, and historically. The climatic and geopolitical differences of its sub-regions developed a rich variety of idiosyncratic institutional features. Stack's (1998) analysis touched on some of these factors, but others such as regional educational systems, regional judicial systems, and the process of elite circulation (including indigenous elites, Soviet elites, mafia, and new entrepreneurs) can be useful in such an analysis.

While the above factors relate to a positive analysis of the regional institutional structure, normative conclusions can be drawn from such an analysis. Successful regional arrangements can be identified and a system for interregional competition can be designed, which allows for and forces regions to learn from other successful regions (in a process of regional institutional innovation and imitation).

IV. CONCLUSION

The new agenda for research described in the preceding paragraphs should not be seen as a complete departure from the reviewed research, but rather points to an integration of existing research with greater emphasis on micro-institutional factors. This research does not aim to result in another grand design for Siberian economic development. Instead, it aims to understand the variety of regional and

sub-regional economic outcomes of various regional and sub-regional institutional arrangements. While initial conditions such as the resource base are fixed points of such an analysis, the analysis of institutional arrangements at the regional level is insofar more rewarding and could result in policy implications, as it concerns variables of regional development. What is more necessary are studies on the local and sub-regional level that are integrated in a greater regional study (for example, for the three Siberias) and related to great topics of the central state (transformation and asymmetric federalism). This research program does not exclude particular researchers of Siberia, Western or Russian. Instead, new research can contribute to the numerous studies of the former group, with the latter's closer understanding of local and regional circumstances.

REFERENCES

- American University. 1996a. Siberia Nuclear Waste. Available: <http://www.american.edu/projects/mandala/TED/sibnuke.htm>.
- _____. 1996b. Siberia Nuclear Pollution. Available: <http://www.american.edu/projects/mandala/TED/sibnuke.htm>.
- Amosenok, Ella and Victor Bazhanov. 1994. Specific Features of Conversion in Siberian Defence Enterprises. In *Adjustment Processes in Russian Defence Enterprises within the Framework of Conversion and Transition*, eds. Petra Opitz and Wolfgang Pfaffenberger. Münster: LIT.
- Anderson, D. 2002. Entitlements, Identity and Time. Addressing Aboriginal Rights and Nature Protection in Siberia's New Resource Colonies. In *People and the Land: Pathways to Reform in Post Soviet Siberia*, ed. Erich Kasten. Berlin: Reimer.
- Astrov, Vasily. 2003. The Russian Oil and Gas Sector: Facing the New Challenges. *Forschungsberichte* No. 294. Wien: Wiener Institut fuer Internationale Wirtschaftsvergleiche.
- Backman, Charles A. 1999. The Siberian Forest Sector: Challenges and Prospects. *Post-Soviet Geography and Economics* 40(6): 453-569.
- Backman, Charles A. and Vadim K. Zausaev. 1998. The Forest Sector of the Russian Far East. *Post Soviet Geography and Economics* 39(1): 45-62.
- Baden, John A. 1994. America's Earth Day Supergift: Siberia, Foundation for Research on Economics and the Environment (FREE). Available: <http://www.free-eco.org/pub/Siberia94.html>.
- Bandman, M.K. and G.J.R. Linge. 1991. Siberian Territorial Production Complexes and Soviet Economic Planning. In *The State and the Spatial Management of Industrial Change*, eds. D.C. Rich and G.J.R. Linge. London: Routledge.
- Biggar, Darryl. 2002. Reform of Gas Sector in Russia. *OECD journal of competition law and policy* 4(2): 147-63.
- Blasi, J.R., M. Kroumova, and D. Kruse. 1997. *Kremlin Capitalism: The Privatization*

- of the Russian Economy*. Ithaca: ILR Press.
- Blauberg, K. 1995. Siberian Forest Sector GIS Database. IIASA Working Paper XP-95-012. Laxenburg: IIASA.
- Böhmer, Nils and Thomas Nilsen. 1995. Reprocessing Plants in Siberia. Bellona Foundation Working Paper No. 4.
- Bond, Andrew R. and Richard M. Levine. 2001. Noril'sk Nickel and Russian Platinum-Group Metals Production. *Post Soviet Geography and Economics* 42(2) (March): 77-103.
- Bradshaw, Michael. 1992. Siberia Poses a Challenge to Russian Federalism. *RFE/RL Research Report* 1(41) (October 16): 6-14.
- Bradshaw, M.J. and N.J. Lynn. 1996. Resource-based Development: What Chance for the Russian Far East? Russian Regional Research Group Working Paper Series. University of Birmingham.
- Brock, Gregory J. 1999. Exploring a Regional Technical Efficiency Frontier in the Former USSR. *Economics of Planning* 32: 23-44.
- Bychkova Jordan, B., Jordan Bychkov, and R.T. Holz. Post-Soviet Change in a Yakutian Farm Village. *Erdkunde* 52(3): 219-31.
- Castells, Manuel and Peter Hall. 1994. Science City Blues. Innovation by Design? The Siberian Dream: Akademgorodok. *Technopoles of the World*. London: Routledge.
- Chichlo, Boris P. 1994. Deux Visages du Séparatisme Sibérien. *Revue des Etudes Slaves* 64(1) : 165-78.
- Considine, Jennifer I. and William A. Kerr. 2002. *The Russian Oil Economy*. Cheltenham: Elgar.
- De Souza, P. 1989. *Territorial Production Complexes in the Soviet Union-with Special Focus on Siberia*. University of Gothenburg.
- Dienes, Leslie, Istvan Dobozi, and Marian Radetzki. 1994. *Energy and Economic Reform in the Former Soviet Union: Implications for Production, Consumption and Exports, and for the International Energy Markets*. Basingstoke: Macmillan.
- Dobretsov, N.L., A.E. Kontorovich, A.G. Korzhubaev, V.V. Kuleshov, V.Ie. Seliverstov, and V.I. Suslov. 2001. Scientific Basis for Strategy of the Social-economic Development of Siberia. *Economics and Sociology* Vol. 4: 35-100.
- Eckardt, Sebastian. 2002. Russia's Market Distorting Federalism: Decentralisation, Governance, and Economic Performance in Russia in the 1990s. Discussion Papers of the Osteuropa-Institut der Freien Universität Berlin, Arbeitsbereich Politik und Gesellschaft Nr. 42. Berlin: Osteuropa-Institut.
- Ericson, R.E. 2000. The Post-Soviet Russian Economic System: An Industrial Feudalism? BOFIT Online No. 8. Helsinki: BOFIT.
- European Space Agency. 2003. Mapping the Siberian Forests. Available: http://www.esa.int/export/esaCP/GGG93AZTGEC_Protecting_0.html
- Flück, R. 1996. Baikalsee; Eine Literaturdokumentation zur Umweltsituation am Baikalsee. *Dokumentation Natur und Landschaft* No. 21.
- Fondahl, Gail. 1993. Siberia: Native Peoples and Newcomers in Collision. In *Nations*

- and Politics in the Soviet Successor States, eds. Ian Bremmer and Ray Taras. Cambridge: Cambridge University Press.
- Fondahl, Gail A. 1996. Contested Terrain: Changing Boundaries and Identities in Southeastern Siberia. *Post-Soviet Geography and Economics* 37(1): 3-15.
- Forbes, B.C. 1999. Land Use and Climate Change in the Yamal-Nenets Region of Northwest Siberia: Some Ecological and Socio-economic Implications. *Polar Research* 18(2): 1-7.
- Frühauf, M. and T. Meincl. 2003. Geoökologische Folgen der Sowjetischen 'Neulandgewinnung' in Südsibirien. *Geoöko* 24(1-2): 203-28.
- Gavigan, Robert J. 1996. Siberia's Environment: A Challenge to Traditional Thinking. *The Georgetown International Environmental Law Review* 8(2).
- Gaddy, Clifford G. and Fiona Hill. 2003. *The Siberian Curse: How Communist Planners Left Russia Out in the Cold*. Washington, D.C.: Brookings Institution Press.
- Gerloff, J. 1994. Nutzung und Gefährdung Borealer Wäldlandschaften Sibiriens. *Essener Geographische Arbeiten* Vol. 25: 59-78.
- Göler, D. 2002. Rückzug aus der Nördlichen Peripherie. Räumliche Konsequenzen der Abwanderung aus dem Hohen Norden Sibiriens. *Praxis Geographie* 32(1): 10-13.
- Habeck, J. 2002. How to Turn a Reindeer Pasture into an Oil Well, and vice versa. Transfer of Land, Compensation and Reclamation in the Komi Republic. In *People and the Land: Pathways to Reform in Post Soviet Siberia*, ed. Erich Kastan. Berlin: Reimer.
- Hanson, Philip. 1994. *Regions, Local Power and Economic Change in Russia*. London: The Royal Institute of International Affairs.
- Harter, Stefanie and Gerald Easter. 2000. *Shaping the Economic Space in Russia*. Aldershot: Ashgate.
- Heinrich, Andreas, Julia Kuszniir, and Heiko Pleines. 2002. Foreign Investment and National Interests in the Russian Oil and Gas Industry. *Post-communist Economies* 13(4): 495-507.
- Heintze, H-J. 1993. The Protection of Indigenous Peoples under the ILO Convention. In *Amazonia and Siberia: Legal Aspects of the Preservation of the Environment and Development in the Last Open Spaces*, eds. M. Bothe, T. Kurzidem, and C. Schmidt. London: Graham and Trotman.
- Heleniak, Timothy E. 1995. Economic Transition and Demographic Change in Russia: 1989-1995. *Post-Soviet geography* 36(7): 446-58.
- _____. 1997. Internal Migration in Russia during the Economic Transition. *Post-Soviet Geography and Economics* 38(2): 81-104.
- _____. 1999. Out migration and Depopulation of the Russian North during the 1990s. *Post-Soviet Geography and Economics* 40(3): 155-205.
- Herrmann-Pillath, Carsten. 2000. The Relation between Federal Government and Regions in the Russian Federation: the Perspective of Competitive Federalism and Recommendations for Reform. Wittener Diskussionspapiere Nr. 67. Witten:

- Fakultät für Wirtschaftswissenschaften.
- Hughes, James. 1994. Regionalism in Russia: The Rise and Fall of Siberian Agreement. *Europe Asia Studies* 46(7): 1133-61.
- Initiative for Social Action and Renewal in Eurasia (ISAR). 2003. *Siberia's Environmental Movement* (Spring). Give & Take.
- Karrasch, H. 1995. Sibirien: Naturressourcen, Nutzungsprobleme, Zukunftsperspektiven. *HGG-Journal* Vol. 9: 76-93.
- Kirkow, Peter. 1997. Economic Change in Novosibirsk Province: from Depressed Rust Belt to Siberia's Financial and Distributional Centre. Russian Regional Research Group Working Paper Series. University of Birmingham.
- _____. 1998. *Russia's Provinces: Authoritarian Transformation versus Local Autonomy?* New York: St. Martin's Press.
- Klüter, H. 1992. Regional Autonomy or Emigration - The Situation of the Germans in Siberia. *Geographische Zeitschrift* 80(3): 139-48.
- Klüter, Helmut. 1994. Sibirien und Kasachstan, Zwei Konkurrierende Rohstoffproduzenten. *Geographische Rundschau* Jg. 46, Heft 4, S: 208-15.
- Kotkin, Stephen and David Wolff, eds. 1995. *Rediscovering Russia in Asia: Siberia and the Russian Far East*. New York: M.E. Sharpe.
- Kouznetsova, Olga, Philip Hanson, and Douglas Sutherland. 1999. Reforming Centre-Region Budgetary Relations in Russia. Russian Regional Research Group Working Paper Series No. 17. Brimingham: School of Geography and Environmental Sciences and Centre for Russian and East European Studies.
- Lane, David. 1999. *The Political Economy of Russian Oil*. Lanham: Rowman & Littlefield.
- Lee, Jae-Young. 2001. The Trans-Siberian Bridge: Activation Opportunities. *Interperiodica* 12(6): 644-48.
- Liuhto, Kari. 2001. Russian Gas and Oil Giants Conquer Markets in the West: Evidence on the Internationalization of Gazprom and LUK Oil. *Journal of East-West Business* 7(3): 31-72.
- Locatelli, Catherine. Les Contraintes de la Politique D'exportation Gaziere de la Russie. *Revue de L'energie* 53(535): 141-52.
- Lynn, N.J. 1996. The Resource Base of the Russian Far East: the Potential for Regional Development? Russian Regional Research Group Working Paper Series. University of Birmingham.
- Makarychev, Andrei S. 2000. Islands of Globalization: Regional Russia and the Outside World. Working Paper No. 2. Zürich: Center for Security Studies and Conflict Research.
- Milanovic, B. 1997. *Income, Inequality, and Poverty during the Transition from Planned to Market Economy*. Washington, D.C.: World Bank.
- Meek, James. 1994. Siberia Loses its Soviet Safety Net. *The Guardian* (October 15).
- Meinhart, Berit, Christian von Hirschhausen, and Andreas Chollet. 2002. Russische Gasexporte in die EU: Optionen unter Einbeziehung der Transitlaender Ukraine

- und Belarus. *Energiewirtschaftliche Tagesfragen* 52(12): 814-17.
- Melvin, Neil. 1996. Regional Foreign Policies in the Russian Federation. London: Royal Institute of International Affairs, Post-Soviet Business Forum.
- Morse, Edward L. and James Richard. 2002. The Battle for Energy Dominance. *Foreign Affairs* 81(2): 16-31.
- Müller, Dieter. 1997. Regionalisierung des Post-sowjetischen Raumes, Arbeitspapier Nr. 6. Berlin: Osteuropa-Institut der Freien Universität Berlin.
- Murray, W.E. 1997a. Natural Resources in the Pacific-Asia Region: A Selected Bibliography. Russian Regional Research Group Working Paper Series. University of Birmingham.
- _____. 1997b. Forestry and Fisheries in Pacific-Asia Resource Depletion, Import Dependence and Potential Implication for the Russian Far East. Russian Regional Research Group Working Paper Series. University of Birmingham.
- Murray, W.E. and M.J. Bradshaw. 1997. Rising Tensions in the Natural Resource Markets of Pacific Asia and the Role of the Russian Far East: Focus on Energy. Russian Regional Research Group Working Paper Series. University of Birmingham.
- Musienko, Igor. 1994. Management Behaviour in Siberian Defence Enterprises. In *Adjustment Processes in Russian Defence Enterprises within the Framework of Conversion and Transition*, eds. Petra Opitz and Wolfgang Pfaffenberger. Münster: IIT.
- Nicholson, Martin. 1999. *Towards a Russia of the Regions*. Oxford: Oxford University Press.
- Nilsson, S., A. Shvidenko, and K. Blauberg, eds. 1996. Small Siberian Forest Atlas. IIASA Working Paper WP-96-151. Laxenburg: IIASA.
- Obersteiner, M. 1995. Status and Structure of the Forest Industry in Siberia, IIASA Working Paper XP-95-030. Laxenburg: IIASA.
- _____. 1998a. A Model for the Siberian Timber Products Market: An Engineering-Economic Approach. IIASA Working Paper XP-98-034. Laxenburg: IIASA.
- _____. 1998b. Siberia and Far East Russia's Future Wood Supply: An Analysis. IIASA Working Paper IR-98-001. Laxenburg: IIASA.
- Opitz, Petra. 1993. Chancen Regionaler Rüstungskonversion in Russland, Die Regionen St. Petersburg und Novosibirsk, Berichte des Bundesinstituts für Ostwissenschaftliche und Internationale Studien Nr. 39. Köln: Bundesinstitut für Ostwissenschaftliche und Internationale Studien.
- Opp, C. and D. Haase. 2000. Geoökologie in der Entwicklungszusammenarbeit. Geoökologische Untersuchungen zum Boden und Gewässerschutz in Südsibirien und in der Mongolei. Proceedings 52. Deutscher Geographentag Hamburg 1999.
- Portnov, Boris A. 1998. Social Attractiveness of the Urban Physical Environment: Cities of Siberia. *The Annals of Regional Science* Vol. 32: 525-48.
- Reymann, Sybille. 1992. Die BAM – ein Großprojekt der Sowjetwirtschaft vor dem Hintergrund von Perestrojka und der Erstarkung der Republiken. *Osteuropa Wirtschaft* 37(1): 77-92.

- Robinson, Paul and Gary Cook. The Gold and Uranium Mines of Siberia, Where Problems with Radioactivity Really Begin in Russia. Available: http://www.earthisland.org/project/reportPage2.cfm?reportContentID=13&sub_SiteID=1&pageID=71
- Sagers, Matthew. 1995. Prospects for Oil and Gas Development in Russia's Sakhalin Oblast. *Post-Soviet Geography* 36(5): 274-90.
- Sagers, Matthew J. 2001. Developments in Russian Crude Oil Production in 2000. *Post-Soviet Geography and Economics* 42(3): 153-201.
- Schmullius, C. and W. Wagner. 2000. SIBERIA - Kartierung Borealer Wälder mit Radarfernerkundung. *Geographische Rundschau* 52(12): 44-49.
- Schneider, Eberhard. 1999. Probleme des Föderalismus in Russland. *Bericht* Nr. 24. Köln: Bundesinstitut für Ostwissenschaftliche und Internationale Studien.
- _____. 2000. Putins Rezentralisierungsinitiativen. *Aktuelle Analyse* Nr. 29. Köln: Bundesinstitut für Ostwissenschaftliche und Internationale Studien.
- Seliger, Bernhard. 1999. The Double Integration: Siberia as part of Russia and Siberia as Part of North East Asia. Paper presented at the International Conference, Relations between Korean and Siberia, Korean-Siberian Economic Association, Seoul, November 27, Conference Proceedings.
- _____. 2000. Entrepreneurial Activity, Transition and Development – Some Lessons from Central and Eastern Europe, 1999 Yearbook of Hankuk University of Foreign Studies. Seoul: HUIS Press.
- _____. 2002. Towards a More General Theory of Transformation. *Eastern European Economics* 40(1): 36-62.
- _____. 2004. The impact of Globalization -- Chances and Risks for Russia as a Transformation Country. *Eastern European Economics* 42(1) (Januar/ Februar): 5-24.
- Shulga, Arina. 2001. Foreign Investment in Russia's Oil and Gas: Legal Framework and Lessons for the Future. *Journal of International Economic Law* 22(4): 1067-1103.
- Simonia, Nodari A. 2001. TIKR-TSR Linkage and Its Impact on ROK-DPRK-Russia Relationship. *Journal of East Asian Affairs* 15(2): 180-202.
- Smirnov, Nikolai E. 1994. Umweltpolitische Instrumente für die Erdölindustrie in Westsibirien. Münster: Lit.-Verlag.
- Stack, Graham. 1998. Neoinstitutionalist Perspectives on Regionalisation in Russia, Discussion Papers of the Osteuropa-Institut der Freien Universität Berlin, Arbeitsbereich Politik und Gesellschaft Nr. 21. Berlin: Osteuropa-Institut.
- Stadelbauer, Jörg. 1996. Regionen und Regionalismus in Sibirien und Ural. In *Regionalismus und Nationalismus in Russland*, hrsg. Andreas Kappeler. Baden-Baden: Nomos, S.
- Stavrakis, Peter J., Joan DeBardleben, and Larry Black. 1997. *Beyond the Monolith: The Emergence of Regionalism in Post-Soviet Russia*. Washington, D.C.: Woodrow Wilson Center Press.
- Strelezki, Wladimir. 2000. Desintegrationsrisiken und neue Regionalstrategie in

- Russland. *Bericht* Nr. 9. Köln: Bundesinstitut für Ostwissenschaftliche und Internationale Studien.
- Sutela, P. 2001. Putin's Second Year – and Beyond. *Russian Economy, the Month in Review* No. 5: 4.
- Sutherland, Douglas and Philip Hanson. 2000. Demographic Responses to Regional Economic Change: Inter-Regional Migration. In *Regional Economic Change in Russia*, eds. Philip Hanson and Michael Bradshaw. Cheltenham: Edward Elgar.
- Tanneberger, Thomas. 1997. Landwirtschaftliche Unternehmensentwicklung im Transformationsprozeß der Russischen Wirtschaft, Beispiel einer Kolchosgenossenschaft in der Kulunda-Steppe/Westsibirien, *Berliner Beiträge zum Genossenschaftswesen* 33. Berlin: Institut für Genossenschaftswesen an der Humboldt- Universität zu Berlin.
- Thornton, Judith. 2001. Institutional and Structural Change in Pacific Russia. *Comparative Economic Studies* 43(4): 1-8.
- Valencia, Mark. 1995. *The Russian Far East in Transition: Opportunities for Regional Economic Cooperation*. Boulder, CO: Westview Press.
- Wein, Norbert. 1996a. Die Westsibirische Erdgasregion, Erschließung und Weiterer Vorstoß in den Norden. *Die Erde* No. 127: 159-75.
- _____. 1996b. Die Westsibirische Erdölprovinz: von der "Boom-Region" zum Problemgebiet. *Geographische Rundschau* 48(6): 380-87.
- _____. 2002. Das Baikalsee-Ökosystem. *Geographische Rundschau* 54(1): 48-54.
- Welfens, Paul J.J. 2002. *Transformationskrise und Neue Wirtschaftsreformen in Russland*. Heidelberg: Physica-Verl.
- Wilson, E. 2002. Est' Zakon, Est' i Svoi Zakony: Legal and Moral Entitlements to the Fish Resources of Nyski Bay, North-Eastern Sakhalin. In *People and the Land: Pathways to Reform in Post Soviet Siberia*, ed. Erich Kasten. Berlin: Reimer.
- Yakimov, O.D. and J.F. Morrison. 1995. The National Press of the Indigenous Peoples of Siberia: Origins and Future Directions. *European Journal of Communication* 10(1): 109-26.
- Ziker, J. 2002. Land Use and Economic Change among the Dolgan and Nganasan. In *People and the Land: Pathways to Reform in Post Soviet Siberia*, ed. Erich Kasten. Berlin: Reimer.

ENDNOTES

- ¹ For the last three demands, it is important to recall the Russian distinction between the two Siberias and the Far East (see Bradshaw 1992) regional strategies for the two will differ.
- ² See the comparison of Milanovic 1997 and the discussion of the impact of globalization, Seliger 2004.
- ³ Again, it would be wrong to speak of a market economy in a Western sense. Observers spoke of Yeltsin's "Kremlin capitalism" (Blasi et al. 1997). While Putin's approach differs from that and some of the blueprints (especially from his advisor, Gref) do represent an improvement, the direction of his economic policy remains unclear. The key to understand Russia's economic system today is the incomplete transformation process with "islands of globalization" (Makarychev 2000), working in a market environment, and the large, untransformed remainder of the country.
- ⁴ This, however, is only true as far as businesses are not adversely affected by the lack of institutions promoting the rule of law (as long as legal business in the framework of a market economy is concerned) and the lack of an appropriate infrastructure.
- ⁵ This paper does not attempt to define "Western" in such a concept. The outlook of American scientists working in a government think tank on resources might be very different from that of a British scholar in a geographical department. It seems to have justified oversimplification despite the risks. The author presents a tendency of "Western" research. Among the research, an important part is done by the Russian researchers in Western research institutes. At the same time, this article does not claim to review all publications on Siberia, but gives an overview of the most important issues.
- ⁶ This does not say that a focus on problems of regional development always takes the form described above. For example, counterexamples can be found in the journal *Region: Economics and Sociology* of the Institute of Economics and Industrial Engineering of the Siberian Branch of the Russian Academy of Science.
- ⁷ To speak of a large group of publications is insofar misleading for the Western interest in Siberia is generally small. Of the fifty-seven publications listed with the keyword "Siberia" in the German Central Library for Economics at the Institute for World Economics at Kiel for the years 1999-2002, only four are non-Russian. An important part of the literature usage comes from geography, sociology and other social sciences rather than economic research.
- ⁸ Military spending alone (excluding the costs for personnel) reaches up to 12% of GDP. Additionally, heavy industry was favored for ideological reasons since the Bukharin-Preobrazhenski controversy in the 1920s and prestige goods of the state (like giant development projects in Siberia) used up much of the investment. The more positive feature of this restructuring was that the fall in production since 1990 was not accompanied by an equal steep fall in consumption.
- ⁹ A "bad institutional equilibrium" in institutional economics refers to a situation where actors' expectations about the state match the results (institutional stability), but where the results are economically undesirable. For example, an economy characterized by an important shadow sector, a low degree of law enforcement, demonetization, and low GDP growth rates.
- ¹⁰ The regions here could mean various research objects. While an analysis at the level of the three greater Siberian regions (Western, Eastern, and Far East) makes some sense in terms of finding out patterns for the whole of Siberia, analysis of institutional development is on the regions as actors (*krais*, *oblasts*, and *okrug*).