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**RUSSIAN REGIONAL
RESILIENCE: FINANCE,
COOPERATION AND RESOURCE
ABUNDANCE (A CASE STUDY OF
KHANTY-MANSIYSK)**

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**RUSSIAN REGIONAL RESILIENCE:
FINANCE, COOPERATION AND RESOURCE ABUNDANCE
(A CASE STUDY OF KHANTY-MANSIYSK)⁴**

This paper, part of a larger project on governance and growth in Russia, examines regional financial resilience in Russia in the period following the global financial crisis. The level of risk is rising, as government emergency finance is withdrawn and regions face rising debt to cover even operational expenses, but “resource” regions seem securely well off, despite having been most affected by the financial crisis. This paper examines one region, Khanty-Mansiysk autonomous okrug (KhMAO), the largest “donor” to the federal budget, against the background of other mineral resource abundant regions. It traces developments since the dramatic budget reforms (late 1990s through 2005), including centralization of revenues and rationalized program expenditure (Alexeev and Weber 2013). It assesses regional budget and debt management in response to pressures from increased federal required expenditures, post-crisis withdrawal of subsidies, and the roll-out of new debt guidelines. It describes and explains KhMAO’s stability and relative autonomy in these crisis conditions. The key questions are: Why are these “donor” regions, more affected by the crisis than others, also more resilient? Is Russia’s growth core of regions financially stable because of federal intervention? How vulnerable is the resource region to future oil price shocks? Our findings are tentative, since there remain questions about transparency and soft budget constraints (Plekhanov 2006). We show federalism at its most cooperative: among other factors, regional collaborative action fosters flexible budgeting.

JEL Classification: R580, R510, H700

Keywords: regional governance, oil-producing regions, fiscal federalism, economy, Russia, federal budget, federal and regional programs, budget reforms, investment strategies.

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Introduction

This paper, part of a larger project on governance and growth in Russia, examines regional financial resilience in Russia in the period following the global financial crisis. The level of risk is rising, as government emergency finance is withdrawn and regions face rising debt to cover even operational expenses, but “resource” regions seem securely well off, despite having been most affected by the financial crisis. This paper examines one region, Khanty-Mansiysk autonomous okrug (KhMAO), the largest “donor” to the federal budget, against the background of other mineral resource abundant regions. It traces developments since the dramatic budget reforms (late 1990s through 2005), including centralization of revenues and rationalized program expenditure (Alexeev and Weber 2013). It assesses regional budget and debt management in response to pressures from increased federal required expenditures, post-crisis withdrawal of subsidies, and the roll-out of new debt guidelines. It describes and explains KhMAO’s stability and relative autonomy in these crisis conditions.

KhMAO is clearly an outlier, as are most other resource regions. This can be seen in terms of budget flexibility, investment, and livelihood, which are generally depicted by more typical regions (less well off) in the enormous quantitative literature on Russia’s highly centralized fiscal federalism in the 83 regions (Treisman 2000, Ahmad and Tanzi 2002, Alexeev and Kurlyandskaya 2003, Ahrend 2005, Plekhanov 2006, Spilimbergo 2007, Akhmedjonov 2011, Berkowitz and DeJong 2011, Vartapetov 2011, Alexeev, Weber et al. 2013). From a look at both budget and credit management, however, it is important to observe and ask why, in regions of greatest growth potential, regional finance is so secure. It is in these “donor” regions, which were more affected by the crisis than others, that there is greater resilience in the medium term. Is Russia’s growth core of regions financially stable because of federal intervention? How vulnerable is the resource region to future oil price shocks? Our findings are tentative, since there remain questions about transparency and soft budget constraints (Plekhanov 2006). We shows federalism at its most cooperative: neighboring regional action fosters growth and stability.

We use a case study approach for a number of reasons. Most important, although there is a considerable quantitative literature on Russia’s fiscal federal system, as pointed out, we aim on a smaller scale to combine a study of budget and credit management with a closer look at a representative example in a particular group of regions.

A case study approach is widely used for conceptual clarification prior to and during statistical analyses of large data bases (Eisenhardt 1989, Ragin and Becker 1992, Geddes 2003, Gerring 2007). A case study isolates for closer examination either extremes in a trend, or a typical case. Since we examine the growth process and not, for example, inequality, we explore

regional finance in a territory especially vulnerable in its growth potential and not its general economic state.

The paper is organized as follows. The case study, broken down by sub-section, is in part 3. The introduction is followed by a review of the large literature on fiscal federalism, with emphasis on analysis appropriate to oil abundant federations. This sets a foundation for looking at KhMAO in comparative context. Russia's fiscal federalism is of scholarly interest within and beyond the borders of Russia in large part because of intense and continuing effective reform through the 2010s, improving the delivery of both equity and efficiency. We use this literature about ongoing centralizing reform, however, to the continuing diversity still apparent in regional finance and regulatory regimes across the enormous country (Commander, Plekhanov et al. 2013). We note in conclusion the importance of cooperation as well as competition among oil abundant regions, although exploring in any detail is beyond the scope of our research. The final section is a conclusion.

Literature Review: Fiscal Rigidity in Russia

There is wide agreement among researchers about fiscal rigidity on the revenue side of Russia's federalism. After the transformation of Russia's federalist system in the 2000s, revenues have been almost entirely centralized, with allocated funds to cover federal social policy along with other expenditures (Treisman 2000, Ahmad and Tanzi 2002, Alexeev and Kurlyandskaya 2003, Ahrend 2005, Plekhanov 2006, Spilimbergo 2007, Akhmedjonov 2011, Berkowitz and DeJong 2011, Vartapetov 2011, Alexeev, Weber et al. 2013). Revenues are collected centrally and allocated to regions by formula in transfers, earmarked grants, subsidies and other allocations, in turn partially allocated to districts and municipalities.⁵ Local government provides services in health, education and social welfare (Searle 2007). Reviewing the major budget reforms, Fitch ratings (28 September 2005) finds that:

... budgetary results showed increasing budgetary rigidity among the regions, the subordination of budgets to rapidly growing social spending and a lack of capital expenditure. Budget reforms have introduced a more structured system of public administration, but regional governments now operate under considerable constraints of having revenue sources reduced through centralization and responsibilities increased by

⁵See Table for a review of fiscal federalist development in Russia since 1991 Alexeev, M. V., S. Weber (2013). Russian fiscal federalism: impact of political and fiscal (de)centralization. London, Centre for Economic Policy Research Discussion Papers, No 9356. See also Vartapetov, K. (2011). "Russian Fiscal Federalism under Stress: Federal Support of Regions during the Global Financial Crisis." *Eurasian Geography and Economics* 52 (4): 529-542.

*higher social welfare targeted expenditures. The vital indicator is economic development-related expenditure as a proportion to total expenditure.*⁶

The important constraint is not the collection of revenues but the access to them through shared spending authority. The spending side, for all regions, has been pressed by President Putin's "May 7 decrees" in 2012, guaranteeing a standard of services, including a pay raise for government staff, and the provision of benefits to all citizens. To be sure, these decrees were not only a constraint but a benefit, promising greater efficiency, reduction of duplication and waste, monitoring of implementation of federal programs.⁷ Rigidity in the budget process, however, as Fitch points out, is important because it conflicts with another key priority objective: "At the same time, there is a clear policy to reduce regions dependency on federal revenues and stimulate greater tax initiative and new local resources"⁸. In other words, excessive centralization will inhibit local initiative in finding resources, which many economists find to be the key objective of government, as Qian and Weingast (1997, p. 84) maintain:

The state must maintain "positive" market incentives that reward economic success. When the government is tempted to take away too much income and wealth generated by the future success, individuals have no incentives to take risks and make effort today. In the terms of North (1990), this is the "state predation" problem. The state must also commit to "negative" market incentives that punish economic failure; if the government is tempted to bail out failed projects or continue costly, inefficient public programs, individuals have no incentives to avoid mistakes and waste. In the terms of Kornai (1986), this is the "soft budget constraint" problem (Qian and Weingast 1997).

An incentive orientation, in its largest significance, is an argument for decentralization that among advanced countries has mostly replaced the former "cooperative fiscal federalism" as the dominant approach to intergovernmental relations (Musgrave 1997) (pp. 65-66).

Russia's seemingly relatively inflexible budget therefore seems not entirely aligned with current trends. The history of Russian budget reform explains why. To end a decade of struggle with separatism, after 2000, the evolving post-Yeltsin state under President Putin sharply reduced political autonomy of regions. It ended—briefly reinstating and then ending, once more—direct gubernatorial elections.⁹ The government helped forget a single dominant party¹⁰ and

⁶ URL: http://www.fitchratings.com/creditdesk/press_releases/detail.cfm?pr_id=180771, accessed 27.01.2014.

⁷ For example, as implemented by prikaz, "O forme i sroke predstavleniia zaiavki na perechislenie subsidii iz federal'nogo biudzheta biudzetu sub'ekta Rossiiskoi Federatsii na sofinansirovanie raskhodnykh obiazatel'sv sub'ekta Rossiiskoi Federatsii, ot 7 maia 2012 g. N 606, Prikaz Ministerstva truda i sotsial'noi zashchity Rossiiskoi Federatsiiot 29 noiabria 2012 g. N556H.

⁸ URL: http://www.fitchratings.com/creditdesk/press_releases/detail.cfm?pr_id=180771, accessed 27.01.2014).

⁹ Direct elections of regional governors were reinstated in 2012, after being suspended in 2004, and a new law in 2013 gave regional legislatures the option of either direct election or a choosing from candidates proposed by the federal government.

¹⁰ Further reduction of choice is seen in one-party dominance in the regions of "United Russia" (Hale, 2006; Gel'man, 2008; Golosov, 2008).

bring to heel «regional authoritarianism», which was an obstacle to well functioning political and market institutions (Golosov, 2004; Stoner-Weiss, 2006). Centralization also brought economic reforms, by which small and medium scale enterprises were disadvantaged. Concentration in economic activity increased, as nation-wide companies penetrated local markets. The state actively intervened in the private sector, and it now owns two-thirds of the market capitalization in the Russian stock market (limited to four industries, energy (oil, gas, and electricity), banks, defense industries and transportation).¹¹ The government has centralized the investment oriented economic policy (Martinez-Vazquez and Boex 2001, Desai, Freinkman et al. 2005, Bahl, Martinez-Vazquez et al. 2006, Martinez-Vazquez, Timofeev et al. 2006, Martinez-Vazquez, Rider et al. 2008, Alexeev, Weber et al. 2013).

It is important to underscore that centralization has not resulted in the degree of uniformity that may have been envisioned in policy. The regulatory environment remains diverse and federal laws are still sometimes not well enforced,

...substantial inter-regional variation in terms of the quality of the business environment. The differences are particularly large in the areas of competition from the informal sector, access to physical infrastructure, access to land and tax administration (European Bank for Reconstruction and Development (2012), p. 43).

Thus centralizing budget reform continues. The historical and current regional revenue and expenditure system is described in detail in numerous articles (Siluanov, Kadochnikov et al. 2009, Vartapetov 2010, Siluanov 2011, Vartapetov 2011, Alexeev, Weber et al. 2013, Mamedov, Nazarov et al. 2013), and in a magisterial chapter in the Oxford Handbook of the Russian Economy (2013) (Alexeev, Weber et al. 2013). Emphasis on key developments before 2002 can be found in Desai, Freinkman et al (2005) and (Lavrov et al. 2001). Briefly, to review Russia's budget reform history: under President Putin, the government eliminated most of the disadvantageous bilateral tax treaties between the federal government and the regions, which were no longer justified in a more unified state (Zhuravskaya and Handelshögskolan i Stockholm. Östekonomiska 2000, Martinez-Vazquez and Boex 2001, Solanko 2001).

The results are as follows: 100 percent of the VAT was recentralized (in the 1990s), along with 80% of the oil and gas extraction tax, leaving by 2012 one quarter of the revenue base of regions from the corporate profit tax (including on resource industries) and personal income tax (28%), approximately the same percentages regional revenues from these sources in Canada. The property tax represents, on average, some 9% of regional revenues (2011), amounting to 1.9

¹¹ Dresen F. Joseph, "The role of state corporations in the Russian economy," Kennan Institute, 1 October 2012, Washington D.C., (URL: <http://www.wilsoncenter.org/publication/the-role-state-corporations-the-russian-economy>, accessed 27.01.2014)).

% of GRP, roughly in line with property taxes elsewhere.¹² Total regional tax revenues in Russia amount to roughly 11% of GRP (Siluanov, Kadochnikov et al. 2009, Vartapetov 2010), again, comparable to other states (Canada, 12.1%, Australia, 4%; Germany, 7.9%; and the US, 5%)¹³. As in other countries, expenditures are allocated by equalization grants (mainly for balancing the budget), earmarked grants (including unconditional grants for center delegated spending (subventions) and earmarked matching grants (subsidies) for priority federal programs, and compensation grants to adjust distribution of these allocations (Vartapetov 2011).

The main result of these reforms, we argue, is considerable standardization of Russia's budget process. Budget centralization, arguably, is too often assumed to be synonymous with political recentralization. Instead, some recentralization has been a natural evolution in Russian governance, similar to all other transition economies, both unitary and federalist. Among results of standardizing reform, for example, is that regions tend to retain a generous share of total revenues (in consolidated budget). It has varied since the start of reforms from 38 and to 51%, and in 2011, it was 46.8%. This is well within the range of tax shares allocated to sub-national governments in most federations, with the figure of 34% in the US to 44% in Canada (Blöchliger and Rabesona 2009) (Table 2, p. 5). The budget rules are fairly transparent although adjusted every year (Shleifer and Treisman 2005, *Unleashing the Potential* 2006, Hauner 2008, Kondrat'eva 2008, Siluanov 2011).

In summary, partial centralization is usual in federations. Revenue collections are centralized including for efficiency of the collection process. This also prevents "beggar-thy-neighbor" outcomes and mis-allocation of factors of production produced by autonomous budgeting and general inefficiency (Christenko 2002, Sakwa 2004, Chebankova 2008, Alexeev, Weber et al. 2013).¹⁴ Centralized revenues allows adjustment of trade-offs between centralization and decentralization (Trujillo, Martinez et al. 1986, Mello 2000, Iimi 2005, Sepulveda and Martinez-Vazquez 2011, Hatfield and Miquel 2012, Alexeev, Weber et al. 2013). For example, the federal level must take responsibility for equalization, as required, and have the resources to do so over the long run. Two examples illustrate the extent of centralization for federations and show the range: in Australia, horizontal fiscal imbalance drives a strong trend toward centralization, with revenue sharing and allocations by formula (according to measures of regional fiscal capacity) in transfers, grants, subventions and subsidies to sub-national governments. By contrast, in Canada, problems of asymmetry have resulted in more autonomy of regional revenues: mining royalties are allocated to the regions, for example, a considerable source of revenue from non-renewable

¹²0.5 to 1.5% of GRP , <http://stats.oecd.org/Index.aspx?DataSetCode=REV>.

¹³See footnote 12.

¹⁴ Ahmad and Mottu (2003), p. 3; Broadway and Shah (1994); McLure (1983); Ter-Minassian (1997);

resources that is missing in Russia's regional budgets. Also, Canada removes restrictions on how provinces can raise money, and the federal level has taken over the unemployment program. In Canada, mineral resource abundant regions thus have considerably more autonomy than in the Russian Federation. Even so, all of these federations experience political pressure from provinces, some favoring more autonomy and some, more equalization.

To continue, it is especially where endowments are uneven, as in Canada, Russia and Australia, that most taxes on energy production and export collected at the federal level, since the federal level can better absorb the uncertainty and volatility of oil prices. Searle (2007, p. 11) summarizes: "the usual starting point in an allocation of revenue sources between levels of government is that the level with the greatest fiscal capacity has the best tools for overcoming fluctuations in revenue collections." In this regard, taking oil extraction revenues away from the regions is a preferred option: it promises to incentivize more efficient use of the profit, or corporate income, tax, to diversify expenditures (Cottarelli, 2012). With oil, the aim is to mitigate the threat of a regional "curse," a phenomenon having a political aspect, where influential lobbies secure tax privileges that affect regional budgets (Sachs and Warner 2001, Papyrakis and Gerlagh 2007, Alexeev and Conrad 2009, Freinkman and Plekhanov 2009, Walker 2013). Centralization aims to mitigate the curse, while guaranteeing comparable services at comparable taxation and providing "insurance" for region-specific shocks.¹⁵

In regard to spending, similarly, Russia's federation provides a range of transfer amounts: in 2012, for example, in Russia, officially recorded transfers from the federal to regional level averaged 20.8% of total income, but the range was 86.4% (Republic of Ingushetia) to 4.9 % (Khanty-Mansiysk autonomous okrug).¹⁶ Among sources of support during the crisis for the regions in Russia has been the Fund for Financial Support to regions with high deficits, and for social expenditures. It is difficult to determine the "system" of allocations: rules exist, but they are not always public information (Siluanov, Kadochnikov et al. 2009, Vartapetov 2010). IN general, these transfers consist of: (1) equalization grants, or formula-based grants aimed building capacity to deliver country-wide a standard level of services; (2) earmarked unconditional grants to finance center-delegated spending and earmarked matching grants designed to co-finance regional expenditures the federal government considers important; and (3) compensation grants, or one time unconditional grants adjust above allocations (Vartapetov 2011).

The rigidity of recent decline in subsidies following the end of financial crisis is not a

¹⁵Otto, J. (2001). Fiscal Decentralization and Mining Taxation. Washington, D.C., World Bank Mining Group, Bishop, G. and A. A. Shah (2011). Fiscal Federalism and Petroleum Resources in Iraq. Obstacles to Decentralization: Lessons from Selected Countries" (Cheltenham, UK: Edward Elgar, 2011) 549. J. Marquez and F. Vaillancourt. Cheltenham, UK, Edward Elgar.

¹⁶ Data regarding regional budgets are from the database of the Russian Federation Ministry of Finance and as reported by the Russian state statistical agency (Rosstat).

specifically “Russian” phenomenon. Even in advanced economies, it is no easy matter to demonstrate that decentralization is effective in producing growth (Iimi 2005, p. 449). KhMAO seems one of those few regions (some 30% in the EU) likely to use transfers to promote growth: normally this kind of effect is only expected where human capital is significant and institutions are strong.¹⁷ In such economies, decentralized decision-making primarily is used to build community-government relations. However, the impact on growth is uncertain (Allers and Ishemov 2011).¹⁸ In Russia, equalization is aimed to resolve both the inadequacy of some territorial administration in the post-Soviet era as well as deeply embedded informal networks that do, indeed, allow “rentier” regions (those with mineral resource abundance) to still derive some rent revenue from “explicit and implicit taxation of extraction of mineral resources, primarily oil and gas”(Desai, Freinkman et al. 2005, Freinkman, Plekhanov et al. 2005, Kumar, Leigh et al. 2007). It is also important to note, that in Russia, there is a current expectation that the government will supply services and there is support for the May decrees.¹⁹

By 2011, it was evident that fiscal regimes in the regions had successfully passed the “stress test” of the financial crisis (Vartapetov 2011). By 2013, the funds extended during the crisis were dramatically cut back incomes of regional budgets for the first 8 months of 2013, transfers were 7% lower than in the previous year; corporate income tax also fell by 20% less.²⁰ Regions were encouraged to rely on credit to cover deficits. Regions (and municipalities) began borrowing more heavily, albeit within strict limits, and some regions were allowed to do so on international capital markets (Martinez-Vazquez and Searle , Martinez-Vazquez and Timofeev 2008). This helped by 2011-2012 in reducing financial transfers to the weaker regions and fostered hope of ending regional “dependency” on “non-reimbursable [bezvozmezdnye]” federal subsidies (see Appendix Table 1). In its review of the budget in 2012, the Accounts Chamber of the Russian Federation has recommended even more income to the regions, since

¹⁷ Ordinarily, it would not be expected that all or even most regions can turn transfers (targeted in Objective 1 in the EU, for example, or funds for the poorest regions) into growth. A study reported for the EU in 2013, found “Only about 30 percent and 21 percent of the regions—those with sufficient human capital and good-enough institutions—are able to turn transfers into faster per capita income growth and per capita investment, respectively.” See Becker, S. O., P. H. Egger and M. von Ehrlich (2013). “Absorptive Capacity and the Growth and Investment Effects of Regional Transfers: A Regression Discontinuity Design with Heterogeneous Treatment Effects.” *American Economic Journal-Economic Policy* 5(4): 29-77.

¹⁸ Arguments in favor of decentralization-- effective governance, preservation of cultural and ethnic identity, and growth are not always based on an empirical foundation. See Rodriguez-Pose, A. and R. Sandall (2008). “From identity to the economy: analysing the evolution of the decentralisation discourse.” *Environment and Planning C-Government and Policy* 26(1): 54-72. In any case, as Musgove (1997, p. 66 shows, a country’s particular objectives determine the degree of devolution: “the case for or against devolution cannot be made in general terms. Distinctions have to be drawn between the various taxing and spending functions which government performs.”

¹⁹ Population surveys of how budgets are implemented show some positive results. Surveys show only 35% was satisfied with administrative effectiveness in de facto privatized health care, but 63% was satisfied in the sphere of education. “Ob otsenke effektivnosti deiatel’nosti organov ispolnitelnoi vlasti subjektov Rossiiskoi Federatsii,” as determined by regulation of 15 April 2009, 2011, no 322.

²⁰ Cherniavskii A., “Regioinal’nye biudzhety v period stagnatsii,” *Novyj KGB (Kommentarii o Gosudarstve i Biznese)*, Centre of Development Institute, National Research University - Higher School of Economics, 5–18 October 2013, (URL: http://www.hse.ru/data/2013/10/23/1280159682/bd_13-16.pdf, accessed 27.01.2014).

regional indebtedness was rapidly becoming the main issue.²¹ Current reform emphasizes independence on the part of regions, local initiative in attracting investment resources, competition among regions, and greater efficiency (Siluanov 2011).²²

Case study: Khanty-Mansiysk autonomous okrug

Background: Resource Regions in Russia

Risk in oil abundant regions is generally viewed as a potential curse, similar to how it is viewed for countries: it can lower the rate of growth level over the long term and hollow out the non-oil sector (Sachs and Warner 2001, Papyrakis and Gerlagh 2007, Alexeev and Conrad 2009, Freinkman and Plekhanov 2009, Walker 2013). Alexeev and Conrad (2009) argue that empirically in a survey of countries this threat is not born out.

Certainly, in regard to regions of Russia the sustained rapid pace of growth of the ten leading (resource rich) regions from 1992 is clear: the pace of growth in these regions in 1992 exceeded those in the slowest growing regions by 2.5 times; in 2000 the ratio was 3.2 times. They are still growing steady with budgets in surplus, low debts and an enviable standard of living. These regions have led others in attracting investment. To be sure, there is a threat. If the oil sector loses its productive potential and/or oil prices dramatically fall, the region could suffer a number of consequences: a plunge in the corporate and private income tax, outmigration of highly mobile unemployed labor and decreased productivity of fields and mines.

In regard to public administration, budgets are fragile because they are dependent on the profit tax. The budget of KhMAO in 2012, this tax formed 40.6%, and in 2013-2015, 43.5% of okrug revenues.²³ The extent of revenues from the profit and income tax is characteristic for “resource regions,” characterized by a significant endowment of globally traded natural resources, unusually adverse natural and climatic conditions creating high transport costs; steep infrastructure (including transportation) requirements for production; low population density and extensive casual migrant labor. An exacting taxonomy is debated, but most simply, they are a

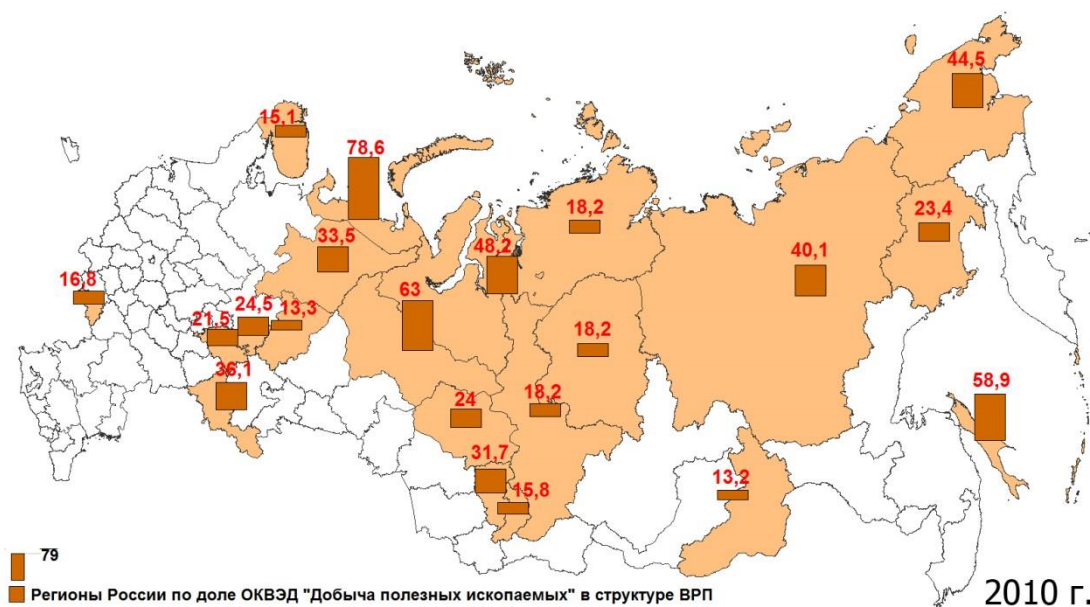
²¹ The Accounts Chamber of the Russian Federation recommended that regional allocations from taxes be increased in percent, that only regions be allowed to establish tax exemptions for firms (a loss in 2012 of some 200 bln rubles to the regions from federal regulations), and that—as soon as the cadastral survey was complete—that individual property tax on expensive real estate be raised. *Zakliuchenie Schetnoipalaty Rossiiskoi Federatsii inaproekt federal'nogo zakona “O federal'nom biudzhete na 2013 god i naplanovyi period 2014 i 2015 gg.”* (8 October 2012), No ZAM, 26/01, (protocol ot 5 oktiabria 2012 g. No 41K (874), Accounts Chamber of the Russian Federation, pp. 263-267.

²² *Diversifying Russia* (EBRD 2013) shows results from the World Bank survey from 2012, the Doing Business Subnational survey, covering 30 Russian cities for region-specific regulations and practices that matter most: starting a business; dealing with construction permits; registering property; and gaining access to electricity and for the latest round of the Business Environment and Enterprise Performance Survey (BEEPS) carried out by the EBRD and the World Bank (the fifth round of that survey (2011-12), covering about 4,000 manufacturing and service sector firms in Russia, with respondents in all federal districts and representative samples for 37 of Russia's 83 regions.²

²³ V. V. Korosteleva and T. A. Kurbanova, “Rol' nalogov v ykh dokhodov v biudjete subjekta RF (na primere Khanty-Mansiyskogo Avtonomnogo Okruga - Yugry),” SiBAK, (URL: <http://sibac.info/index.php/2009-07-01-10-21-16/4315-2012-10-22-04-02-12>, accessed 27.01.2014).

group of regions whose resources attract investment and high skilled, mobile labor (Polynev 2010, Demina and Vlasiuk 2012, and Mikheeva 2009). The following Figure 1 maps these regions by share of Oil and Gas production industry in total GRP:

Figure 1. Share of Oil and Gas production industry in total GRP in resource regions of the Russian Federation (%)



Source: Ilyina I. N. Outlook toward the future development of primary producer regions of Russia as expressed in the documents of strategic planning // Journal «Public Administration Issues». 2013. № 2. p. 87.

Compiled from statistical yearbook "Regions of Russia. Socio-economic indicators. 2012" (Federal state statistics service) by Evgenij Plisetskij

For our budget comparisons for Khanty-Mansiysk, we select among them 8 regions with production of oil and gas at over 40% of total GRP²⁴, as in Table 1 below.

²⁴The strategy of chemical and petrochemical industry development in Russia up to 2015. Ministry of industry and trade of the Russian Federation (URL: <http://www.minpromtorg.gov.ru/ministry/strategic/sectoral/6>, accessed 27.01.2014); The concept of socio-economic development of the Russian Federation for the period up to 2020. Order of the Government of the Russian Federation from November 17, 2008 N 1662-R; Strategy 2020, «New growth model - new social policy»; The concept of socio-economic development of the Tyumen region for the period till 2020 and on prospect till 2030; Program of socio-economic development of the Republic of Sakha (Yakutia) for the period till 2025 and the main directions till 2030. Draft law of the Republic of Sakha (Yakutia) «On the Program of socio-economic development of the Republic of Sakha (Yakutia) till 2025 and basic trends to 2030»; Strategy of socio-economic development of Arkhangelsk region for the period till 2030; Strategy of socio-economic development of the Kemerovskaya region for the period till 2025; The draft Strategy of socio-economic development of the Nenets Autonomous district for the period up to 2030; Strategy of socio-economic development of the Orenburg region for the period till 2020 and on prospect till 2030; Strategy for economic and social development of the Komi Republic for the period till 2020; Strategy of socio-economic development of Sakhalin region for the period till 2030; Strategy of socio-economic development of the Khanty-Mansiysk Autonomous Okrug - Ugra for the period till 2020 and on prospect till 2030.

Table 1. Resource Regions of the Russian Federation (Oil and Gas Producers)

Russian regions	Share of Oil and Gas Production in total GRP, %
Russian Federation	11.4
Nenetskii autonomous okrug (located within Arkhangelsk region)	78.5
Khanty-Mansiysk autonomous okrug (located within Tiumen' region)	67.2
Sakhalin region	60.9
Tiumen' region	52.2
Yamalo-Nenetsk autonomous okrug (located within Tiumen' region)	48.3
Kemerovo region	35.1
Republic of Sakha (Iakutia)	43.7
Chukhotskii autonomous okrug	41.8

Source: Rosstat 2012

All of these regions have a substantially larger than average per capita income—for KhMAO, for example, living standards are even potentially higher than in Moscow city. Located within but not completely included in Tiumen' oblast—KhMAO is a so-called “composite region”, along with Yamalo-Nenets—it retains some autonomy although provides to Tiumen' some revenues for this special arrangement. KhMAO is among seven regions (including Moscow and St Petersburg) at an investment-grade rating, with two rating agencies, permitted, in principle, to obtain funds in international capital markets, where interest rates are considerably lower (8-10%) and repayment extends over a longer period (3-5 years). KhMAO is among three regions actually doing so.²⁵ The following Table 2 shows its relatively high standard-of-living at a level between that of Moscow city and that of the rest of Russia:

Table 2. Standard of Living Indicators, 2011, Khanty-Mansiysk Autonomous Okrug, Moscow city, Russian Federation average

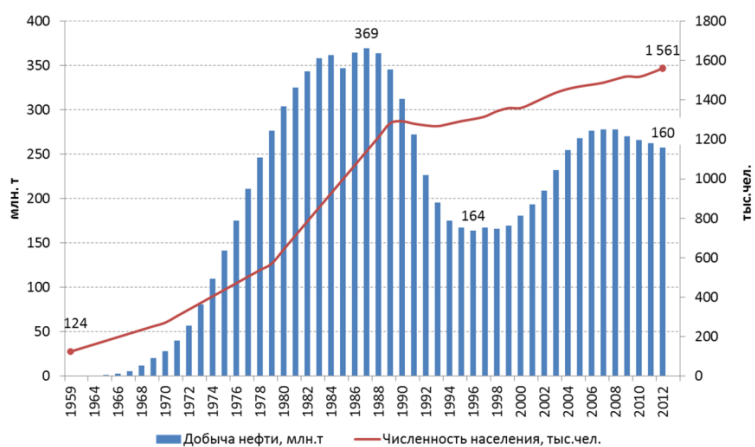
	Average per Household Member, Rubles per Month					Percent Households on Internet	Average per Household Member, Rubles per Month		
	Disposable Income	Consumption	Expenditure on Food	Expenditure on Non-Food items	Expenditure on Services		Income Poor Households,	Income Extremely Poor Households	Minimum Sustainable Monthly Income
Russian Federation	15816	10460	3250	4178	2615	53	4858	2637	6090
City of Moscow	25629	21145	4720	8220	6900	82	8287	NA	8656
Khanty-Mansiysk AO	27061	15278	3240	7112	4494	71	7094	3073	5234

Source: *Regions of Russia. Social and Economic Indicators. Federal State Statistics Service. 2013*

²⁵ Margarita Panchenkova, “Fitch: regionam nuzhno zanimat' za granitsej” (6.12. 2013), Vedomosti; (URL: <http://www.vedomosti.ru/finance/news/19744291/ukazy-putina-oplatyat-inostrancy#ixzz2rckm3x76>, accessed 27.01.2014).

Population trends are stable in KhMAO, despite a relative decline in oil extraction, as shown below in Figure 2.

Figure 2. Oil Extraction and Population, KhMAO, 1959-2012



Source: Research work on the Expert support to the completion and presentation of the project of Strategy of social-economic development of the Khanty-Mansiysk Autonomous Okrug-Ugra till 2020 and till 2030 made by the order of JSC «Siberian scientific-analytical centre»²⁶.

Among these regions, KhMAO is the leader. Among implications of this position is the profit tax from the oil and gas sector, making up some 95% of KhMAO operating income in 2012. Taxes of the major oil and gas companies comprised 52.1% of total revenue in 2012 (51.5 % in 2011).²⁷ Falling extraction at major fields and a dip in the share of oil in GRP to less than half (43.6%) is a cause of concern, but it will barely dent KhMAO’s leading position among the regions and in the world. Indeed, in the longer run, investment will no doubt reverse this trend. Here is the forecast: by 2030, according to the region’s Energy Strategy to 2030, annual production of oil will fall at a minimum from 260 to 222 million tons, and more likely, to 196 mt, as costs of extraction increase due to flooding and technological challenges.²⁸ It is not that technologies are unavailable—this is a global industry. It is that these technologies, hydraulic fracturing , horizontal drilling , three-dimensional seismic modeling, are especially costly in the initial stages. Thus arises pressure on the region to enhance investments, attract exploration, and take measures to insure economic well being under volatile price conditions. There is little chance of such a threat exceeding Russia’s capacity to solve it: these concerns attract as a priority cooperation of regional governors and ministry officials and past and representatives of the oil companies, who meet informally as a " Board of Directors of Ugra", discussing,

²⁶ Contract № 7\06-12 of April 17, 2012, National Research University-Higher School of Economics

²⁷(URL: http://www.fitchratings.ru/rws/press-release.html?report_id=804352, accessed 27.01.2014)

²⁸RIA Novosti (19/04/2013), “Vlasti Jugry ishnut sposoby sderzhat' padenie neftedobychi v regione”; (URL: <http://m.ria.ru/analytics/20130419/933482745.html>, accessed 27.01.2014).

essentially, policy options for the country as well as the region.²⁹

Background: Post-Crisis Finance in Russia's Regions

There is a general optimism about long run regional growth, as expressed at Davos 2014.³⁰ At the same time, however, accumulating regional government debt in the short term is also of widespread public concern.³¹ N. Zubarevich, a regional expert at Moscow Lomonosov State University (2013):

...regional budgets are buckling. Revenues in the first half of 2013 decreased due to a 20% decline in profit tax revenue and a 15% cut in federal budget transfers. Meanwhile, spending grew 5% to fulfill the president's promises to increase public sector wages. Budgets are running deficits in two thirds of all regions, and aggregate regional and municipal debt has surpassed 25% of (tax and non-tax) revenue. The regions are reducing investment spending, but it's not enough....the decline in public sector employment is accelerating. ...Laid off workers have difficulty finding another job.”³²

Debt measures about 20 to 25% of income of Russia's regions. Regional rating reports, carried out by RIA rating, Fitch and S&Ps, and the publication of Ministry of Finance open access data, show the importance of these data. RIA Rating (12 March 2013) reported that the total public debt of all sub-national entities increased by 15.6% in 2012 and on January 1, 2013 amounted to 1.335 trillion rubles. Similarly, S&P flagged its concern. Ministry viewpoints were “excessively optimistic,” it wrote; a decline in the profit tax cast doubt on Ministry forecasts of 8-10% growth of regional revenues over 2014-2016. “The regional deficit will rise to 3 trln rubles more than planned, double the current amount.” It goes on, “the regional gap will widen and in half of the regions, debt will exceed 60% of operational income (as it does now in 15 regions), and average debt service will reach 10% of revenues and in half of the regions, over 15%.”³³

²⁹ Ibid.

³⁰ http://riarating.ru/regions_study/20130312/610544708.html; Russia's Regions: Drivers of Growth project, see (URL: <http://www.weforum.org/content/global-agenda-council-russia-2012-2014>, accessed 29.01.14); G. Evstigneyeva, “Davos Experts Urge Russia to Focus on Regional Development,” Russia Beyond the Headlines, 24.01.14, (URL: http://rbth.ru/business/2014/01/24/davos_experts_urge_russia_to_focus_on_regional_development_33491.html, accessed 29.01.14).

³¹ Debt was to cover the impact of a simultaneous cut in subsidies and budget deficit from the rise in obligations from the “May decrees”: “It was especially difficult to bear the cost of increased pay for teachers and doctors to the level of average regional salaries. According to the Ministry of Finance of the Russian Federation, by 2013, sub-national entities (excluding Moscow city and Moscow Region) in this year alone an extra 337.4 billion rubles are required, but 209.1 billion rubles were allocated. The Audit Chamber of the RF summarized, according to a survey of 78 regions, that just to cover increased salaries of state administrators, 773.5 billion was needed, but 623.4 billion had been allocated. The budget deficit for those regions was 150 billion.” D. A. Vavulin, S. V. Simonov, “Obligatsionnye zaimy kak alternativnyy mekhanizm financirovaniya defitsita regional'nykh biudzhetrov,” 2013, Finansikredit, Fondovyrynok (42), 570: 32.

³² N. Zubarevich, Vedomosti No.175 (3437) September 24, 2013 What's Next for the Four Russias?

³³ “Defolt shagaet po strane: k 2015 dolgi regionov udvojatsja” Finmarket (11.12.2013), (URL: <http://www.finmarket.ru/main/article/3574451>, accessed 25 Jan 2014);

It should be noted that these averages have ambiguous meaning. The wealthiest regions have most of the outstanding regional bonds: Moscow, Krasnoyarsk, Nizhnyi Novgorod, Samara and Moscow oblasts (64%), regions that can easily cover obligations.³⁴ Also, the term structure of obligations and debt service matter.³⁵ Russia's debt service is high, about 10% of revenues compares in the US to an average of 5%, the ceiling for state debt, although many states have debt one or 2 percent more.³⁶ To what extent is debt a concern for the region in this case study?

KhMAO in 2014

Resource regions have a low level of debt to income, far less than the average than 10% of income.³⁷ The budget and debt data for Khanty-Mansiysk (2005-2011) provided in the Appendix, Tables 1 and 3, allow comparisons, and these similarities show up among the well-off resource regions. This better than total debt figures on average for all regions in the country, but even these are low by international comparisons.³⁸ One or two regions are in great difficulty; most resource regions, including KhMAO, have weathered a difficult period without running into too much debt.

Appendix, Table1, also shows that reforms have brought total revenue shares of each category of tax for these regions increasingly into conformity. They are within a narrow range in the years after 2005. In one area, greater or less income are still derived from transfers from the federal level; in this regard, Orenburg and Sakha differ substantially from KhMAO, which derives a very small percent of its budget from transfers.

In regard to the ratio considered by Fitch as critical in regard to rigidity, the ratio of economic spending to total expenses of the consolidated budgets³⁹, in the Appendix, Table 2, in six out of eight of the selected resource regions, there was a rise in this ratio between 2000 and 2011. Among again, there is a general narrowing or a trend.

³⁴ http://riarating.ru/regions_study/20130312/610544708.html.

³⁵ Cherniavskii A., "Regional'nye biudzhety v period stagnatsii," Novyj KGB (Kommentarii o Gosudarstve i Biznese), Centre of Development Institute, National Research University - Higher School of Economics, 5–18 October 2013, (URL: http://www.hse.ru/data/2013/10/23/1280159682/bd_13-16.pdf, accessed 27.01.2014).

³⁶ T. Dinopoli, "Debt Impact Study: An Analysis of New York State's Debt Burden" (Office of the State Comptroller, January 2013), p. 30; <http://www.osc.state.ny.us>.

³⁷ I. Granik, L. Samarina, "Dolgi regionov prevysili ikh dokhody," (12.03.2013) Moskovskie novosti, (URL: http://mn.ru/business_economy/20130312/339615887-print.html, accessed 27.01.2014).

³⁸ In 2013, oil producing regions had far less debt (Yamalo Nenets AO, for example, 0%) than others, at one extreme—Mordovia (179%), Vologda oblast' (92%), and Riazan (91%); ten regions have debt over 70% of their income; 19 from 50 to 70%. The reasons for such high debt vary. Some regions (Mordovia and Samara) claim that agriculture remains weak; others that fulfilling federal promises of services and increased salaries has been difficult. For all regions, the average level of debt is 26% of GRP (1/1/2013), and in the view of the Ministry of Finance, this is relatively low in a global perspective. See "Regiony Rossiipogriazili v dolgakh," Kriziskopilka (23 February 2013), (URL: <http://krizis-kopilka.ru/archives/9618>, accessed 27.01.2014); "Dolgi regionov prevysili ikh dokody," Newsland (12 March 2013), <http://newsland.com/news/detail/id/1140285/>; "Reiting sotsial'no-ekonomicheskogo polozheniia regionov Rossii – 2013," Ria reiting (10 June 2013), (URL: http://riarating.ru/regions_study/20130610/610567066.html, accessed 27.01.2014).

³⁹ Expenditure commitments of the section "national economy" are determined by Federal laws, decrees of the President of the Russian Federation, resolutions of the Government of the Russian Federation on extraction and use of mineral resources, development of agriculture, forestry and water economy, transport, road management, communications, science and scientific and technical policy, space activities, Federal target programs, as well as international agreements and treaties. (URL: <http://www.protown.ru/information/hide/6374.html>, accessed 27.01.2014)

In summarizing the significance of the example of KhMAO, among resource regions, it is important to return to the impact of the crisis and the resilience afterward. The profit and income tax fell, in some regions (Chelyabinsk and Kemerovo) by 90%. The well off resource regions, including KhMAO, suffered most (Iandiev 2013). Meanwhile, other regions, which had generous federal support, experienced no impact of the crisis. After recovery, the regions with now diminishing support from the center were in a worse position than those affected, where the liquidity of banks quickly recovered and oil and gas firms' profits rose, once again for the resource regions.

Priorities for 2014-2016 for KhMAO were ambitious, including repeated assurances of fulfilling the May decrees of 2012 and the creation of a fund for capital investment. Tax objectives for KhMAO are aligned with federal interest and long-run modernization and diversification; significant property tax breaks are now given to small and medium size enterprises, to incubators that promote them, to non-profits with socially oriented objectives, to production that reduces environmental risk, to organizations that rent property for affordable housing, and to firms producing gas by fracking.⁴⁰ Even more ambitious is the effort among resource regions to increase the share of corporate taxes allocated to regions (of the 20% tax, 2% is currently given to the federal government); a broad lobbying effort including Urals and Siberian governors has led to a law giving the regions the entire 20%, which is making its way through the Russian parliament.⁴¹

Bargaining and informal arrangements (public/private and intergovernmental) are notoriously difficult to follow, as some regions seek amendments to legislation.⁴² It is at the level of the region and blocks of regions that tax policies of enormous importance are made. The case of one resource region cannot be convincing of the overall dynamic. However, although this study shows that there will be no likely slimming of federal programs, and that federal guidelines are prominent among Regional tax and budget documents preparing for the long-run budget, this is not the whole story.

⁴⁰Rasporiazhenie, Ob Osnovnykh napravleniiakh nalogovoi politiki Khanty-Mansijskogo avtonomnogo okruga – Iurgyna 2014 god I naplanovyi period 2015 I 2016, Pravitel'stvo Khanty-Mansijskogo avtonomnogo okruga – Iurgy (9 avg 2013 g.), N 405.

⁴¹Zakonoproekt No 389323-6 "O vnesenii izmenenii avstat'iu 284 Nalogovogo kodeksa Rossiiskoi Federatsii," Nalognapribyl' ot dadut' regionam," Volgogradskoedelo vo etelevidenie, <http://vd-tv.ru/news.php?12874>; P. Perepilitsa, "Tiumenskii deputat ykhotiat izmenit' Nalogovii biud'zhetnikodeksy (7 Nov. 2013), Vslukh.ru; (URL: <http://www.vsluh.ru/news/politics/274084>).

⁴²The informal power of local elites is a classical concept in political science from Dahl, R. A. (1961). *Who governs? Democracy and power in an American city*. New Haven, Yale University Press. However, advanced economies have tended to promote transparency as a main goal; in Russia, the budget process scarcely restrains the power of interests at the regional level and, particularly, in discretionary parts of federal finance. See *Diversifying Russia* (2013).

Conclusion

There is a major EU investigative effort to discover factors in regional resilience, as illustrated in a one report (October 2012, the European Commission's brief on 'The EU approach to resilience'), which will be developed into an EC action plan. This paper has focused on budgetary resilience in some of the regions hardest hit by the recent financial crisis (2008-2009). The budget for these years in the context of the medium run shows that these donor regions suffered a temporary decline in income (substantial fall in corporate and personal income tax receipts) and without taking on much credit, reestablished surplus budgets while also covering the new 2012 requirements of increased salaries and other obligations announced in President Putin's "May decrees". The resilience of most of these regions was due in the short run to two main factors: the lack of dependence before the crisis on budgetary subsidies, whose reduction within a few years after the crisis had, therefore, almost no effect, and relative rapid restoration of adequate receipts from the CIT.

In the longer run, the resilience of resource regions, such as KhMAO, with their overall steady growth, despite volatility in oil prices, arguably is due geopolitical factors, which attract energy producers and industrial giants other than in the oil sector, and the business environment, including steady maintenance of a higher standard of living and skills attracted in new clusters, which are supported by innovation-oriented budgets. The findings here, however, also include, even more fundamentally, an evolving cooperative federalist agenda, with groups of regions acting together to secure negotiated decisions on tax allocations and spending requirements. Supportive of the conclusion in Chebankova (2008), the term adaptive federalism applies to finance, and compels a rethinking of the concept of fiscal rigidity as applied to the Russian Federation.

Appendix

Appendix 1

Table 1 - Tax Structure in Resource Regions in Russia, 2005-2011 (% Total Revenues)*

Corporate Income Tax (CIT), % Revenues							
	2005	2006	2007	2008	2009	2010	2011
Russian Federation	31.8	30.6	31.7	28.3	18.0	23.2	25.2
Nenetsk AO	39.5	32.5	21.9				
Orenburg Oblast'	29.9	30.3	33.6	30.0	22.8	25.4	29.6
Tiumen' Oblast'	66.8	59.6	42.2	42.1	37.4	49.1	58.8
KhMAO	95.7	47.0	37.5	38.9	28.5	31.5	37.4
Yamalo-Nenetsk AO	40.8	32.9	27.5	29.5	23.1	32.5	34.4
Kemerovo Oblast'	25.2	17.8	19.6	29.3	9.4	19.8	28.0
Republic of Sakha (Iakutia)	14.6	12.3	16.4	17.5	8.4	13.9	18.9
Sakhalin Oblast'	15.5	17.2	17.1	19.9	34.4	29.9	31.6

Table 2 - Personal Income Tax (PIT), % Revenues

Russian Federation	23.6	24.5	26.2	26.9	28.1	27.4	26.1
Nenetsk AO	20.4	17.9	12.2	6.9	6.7	5.9	5.3
Orenburg Oblast'	22.8	23.8	22.4	22.5	22.2	22.8	22.0
Tiumen' Oblast'	5.1	5.8	11.1	10.2	12.6	11.8	10.7
KhMAO	18.8	27.4	29.2	27.7	31.9	30.8	27.4
Yamalo-Nenetsk AO	24.1	25.7	29.0	29.1	29.5	26.2	23.1
Kemerovo Oblast'	23.5	28.3	28.3	24.2	25.6	24.8	24.9
Republic of Sakha (Iakutia)	15.0	16.5	18.3	18.0	17.1	16.6	15.6
Sakhalin Oblast'	35.6	33.4	28.3	22.3	24.5	27.4	27.7

Table 3 - Property Tax, % Revenues

Russian Federation	8.4	8.2	8.5	8.0	9.6	9.6	8.9
Nenetsk AO	13.1	13.7	16.5	24.3	47.6	44.7	35.6
Orenburg Oblast'	10.8	10.2	8.7	8.7	10.3	10.9	9.9
Tiumen' Oblast'	1.6	1.6	2.9	2.3	3.6	3.6	3.0
KhMAO	9.7	12.9	13.2	12.6	19.3	19.6	17.2
Yamalo-Nenetsk AO	17.5	21.6	22.7	22.1	25.3	24.4	20.8
Kemerovo Oblast'	9.1	12.6	13.0	7.8	11.2	10.6	10.4
Republic of Sakha (Iakutia)	4.7	5.7	5.0	4.2	6.0	5.9	5.1
Sakhalin Oblast'	6.1	5.3	3.9	2.7	2.8	3.5	3.7

Table 4 - Transfers from Federal Budget, % Revenues

Russian Federation	14.7	15.9	13.4	19.4	27.3	23.1	23.1
Nenetsk AO	3.4	2.7	5.1	33.8	35.0	23.6	19.9
Orenburg Oblast'	12.4	10.3	13.5	18.0	24.3	22.5	20.1
Tiumen' Oblast'	0.9	1.1	3.2	4.2	5.3	27.7	19.9
KhMAO	-42.8	-2.0	3.2	4.8	5.9	4.9	8.2
Yamalo-Nenetsk AO	2.7	8.3	4.0	6.3	10.3	7.0	13.6
Kemerovo Oblast'	15.2	13.0	13.9	17.0	29.9	20.0	12.6
Republic of Sakha (Iakutia)	30.8	34.1	34.1	40.3	51.5	45.8	42.3
Sakhalin Oblast'	19.9	23.2	27.3	30.5	21.4	23.8	14.6
*Some revenues are not identified, and the total listed does not add up to 100.							

Appendix 2

Table 1 - Ratio of Economic Spending to Total Spending, 2000-2012, Resource Regions

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Russian Federation	10.0	21.5	19.4	20.4	18.4	17.5	16.5	18.1	19.7	18.1	16.6	17.1	19.3
Nenetsk AO	11.1	18.6	9.6	13.8	10.2	12.9	13.2	12.7	10.1	9.1	5.1	5.4	8.0
Orenburg Oblast'	30.9	21.3	17.3	20.1	20.1	13.1	16.3	17.8	18.0	15.2	18.4	13.4	17.0
Tiumen' Oblast'	10.7	37.4	34.9	36.7	36.7	35.5	39.2	46.4	45.5	44.6	41.3	45.2	44.1
KhMAO	9.7	37.7	36.7	38.9	38.9	14.1	11.7	12.8	12.0	9.8	9.7	8.6	12.0
Yamalo-Nenetsk AO	10.9	40.7	35.9	36.7	36.7	14.2	10.8	9.1	9.4	13.0	18.5	19.0	25.0
Kemerovo Oblast'	9.8	9.7	9.9	10.0	10.0	15.9	15.1	15.4	17.8	14.7	15.0	12.4	14.0
Republic of Sakha (Iakutia)	12.2	22.9	19.1	22.0	22.0	22.0	15.0	15.1	17.4	15.2	14.3	14.5	15.3
Sakhalin Oblast'	13.7	23.3	16.4	17.6	17.6	21.4	20.7	16.3	17.6	20.4	21.2	19.9	23.4

Source: Regions of Russia. Social and Economic Indicators. Federal State Statistics Service. 2013

Appendix 3

Table 1 - Debt in Resource Regions, % GRP*

Region	2010		2013	
	Debt Regional, % GRP	Debt, Regional & Municipal, % GRP	Debt Regional, % GRP	Debt, Regional& Municipal, % GRP
Nenetsk AO			18.2	19.5
Orenburg Oblast'	1.9	2.1	4.4	5.4
Tiumen' Oblast'	0.0		0.0	0.1
Khanty-Mansiysk AO	0.6	0.7	0.8	0.8
Yamalo-Nenetsk AO			0.3	0.7
Kemerovo Oblast'	2.9	3.3	5.7	5.9
Republic of Sakha	4.0	4.4	5.4	6.0
Sakhalin Oblast'	0.1	0.6	0.3	0.7
*GRP from ROSstat; for 2013 estimated from annual growth rates, 2005-2010				

Source: Regions of Russia. Social and Economic Indicators. Federal State Statistics Service. 2013

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