

The Regional Economy of Primorsky Krai (Russia) and Labor Concerns  
By Brian P. Ettkin

The Russian Far East, since the collapse of the Soviet Union, has consistently underperformed when compared to the national economy and the economies of other regions. Economic depression has been accompanied by drastic demographic shifts, reflecting the economic and social costs of shifting from a command economy to a market one. The 1998 ruble crisis exacerbated the region's problems. Average economic growth for the Russian Far East (1999-2001) was only 3.1 percent, in contrast to the national average of 7 percent.<sup>1</sup> In 2003, President Putin issued a challenge to double the Russian Economy in ten years. Clearly, if the Russian Far East continues to lag behind the national average, it will not make the necessary contribution to Russia's economic development to reach this ambitious goal.

In order to understand how the region can improve its economic position, it is necessary to have a better understanding of the regional economy. This paper explores the regional economy of one administrative unit of the Russian Far East—Primorsky Krai.<sup>2</sup> In particular, this paper is concerned with the overall trends of the regional economy, the constraints that the current demographic situation will place on the region, and how those constraints will impact one particular sector of the economy—the construction sector. The logic for choosing Primorsky Krai as the unit of analysis is presented in the following section. We choose the construction sector because it is a labor-intensive industry, and a non-basic sector. That is, its growth is dependent upon the overall growth of the regional economy. Furthermore, the growth of the construction sector ought to be significantly constrained by the demographic situation.

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<sup>1</sup> Nadezhda Mikheeva, "Regional Aspects of Economic Growth in Russia," *The Journal of Econometric Study of Northeast Asia* 5, no. 1 (October 2004): 45.

<sup>2</sup> A *krai* is the administrative equivalent of a state in the United States.

Obviously, we cannot ignore the sensitive issue of labor importation; it is one of particular concern for the region's residents.

This paper adopts several approaches to analyzing the regional economy. The first and simplest approach is a descriptive overview of the economy, its structure, and trends. Beyond this method, we will also use more sophisticated tools of regional economic analysis. Data limitations prevent us from adopting the most advanced tools. However, a basic tool of analysis such as shift-share analysis should offer some insight into the regional economy of Primorsky Krai.

### *The region*

The Russian Far East is a vast region, equivalent in geographic area to two-thirds of the United States. It comprises one-third of the territory of the Russian Federation. There are nine federal subjects (territories) in the Russian Far East: Primorsky Krai, Khabarovsk Krai, the Jewish Autonomous Oblast, Amurskaya Oblast, Sakhalinskaya Oblast, Magadanskaya Oblast, Chukhotsky Autonomous Okrug, Kamchatskaya Oblast, and the Republic of Sakha (Yakutia). Four of these regions were in the bottom decile of economic performance from 1998 to 2001.<sup>3</sup> Although it is common to speak of the region as a unified whole, only the first four territories are of immediate concern. The other regions are too geographically distant and too economically depressed to be relevant. (Sakhalin Island might have been included, given the notable foreign investment in its energy sector. However, the Sakhalin economy presents its own challenges that merit a separate treatment.)

Primorsky Krai, Khabarovsk Krai, the Jewish Autonomous Oblast and Amurskaya Oblast all share a border with China. The significance of this border to all of the territories

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<sup>3</sup> Mikheeva, "Regional Aspects of Economic Growth in Russia," 49.

cannot be overestimated. China is the principle trading partner for each region. Demographically, the three Chinese border territories have a combined population of about 100 million, compared with a total population of 6.7 million for the entire Russian Far East.

Beyond simple export and import, Chinese businesses make significant contributions to the economies of the region. Tourism continues to be a major driver, and Chinese tourists make up the bulk of visitors to the region.<sup>4</sup>

This analysis will focus on only one region, Primorsky Krai (often referred to as Primorye). This is not to say that the other territories do not play a role in the regional economy of the RFE. Without a doubt, we should consider all the territories in our discussion in order to create a fuller picture. Unfortunately, resource and time constraints did not permit me to gather an adequate amount of information on the other territories.

Nevertheless, Primorsky Krai is sufficiently representative of the four border territories. Its border crossing stations account for the lion's share of entries by Chinese citizens. Primorsky Krai has the largest population of any territory in the RFE. Primorye is tied with Khabarovsk Krai in terms of economic output. Considering these and many other factors, it should be reasonable to assume that the labor migration trends observed in Primorye are at the very least representative of trends occurring in the other territories. It is more likely that Chinese migration in Primorsky Krai is even more dynamic than in other territories.

### ***From demography to economy: Some key trends in Primorsky Krai***

Demographic changes in Primorsky Krai are certainly not explanatory variables of the region's economic performance. If any thing, they are most likely symptomatic of the level of

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<sup>4</sup> "Vladivostok Fourth in Russia for Tourism," trans. Brian Ettkin, *Deita.Ru* (Vladivostok, Russia), 15 January 2004, PG.

development in the region. Nevertheless, in order to understand the regional economy, we need to better understand the population dynamics of the region. These trends are having and will continue to have a significant impact on the economy of the region.

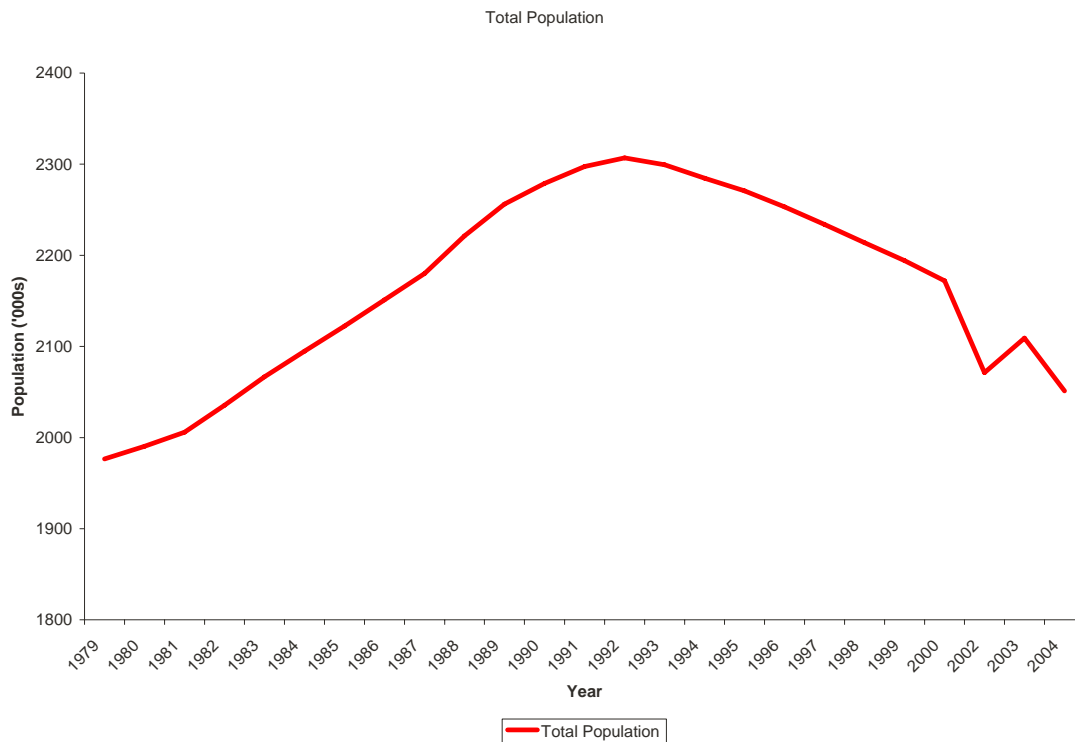
Like other territories throughout Russia, Primorsky Krai has suffered from severe demographic decline. The population of the Russian Federation peaked in 1989 at 147 million. By the 2002 census, the national population had declined 1.2 percent to 145 million.<sup>5</sup> Changes in Primorsky Krai were far more dramatic. Figure 1 shows that the peak for Primorye's population was reached in 1992, when the population of the territory was just over 2.3 million. Since the collapse of the Soviet Union, the region's population has contracted about 11%.<sup>6</sup> It should be noted that Primorsky Krai's population loss has been mild compared to the Russian Far East as a whole. The RFE lost a total of 16.25% of its population between 1989 and 2002 (the two most recent census results).<sup>7</sup>

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<sup>5</sup> *Russian National Census, 2002*, Federal Agency for State Statistics <<http://www.gks.ru/perepis/itog.htm>>.

<sup>6</sup> Federal Agency for State Statistics, Primorsky Krai Committee for State Statistics, *Demographic situation in Primorsky Krai*, ed. L.O. Kiselova et al. (Vladivostok, Russia, 2004), 7

<sup>7</sup> <http://www.gks.ru/perepis/itog.htm>.



**Figure 1 Total Population of Primorsky Krai<sup>8</sup>**

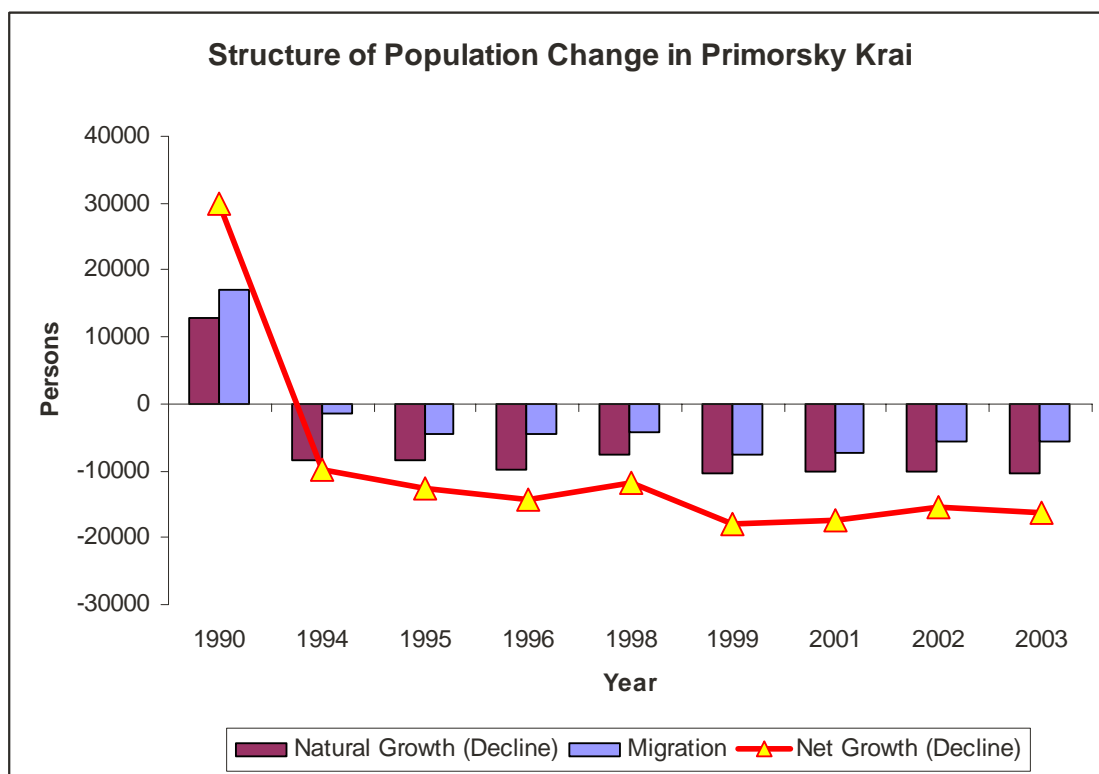
Source: Primorsky Krai Committee for State Statistics, 2004.

There are several explanations for the declining population of the RFE as a whole and Primorsky Krai in particular. Some of this decline is due to an outflow of residents as people move either to the western part of the country or abroad. We can fairly speculate that the catalyst for this outflow was the socio-economic collapse that hit the region in the wake of the dissolution of the Soviet economy. No longer compensated for the higher cost of living in the RFE and faced with unemployment and deteriorating living conditions, many residents fled to the European part of the country or other countries, which they perceived to be economically better off.

Migration can account for only part of the demographic changes of the region. As is the case throughout Russia, the principle cause for population decline is natural population decline,

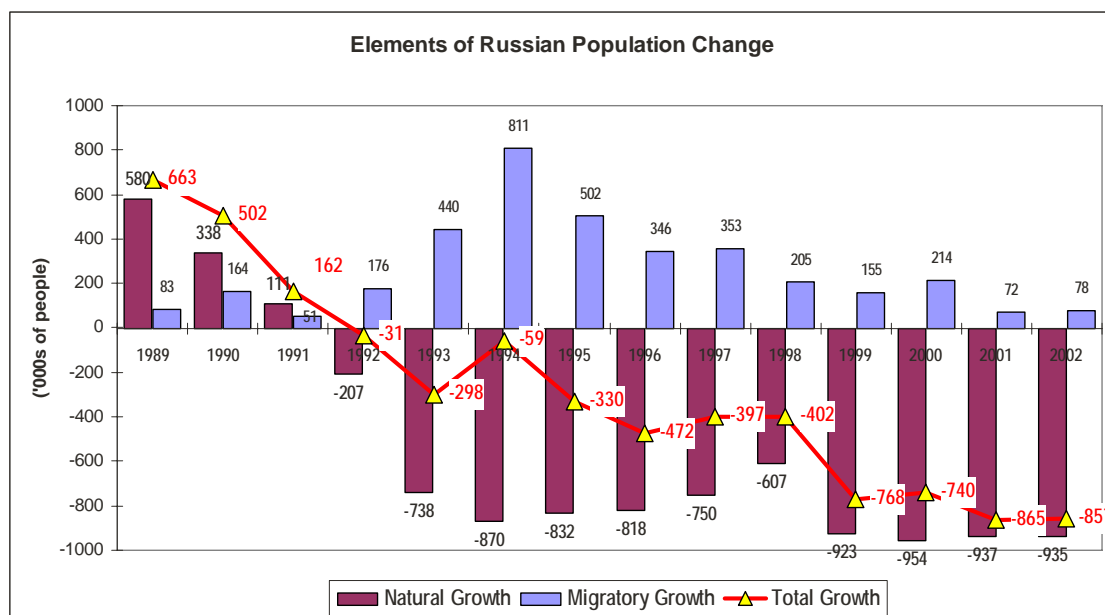
<sup>8</sup> The “kink” in this graph represents the headcount data from the 2002 national census, which uses a different methodology than the official population estimation model of the regional statistics agency.

which results from the number of deaths exceeding the number of births. Figure 2 illustrates the structure of population change in Primorsky Krai.<sup>9</sup> For contrast, Figure 3 shows the overall trend for the Russian Federation.



**Figure 2: Structure of Population Change in Primorsky Krai**  
 Source: Primorsky Krai Committee for State Statistics, 2004.

<sup>9</sup> Federal Agency for State Statistics, *Demographic Situation in Primorsky Krai*, 19.

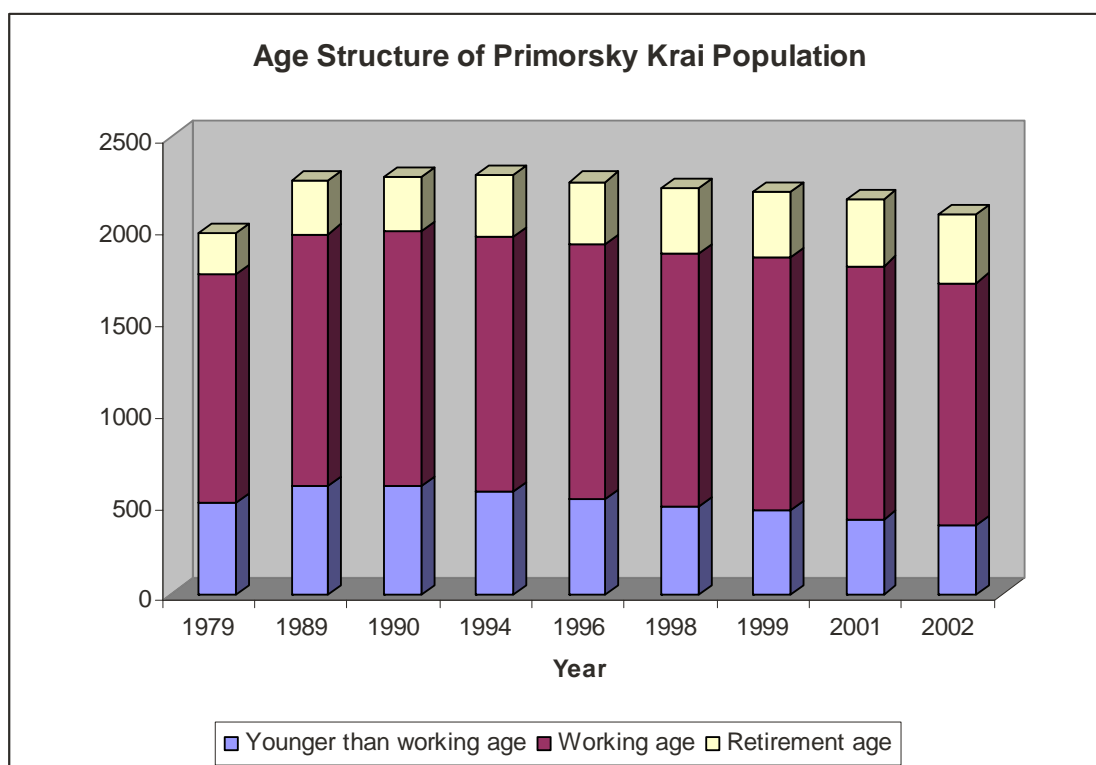


**Figure 3 Elements of Russian Population Change**

Source: Primorsky Krai Committee for State Statistics, 2004.

The economic consequences of these demographic trends could potentially be quite severe for Primorsky Krai. Of principle concern is the labor force. Most people leaving the region are likely to be either of working age or younger. This outflow is effectively depriving the region of current and, more importantly, future workers. The trend is exacerbated by the natural decline. In 2003 alone, approximately 36% of deaths were people of working age.<sup>10</sup> It can be expected that the labor force will continue to contract. Figure 4 shows how the age structure of the krai has changed over time. Notable is the concurrent decline in both the size of the work force and the number of persons younger than working age (i.e., those who will replace today's workers). If these trends continue, the labor force of Primorsky Krai will contract sharply in the very near future, even if the total population of the region stabilizes. In this case, the economy of the region will face the additional constraints of high dependency ratios of elderly population to workforce.

<sup>10</sup> Federal Agency for State Statistics, *Demographic Situation in Primorsky Krai*, 33.



**Figure 4 Age Structure of Primorsky Krai Population**  
Source: Primorsky Krai Committee for State Statistics, 2004.

This downward demographic trend has led to significant ambivalence on the part of Russians with regards to foreign labor migration into the region. On the one hand, RFE residents are extremely wary of what they perceive to be imminent expansion on the part of the Chinese. On the other hand, both researchers and regional authorities are now openly putting forth the thesis that Chinese and North Korean migrant workers are critical for the region's economic growth.<sup>11</sup>

### ***Migrant workers and the regional economy***

<sup>11</sup> For a representative cross-section of opinions, see the works of Larin, Gelbras and Baklanov, as well as the recent statements of Primorsky Krai Governor Sergey Darkin (contrasted with former Governor Evgeniy Nazdratenko or Khabarovsk Krai Governor Viktor Ishaev).

Intuitively, the claim that the RFE must supplement its labor market with foreign workers makes perfect sense. Yet, many of the linkages remain unclear in terms of the magnitude of labor import and its composition. Just how many foreign workers will the RFE need to import to satisfy demand on the part of employers? What industries require the most foreign labor? More importantly, what level of economic growth can we expect for the next few years—a variable which should significantly affect the magnitude of labor demand? Clearly, sound policy can only be developed with a full understanding of these linkages. At present, we have at our disposal only some general historical information, and even the validity of these figures is dubious.

Traditionally, researchers and officials have divided the migrant worker presence in the RFE into three sectors: trade, construction and agriculture.<sup>12</sup><sup>13</sup> Most Chinese migrants in the region seem to work as traders—either in the markets or in other places where they can sell their wares brought in via the prolific shuttle trade. Estimates on the numbers of these types of workers vary from 30,000 to hundreds of thousands.<sup>14</sup> In reality no one knows the exact number of Chinese traders working in RFE markets.

Construction, agriculture and some logging firms are the primary sponsors of official migration to the Russian Far East. Of the over 15,000 sanctioned migrant workers in Primorsky Krai, 25 percent work in the construction sector and 15 percent work in agriculture.<sup>15</sup> These figures, of course, reflect only those workers who have received official approval from the

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<sup>12</sup> Vilya Gelbras, "Chinese Migration to the Russian Far East: A View from Moscow," in *Human Flows Across National Borders in Northeast Asia: Seminar Proceedings*, ed. Tsuneo Akaha (Monterey, California: Center for East Asian Studies, Monterey Institute of International Studies, 2003), 135-52.

<sup>13</sup> Viktor Larin, "China's Envoys to the Far East: A Response to the Alarmists," trans. Brian Ettkin, *Diasporas* 2, no. 3 (2001): 76-110.

<sup>14</sup> Interviews with regional authorities, Vladivostok, Russia, Summer 2004. See also the works of Zayonchkovskaya, Gelbras and Larin.

<sup>15</sup> Author's calculations based on data provided by the Primorsky Krai Committee for State Statistics.

government to work in Russia. In reality, it is widely acknowledged that at least twice as many laborers are working in the region as part of the informal economy.<sup>16</sup>

How can we get some bearing on the actual need for foreign labor in the RFE? The absence of reliable data has made it difficult to conduct a proper analysis of the labor market and labor demand. An examination of the sectors in which migrant workers are purported to work may provide some insight into future needs.

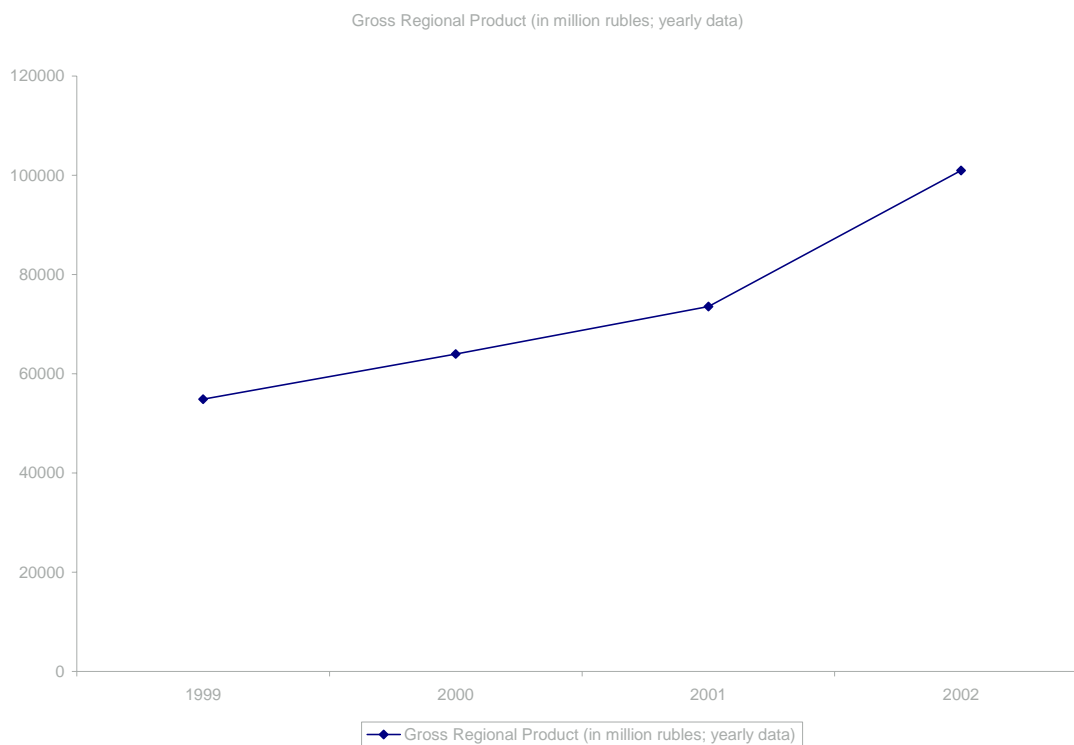
### ***The Construction Industry***

After the 1998 default, the RFE economy fell into what can fairly be labeled as a depression. Construction projects lost their financing overnight, and the carcasses of hundreds of incomplete buildings dot the landscape to this day. The recovery of the construction industry has been lethargic, reflecting the limited capital available for building projects and overall investor timidity.

The last several years have shown substantial improvements in the economy of Primorsky Krai. On the whole, the economy of Primorsky Krai has continued to work towards regaining its pre-crisis position. Figure 5 shows that since 2001, economic growth in the region has experienced a sharp upturn. Expectations for 2003 and 2004 are equally positive. These gains appear to have affected the construction sector.

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<sup>16</sup> Interviews with regional authorities, Vladivostok, Russia, Summer 2004.



**Figure 5 Gross Regional Product, Primorsky Krai**

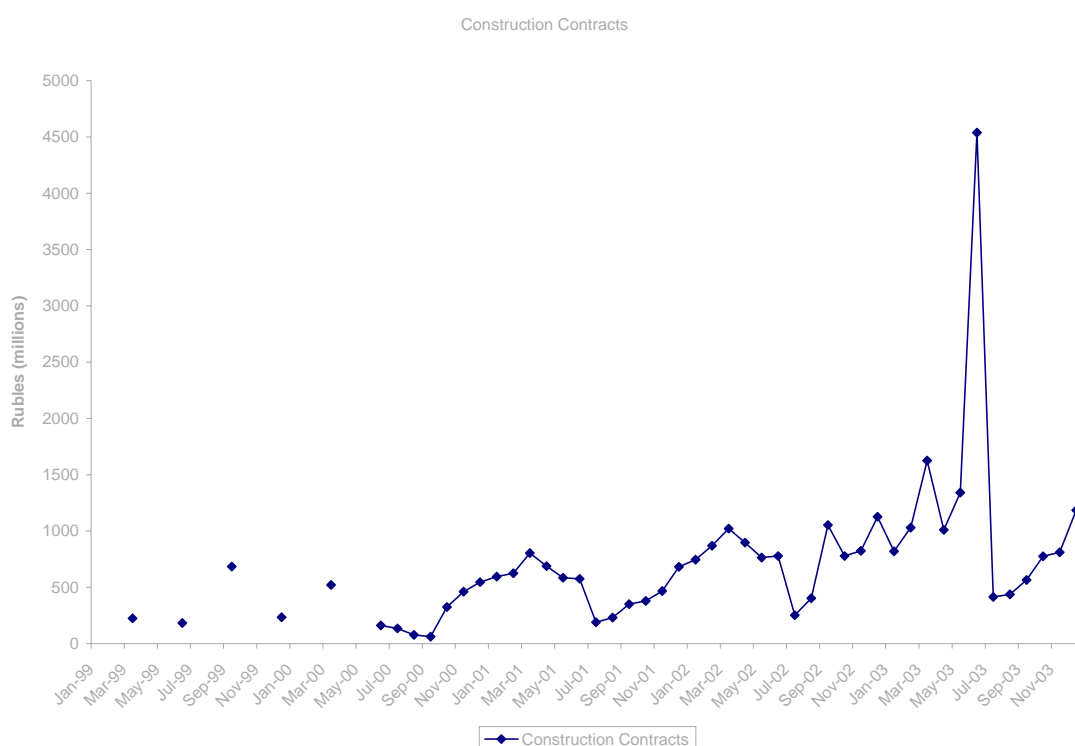
Source: Primorsky Krai Committee for State Statistics, 2004.

Recent visitors to Vladivostok may be struck by the appearance of a construction boom. New buildings seem to be cropping up on every corner—a stark contrast from just a few years ago. However, it is unclear how real this boom is, what has stimulated current construction and how widespread the building activity is.

Many indicators support the prediction of a building boom. Construction orders for the entire Far Eastern Federal District increased by 26.8 percent in 2003.<sup>17</sup> Not surprisingly, Sakhalin Island accounts for a significant percentage of the growth in the construction sector, owing mostly to massive investment in oil and gas extraction. Primorsky Krai actually trails some of its neighbors in terms of absolute and relative growth in construction activity. Construction orders in 2003 increased a mere 1.8 percent over 2002 levels (compared to 119.6,

<sup>17</sup> Viktor Kudinov, “Vira pomalu!” *Dalnevostochny Kapital* (August 2004), 14.

136.9, 120.1 and 115.3 percent in Sakhalinskaya Oblast, Amurskaya Oblast, the Jewish Autonomous Oblast, and Khabarovsk Krai, respectively).<sup>18</sup> Primorsky Krai has performed slightly better in the first half of 2004, with 4% growth in construction orders compared to the same period in 2003.<sup>19</sup> Figure 6 demonstrates the overall positive trend in Primorye’s construction industry over the past five years.<sup>20</sup>



**Figure 6 Construction contracts, Primorsky Krai**  
 Source: Primorsky Krai Committee for State Statistics, 2004.

What is driving this growth? Part of the growth, at least in Primorsky Krai, is due to increased housing construction. Primorsky Krai added over 215,000 square meters of housing in

<sup>18</sup> Ibid.  
<sup>19</sup> Larisa V. Efimova, ed., *The Economy and Social Sector of Primorsky Krai: January-May 2004* (Vladivostok, Russia: Primorsky Krai Committee for Government Statistics, 2004).  
<sup>20</sup> Data obtained by the author from the Primorsky Krai Committee for Government Statistics.

2003, which is 22.9 percent more than was added in 2002. More importantly, most of the financing for these construction projects came from private sources.<sup>21</sup> This shift from government-sponsored housing construction (including federal, regional and municipal funding) is indicative of the increase in mortgage lending being made available to the general population. Both the federal government and the krai administration have instituted incentives for mortgage lending at reasonable rates (by Russian standards). Despite a cultural aversion to debt financing, a surprising number of Russians are considering taking out mortgages. Two factors are probably encouraging this trend. First, both the national and regional economies have been remarkably stable since the change of presidential and gubernatorial administrations. This stability, in turn, may have led to increased consumer confidence and an increased willingness to incur debt. Second, the housing market in Vladivostok, where most of the region's housing construction is taking place, is extremely tight. Real estate prices per square meter have risen sharply over the past few years. Consequently, apartment prices have started to exceed what most families can afford to pay for out of pocket. Rather than save indefinitely or settle for sub-standard housing alternatives, an increasing number of families are prepared to take out a loan. It should be noted that most mortgage-funded housing purchases take place in the secondary real estate market (i.e., previously owned properties). However, there is no doubt that this trend will have an ancillary effect on new housing construction. Assuming continued economic stability, growing availability of long-term credit should have a positive impact on growth in the construction industry.

Construction work, however, is not limited to new housing. The year 2003 saw a 23.2% increase in construction work on repairing and renovating non-factory buildings.<sup>22</sup> The first half

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<sup>21</sup> L. Nikitina, ed., *Investment and Construction Activity in Primorsky Krai in 2003* (Vladivostok, Russia: Primorsky Krai Committee for Government Statistics, 2004), 20.

<sup>22</sup> Ibid.

of 2004 saw a 21.8% increase in spending on remodeling factory buildings.<sup>23</sup> This growth is significant and likely underreports the actual volume of work, since many business owners and families hire small firms and individuals on an unofficial basis to do renovation.

The picture for the construction industry in Primorsky Krai seems quite positive again assuming continued stability in the national and regional economies. My survey of construction-firm owners confirmed a cautiously optimistic outlook. One respondent said that he expected annual growth of at least 10 percent for his business. He said that there is a definite demand for construction services both in Vladivostok and in other larger Primorsky Krai cities.<sup>24</sup>

Sergei Smironov, deputy director of GOSSTROY for the Far Eastern Federal District and chairman of the FEFD Coordinating Council for Quality Control in the RFE,<sup>25</sup> was also optimistic. In an interview, he said that there is an incredible amount of work that needs to be done in the Far Eastern Federal District just in the existing housing and communal services infrastructure. He does not foresee a lack of demand in this sector for the next decade. And these estimates do not include new building projects.<sup>26</sup>

Not all respondents were as optimistic. Viktor Kudinov, one of the leading journalists covering the RFE construction industry, agreed that the current growth is positive. However, he was reluctant to call the current revival in construction activity a “boom.” Investment in construction activities has remained flat. Material costs are fairly high. Kudinov also saw the lack of a real estate property market as a major constraint on future building.<sup>27</sup> He predicted steady, but not phenomenal growth of the construction industry.

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<sup>23</sup> Efimova, *op.cit.*, 18.

<sup>24</sup> Author interview, 2004.

<sup>25</sup> GOSSTROY is the federal agency that regulates the construction industry in Russia. FEFD is the Far Eastern Federal District.

<sup>26</sup> Author interview, 2004.

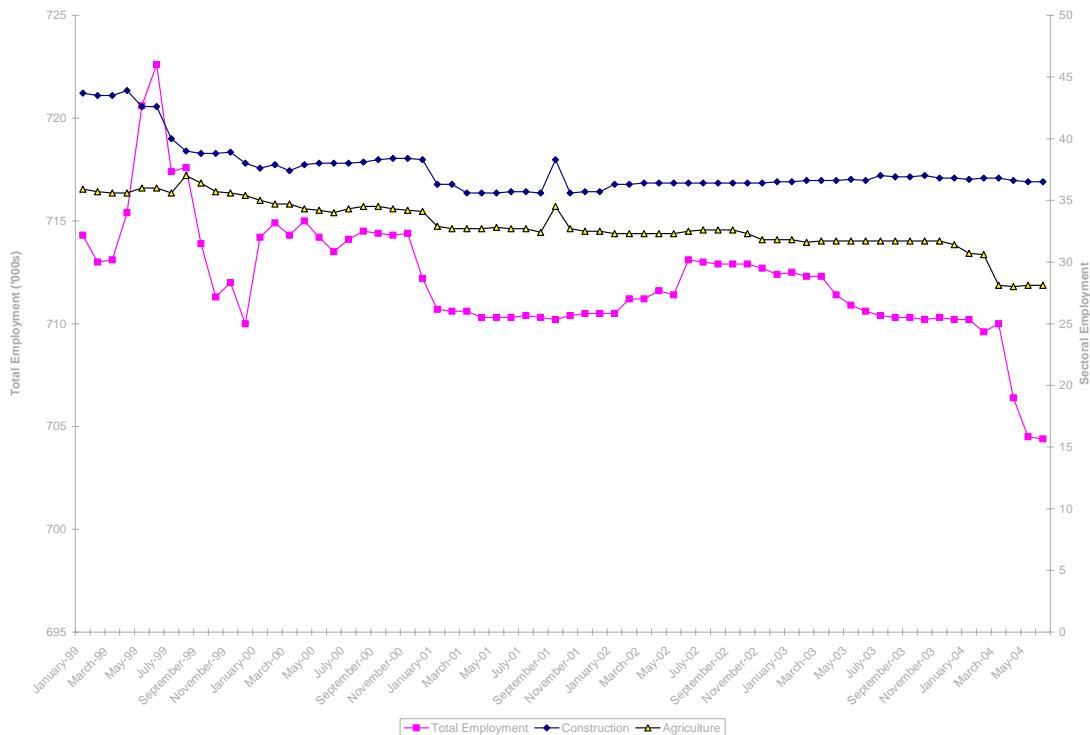
<sup>27</sup> Author interview, 2004.

All respondents agreed that the primary constraint on the development of the construction industry is the human resource factor. A survey of Primorsky Krai construction company managers reported that the most serious problem facing the construction industry is the lack of qualified workers. Figure 7 shows that even as total employment has declined in the region, employment of construction workers has remained steady. This picture would seem to indicate that labor demand within the construction industry is quite strong.

Respondents attributed the deficit of qualified workers to several factors. The obvious factor is the demographic situation in the Russian Far East, which has already been discussed. Interestingly, all respondents independent of one another brought up another explanation for the lack of qualified workers: changes made in the Russian education system following the collapse of the Soviet Union. Under pressures of radical free market reform and insufficient financing, many technical colleges and professional schools began to change their orientation. As a result, they started offering more programs that the market “demanded,” or at least what they thought the market demanded. These were not the traditional blue-collar professions that the schools had been preparing students for. Over time, they almost entirely stopped offering these professions as courses of technical education. Consequently, ten years have passed without proper instruction and training of professionals in the construction industry.<sup>28</sup>

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<sup>28</sup> Author interviews, 2004.



**Figure 7 Total and Sectoral Employment, Primorsky Krai**

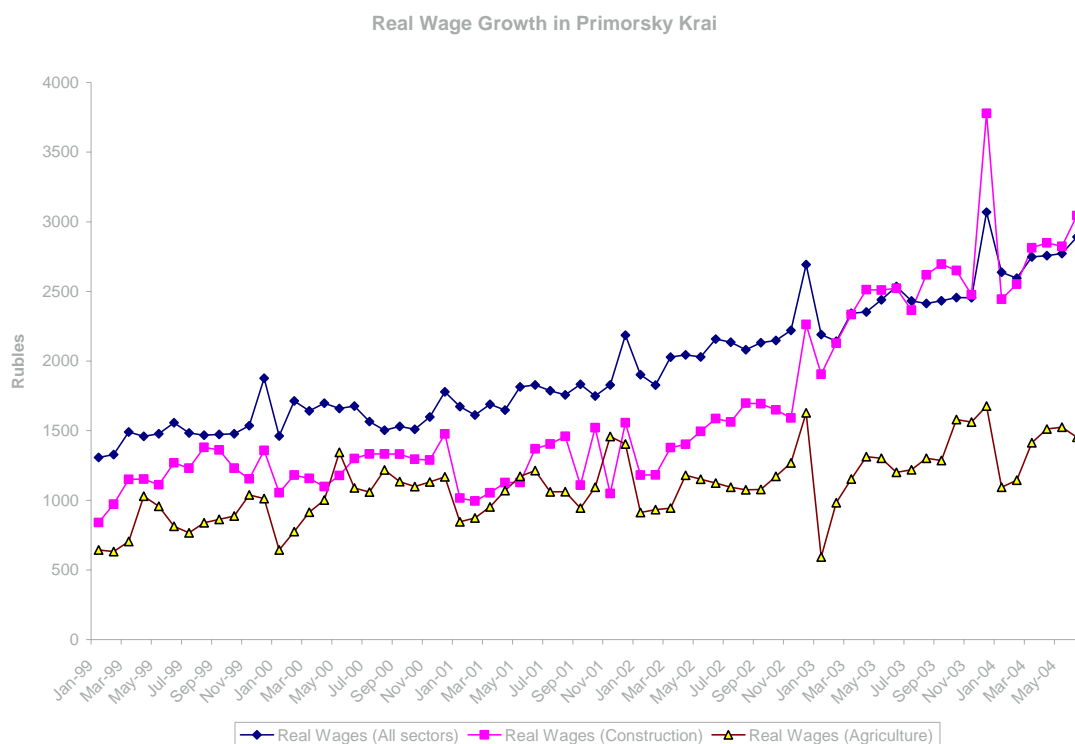
Source: Primorsky Krai Committee for State Statistics, 2004.

Some experts suppose that it will take another ten years to correct the situation. The problem is complicated by the unrealistic expectations of the younger generation going into construction work. Aspiring construction specialists are more cosmopolitan than their Soviet-trained predecessors. They are more materially motivated and expect to achieve a high level of comfort immediately. However, these unapprenticed workers have not acquired the experience to justify their expectations. Employers want workers with experience; up-and-coming workers have no opportunities to gain experience.<sup>29</sup>

Thus, the labor deficit in the Russian Far East is multifaceted—not simply demographic in nature. Reversing the outflow of RFE residents is part of the solution, as is increasing the rate of natural growth. The Primorsky Krai branch of the Federal Employment Agency sends job

<sup>29</sup> Author interview, 2004.

vacancies throughout the country to fill the labor demand. However, they openly admit that without improved living conditions, few people will be willing to relocate to the RFE. Appropriate housing must be built to attract new workers.<sup>30</sup> The infrastructure of the region must undergo a complete overhaul. And most importantly, wages must reach a competitive level.



**Figure 8 Real Wages by Sector**  
 Source: Primorsky Krai Committee for State Statistics, 2004.

The wage issue is a significant hurdle. Wages in the construction industry have grown consistently since 1999. Beginning in 2003, construction wages began to exceed the average wage for Primorsky Krai, and that trend has continued, as Figure 8 demonstrates. Construction wages in nominal terms in Primorsky Krai have nearly doubled since September 2003. It would seem that the growth in wages reflects the tight labor market for construction workers.

<sup>30</sup> Author interview.

There is one curious fact, however, that would lead one to dispute this interpretation of the trend. Primorsky Krai has the lowest average wage in the construction industry for the entire Far Eastern Federal District. Table 1 lists the regions of the FEFD and the average construction wage in each region.

**Table 1 Construction Worker Wages in the Far East Federal District, 2004.**

<i>Construction Worker Wages in the FEFD</i>		
<i>Region</i>	<i>Average Wage (rub.)</i>	<i>Growth since Sept. 2003</i>
Primorsk Krai	6,131.20	80%
Khabarovsk Krai	7,575.90	23.1
Amurskaya Oblast	8,257.10	33.3
Kamchatskaya Oblast	9,275.20	20.1
Magandanskaya Oblast	7,983.40	5.3
Sakhalinskaya Oblast	15,739.20	60
Republic of Sakha (Yakutia)	11,096.70	-0.4
Jewish Autonomous Oblast	8,307.40	0.6
Chukhotskaya Autonomous Oblast	8,153.40	56.6

Such a fact seems to contradict the ostensibly severe shortage of construction workers in the region. If the demand for qualified workers is so high, should we not expect wages to reflect that demand? None of the respondents was able to adequately address this paradox.

We may hypothesize an explanation for this phenomenon. Might not these lower wages reflect the deflationary impact of informal migrant labor in the economy?

There is no conclusive way to answer this question. However, it has been established anecdotally that unofficial migrant workers are attractive to employers not just because their services are in high demand. Chinese and North Korean migrant laborers are willing to work longer hours for less money. Moreover, they work faster and more reliably.<sup>31</sup>

In a testimony that seems to contradict the wage deflation hypothesis, one respondent, the owner of a construction company, said that he would rather pay a Chinese or North Korean

<sup>31</sup> Author interviews, Vladivostok, Russia, 2004.

worker twice as much as a Russian worker. He explained that he could be sure that the foreign workers would show up to work on time. Chinese and North Korean workers can do in a week what would take Russian a month. Therefore, for the sake of maintaining a quick turnaround of cash flow, the employer was willing to pay significantly higher wages to the foreign laborers.<sup>32</sup>

In actuality, this statement does not contradict the idea that foreign labor is deflating wages in the region. The Russian system of wage accounting is highly imprecise. Official wage statistics are calculated on the basis of basic pay rather than take-home pay. Additionally, monthly earnings figures do not accurately reflect wages. A more useful statistic would be hourly pay rates. Unfortunately, such information is not available.

Nevertheless, some quick, back-of-the-envelope calculations should illustrate the point. The average monthly salary for a Russian construction worker is 6,131.20 rubles. In one month, the average worker will clock 160 hours (forty hours per week, as mandated by Russian labor law). On an hourly basis, the Russian worker is earning just under 40 rubles. Unofficial foreign laborers do not benefit from the requirements of labor law. Consequently, they may work (or be forced to work) much longer hours than their Russian counterparts. For the sake of simplicity, if a Chinese worker were fortunate enough to receive 10,000 rubles for his labor on a construction site (which is unlikely), yet he worked 80 hours per week, his hourly wage would be 31.25 rubles. Working at the same monthly salary as a Russian, he would take home a mere 19 rubles per hour.

The lower effective wage rate does not take into account other cost savings for the employer. Obviously, construction firms need not pay payroll taxes or pension fund contributions for unofficial labor. By using unofficial foreign labor rather than official foreign labor, they also bypass the significant cost and hassle of applying for work permits through

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<sup>32</sup> Author interview, 2004.

formal channels. Until very recently, the penalties for employing unofficial labor were lower than the administrative fees necessary for requesting work permits. Thus, employers benefited significantly from using Chinese and North Korean workers.

The above illustration should demonstrate the veracity of the wage-deflation hypothesis, although it is hardly conclusive evidence that wage deflation is in fact taking place. It is clear that demand for labor in the construction industry is high. It is also clear that firms are looking for immediate solutions to their human resource problems. Assuming that the regional economy grows at its current rate or faster (the regional administration has stated that it must achieve 6-8% annual GRP growth to meet the president's goal of doubling the national GDP within ten years), these pressures on the labor market will not diminish.

### ***Economic Base and Shift-Share Analysis***

Many tools are available for economic analysis. However, these tools often require significant data inputs. Disaggregated regional data is not as widely available in Russia as national data. Therefore, many of the more sophisticated models for analysis are beyond the scope of this analysis. Two well-established and simpler models, economic base and shift-share analysis, can be used with the available data.

Economic base models are used to estimate the impact of changes the "basic" sector of a regional economy. The basic sector is usually the primary export industry. Non-basic sectors are those that support the employees of the basic sector. Using the economic base model, we can develop multipliers that show the necessary increase in non-basic (local economy supporting) employment to support one additional job in the basic sector.

My application of the economic base model immediately encountered several obstacles. The first problem was the theoretical assumption of the model. The economic base model, as stated above, focuses on the impact of employment changes in the basic sector. Obviously, construction is very rarely an export sector. Therefore, my calculations of an economic base multiplier for the construction industry reverse the logic of the model. That is, my assumption was to treat the construction sector as the *only* non-basic sector and the rest of the economy as a basic sector. Therefore, my interpretation of the result is how many jobs the economy must add in order for one construction job to be added. Using this approach, the economy must add approximately 18 jobs for there to be an increase in construction employment of one job. This interpretation admittedly is contrary to the traditional application of the model.

The other significant problem in using the economic base model for analyzing the Primorsky Krai economy is that the unit of analysis in this model is employment. Economic growth is assumed to be reflected in job growth. However, this assumption does not hold for Primorsky Krai. Total employment has been decreasing sharply (1.3% between 1999 and 2004), reflecting the severe effect the demographic situation has had on the labor force. (The labor force contracted nearly 4 percent between 1999 and 2002.) However, Primorsky Krai has experienced positive economic growth every since 1999. Evidently, employment is not the best indicator for benchmarking sectoral growth.

Another useful technique is shift-share. Regional planners often use shift-share analysis for examining the components of regional growth. Sectoral growth at the regional level (measured by employment) is compared to national growth rates. Shift-share breaks up net changes in employment into a national share component, an industrial mix component and a

regional share component. Each component reveals how that particular sector performed relative to the economy as a whole.

I calculated the shift-share values for the Primorsky Krai construction industry. These values were calculated for three distinct periods: 2002-2003, 2003-2004 and 2002-2004. Table 2 shows the results of these calculations.

**Table 2 Shift-Share Values for the Construction Industry in Primorsky Krai, 2002-2004**

<b>Shift-Share Calculations</b>				
<b>National Share</b>	<b>Ei</b>	<b>Gn</b>		<b>NS</b>
2002-2003	36.50	9.69%		3.54
2003-2004	36.70	2.88%		1.06
2002-2004	36.70	12.86%		4.72
<b>Industrial Mix</b>				
	<b>Ei</b>	<b>Gni</b>	<b>Gn</b>	<b>IM</b>
2002-2003	36.50	0.10%	9.69%	-3.50
2003-2004	36.70	8.05%	2.88%	1.90
2002-2004	36.70	8.15%	12.86%	-1.73
<b>Local Share</b>				
	<b>Ei</b>	<b>Gri</b>	<b>Gni</b>	<b>LS</b>
2002-2003	36.50	0.55%	0.10%	0.17
2003-2004	36.70	0.55%	8.05%	-2.75
2002-2004	36.70	1.10%	8.15%	-2.59
<b>Total Shift Share</b>				
	<b>NS</b>	<b>IM</b>	<b>LS</b>	<b>SS</b>
2002-2003	3.54	-3.50	0.17	0.20
2003-2004	1.06	1.90	-2.75	0.20
2002-2004	4.72	-1.73	-2.59	0.40

Source: Author's calculations based on data from the Primorsky Krai Committee for State Statistics.

What do these numbers tell us about the construction industry in Primorye? Had the construction industry in Primorye grown at the same rate as the national economy, it would have added about 4,720 jobs to the regional economy between 2002 and 2004. At the national level, the construction industry performed poorly over the aggregate period, as reflected in the 1,700-person job loss. However, most of this loss would have occurred between 2002 and 2004. Had the local construction industry grown at the same rate as the national construction industry from 2003 to 2004, it would have added about 1,900 jobs. The most telling figure is the local share. It

shows how the regional construction industry performed relative to the average construction industry in the country. Clearly, the Primorsky Krai construction industry is significantly less competitive than the average national construction industry. The poor competitive nature of the local construction industry decreased potential job gains in the construction industry by nearly 2,600 jobs between 2002 and 2004. Since most of this loss was in the most recent year, it makes one wonder about the health of the construction industry in Primorsky Krai.

The shift-share analysis paints a gloomy picture of the construction industry in Primorsky Krai. It seems to imply that the little growth that occurred in the construction industry was a result of national economic growth. However, it should be recalled that shift-share is merely a descriptive tool, and, because of its basic assumptions, may not describe the region as fully as one might like. It provides us no insight as to why Primorye's construction sector has performed as poorly as it has. Perhaps the failure of Primorsky Krai to add more jobs in the construction sector reflects the tighter labor market. Similarly, perhaps the relatively flat job growth shows improvements in efficiency on the part of contractors. Shift-share does not take into account any gravitational effect. That is, it ignores the effect of geographic isolation on the Primorsky Krai economy. Similarly, it fails to take into account the economic impact of growth in the Northeast Asia region. In the end, although shift-share is a useful tool, it still does not help us determine the labor demands for foreign workers.

### ***Conclusion***

The economic pressures on the labor market that have been used to justify the use of foreign labor appear to be real. Using the construction industry in Primorsky Krai as a test case for the Russian Far East as a whole, we can see that the sector may already be experiencing the

consequences of a labor shortage. The current demographic situation is only likely to make the shortage more severe. Moreover, the industry appears to be on a course of continued moderate-to-high growth, which will only increase pressures on the labor market.

In the near future, the region clearly has no alternative to using the cheap and accessible labor of its neighbors to the south. However, increased labor import cannot be the sole pillar of the region's policy. Regional policy makers need to improve their monitoring and accounting capabilities in order to more accurately describe the labor demand. Current prescriptions are based more on wishful thinking than on rigorous economic analysis. A sound labor import policy must be based on empirical analysis.

On the other hand, my application of regional analysis tools such as shift-share shows the difficulty of using these techniques in a transitional economy. The market principles that underlie the theory of economic models may not work exactly as we expect in Primorsky Krai. A mixture of "cowboy" capitalism, command economy, and rampant corruption distorts traditional theory, making even general predictions about economic trends very problematic. These theoretical problems are complicated by other externalities like geographic isolation and demographic decline. At the end of the day, it may not be feasible for policy makers to adequately predict labor demand in the Russian Far East.

Nevertheless, foreign labor employment must also go hand-in-hand with strict adherence to and enforcement of labor laws. The necessary legislation is already in place. Russian law affords equal protection to Russian and foreign laborers alike. It is the application of this law that remains lacking. Law enforcement officials still operate under a punitive mindset that encourages corruption. Labor law must be applied justly and equally, regardless of country of origin. Such consistency is not just a matter of state security; it is also a matter of human security

for the migrant workers laboring under sub-standard conditions and for the Russian workers whose standard of living is compromised by employers' exploitation of cheap foreign labor. Ultimately, the social, economic and political future of the region depends on effectively developed and implemented policies.

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