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## **An Introduction to the Economics of the Gulag**

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THE ACRONYM “GULAG” translates as the “Main Administration of Camps,” an agency that was subordinate to the USSR Ministry of Interior.<sup>1</sup> The interior ministry operated under four acronyms from the time of the Bolshevik Revolution to Stalin’s death in March of 1953. It was first known as the Cheka, under its first minister, Feliks Dzerzhinsky. It was renamed the OGPU in 1922. The OGPU was merged into the NKVD in 1934. The NKVD was headed by G. G. Yagoda (from 1934 to 1936), N. I. Yezhov (from 1936 to 1938), and L. P. Beria (from 1938 to 1945). It was renamed the MVD in 1946. Although the interior ministry had three other ministers before Stalin’s death, the bloody history of the Cheka-OGPU-NKVD-MVD is associated with these four leaders, of whom only Dzerzhinsky escaped execution and died of natural causes. The Great Purges of 1937–38 are usually referred

1. The author is particularly grateful to Aleksei Tikhonov who collected much of the statistical material cited in this chapter from the Soviet Gulag archives of the Hoover Institution.

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to as the “Yezhovschina” after the zealous NKVD minister who spearheaded them.<sup>2</sup>

The generic term “Gulag” refers to the vast system of prisons, camps, psychiatric hospitals, and special laboratories that housed the millions of prisoners, or *zeks*. Although Soviet propaganda at times praised the Gulag’s rehabilitation of anti-Soviet elements through honest labor, there were no Soviet studies of the Gulag. The interior ministry had to turn to studies written in the West, which have been carefully preserved in its archives.<sup>3</sup> Broad public understanding of the magnitude and brutality of the Gulag was generated by the publication of Alexander Solzhenitsyn’s *The Gulag Archipelago*.<sup>4</sup> Since Russian independence many historical and political works have been published in Russia along with the memoirs of former prisoners. Former camp administrators have remained silent, so we have no accounts from the perspective of the camps’ bosses.

### THE GULAG AS AN INSTITUTION OF THE TOTALITARIAN STATE

This book is a collection of studies of forced labor in the Soviet Union until the time of Stalin’s death and its immediate aftermath. These studies focus mainly on the most extreme form of coercion—penal labor, but they also describe the application of force in the everyday workplace, a practice prominent from the late 1930s through the end of World War II. The extensive political and social literature that exists today on the Gulag has chronicled the suffering and loss of life it caused, establishing beyond a doubt the Gulag’s

2. Marc Jansen and Nikita Petrov, *Stalin’s Loyal Executioner, People’s Commissar Nikolai Ezhov, 1895–1940* (Stanford: Hoover Press, 2001).

3. Oleg Khlevnyuk, “The Economy of the Gulag” in *Behind the Façade of Stalin’s Command Economy*, ed. Paul Gregory (Stanford: Hoover Press, 2001), 111.

4. Alexander Solzhenitsyn, *The Gulag Archipelago*, 3 vols. (New York: Harper and Row, 1973).

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brutality and criminality. Our focus is on the Gulag as an institution of coercive power in a totalitarian state. We are interested in its functions and operations, both formal and informal, and its contributions to the goals of the dictator. We are interested in whether the Gulag was created to serve the economic interests of the totalitarian state or whether it was a by-product of the dictator's consolidation of power.

The Soviet administrative-command system was the most important experiment of the twentieth century. Its true operation, hidden behind a vast veil of secrecy, was exposed by the opening of formerly secret archives. Studies using these archives reveal that the system's working arrangements were more complex and subtle than had been imagined.<sup>5</sup> We must examine the institution of the Soviet Gulag in a similar light to determine its true working arrangements.

The chapters in this book are based mainly on research in the archives of the Gulag, in its central, regional, and local archives. Three chapters examine the general institutions of force and coercion as applied to labor (Chapters 2, 3, and 4). Four chapters are devoted to case studies of three major Gulag projects (The White Sea–Baltic Canal in Chapter 8, Magadan in Chapter 6, the Karelia region in Chapter 9, and the Norilsk Metallurgy Complex in Chapter 7). Chapter 5 examines the use of penal labor in Norilsk. The case studies use both central and local archives, while the studies of central institutions use the central archives of the Gulag and the relevant central archives of the Soviet state and party.<sup>6</sup> These archives are located in Moscow and in the regions themselves. The

5. See, for example, Paul Gregory, *The Political Economy of Stalinism: New Evidence from the Secret Soviet Archives* (New York: Cambridge University Press, 2003).

6. S. A. Krasilnikov, "Rozhdenie Gulaga: diskussia v verkhnikh eschelonakh vlasti: Postanovlenia Politburo TsK VKP(b), 1929–1930," *Istoricheskiy Arkhiv*. 1997, N 4, pp. 142–56.

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Gulag archives are also located in the collections of the Hoover Institution.

The archive documents tell the complicated story of how the forced labor system was created and operated partly by design and partly by learning from experience. Internal reports on the state of the Gulag reveal a high level of introspection by top Gulag administrators and give a valuable insider's view of the Gulag's strengths and weaknesses.

Internal Gulag documents reveal three constants of Gulag administration. First, the Gulag's structure and development were dictated by the political strategy of the dictatorship. As noted by a Gulag administrator: "Organizational changes within the Gulag are normally caused by external political and/or economic decisions of the state."<sup>7</sup> The Gulag was populated as a consequence of the exogenous state policies of collectivization, the Great Terror, the harsh labor laws, and the imprisonment of returning POWs. From 1934 on, the Gulag had to manage the "unplanned" rise in the number of prisoners and the simultaneous expansion of the prison camp network. The Gulag's attempts at advance planning grossly underestimated the influx of prisoners. Its planners consistently expected a diminishing number of prisoners. The third Five-Year Plan (1938–42), which was drawn up during the Great Purges, remarkably projected fewer prisoners just as the first victims of the Great Terror began flooding in.

The second constant was the economic *raison d'être* of the Gulag: the exploration and industrial colonization of remote resource-rich regions at a low cost of society's resources. As noted by an internal Gulag document: "The history of the Gulag is the history of the colonization and industrial exploitation of the remote regions of the state."<sup>8</sup> Although prison labor was used throughout

7. 9414-1-368, l.115. (Hoover Archives)

8. 9414-1-368, l.115.

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the USSR, Gulag labor was principally concentrated in remote regions that had difficult climates and that would have been costly to settle with free labor. The use of penal labor in remote regions was supposed to achieve economic “surpluses” (similar to Marx’s surplus value) by paying unfree labor only subsistence wages (or paying well below the rate for free labor) to produce products that had substantial economic value. Penal labor was supposed to be more mobile than hired labor because prisoners could be shifted in large numbers from one project to another. Penal labor was also supposed to provide surpluses and resource mobility without the loss of labor productivity. Close supervision and monitoring, it was hoped, would render penal labor as productive as free labor.

The third constant was the conflict between the economic function of the Gulag and its function of isolating prisoners from the general population and preventing escapes. The more prisoners were used for construction and production, which required their movement from job to job or from task to task, the weaker the security regime. Prisoners contracted out to civilian enterprises and institutions were particularly difficult to guard, to isolate from the general population, and to prevent from escaping. To a degree, the Gulag attempted to reduce the friction between its isolation and economic functions by locating production facilities close to the place of confinement, but this was an expensive solution. All the economic tasks that inmates were supposed to carry out could not be located within the confines of camps. As the Gulag’s economic system became more complicated and its economic obligations heavier, “its priority function of protection and isolation was negatively affected,” as remarked one Gulag chronicler.<sup>9</sup>

The chapters in this book show the struggle within the dictatorship and within the Gulag between the notion that productive

9. “Vozniknovenie i Razvitie ITL, ULAGa i GULAGa OGPU-NKVD-MKVD SSSR” - 9414-1-369 (3.4708) l.129.

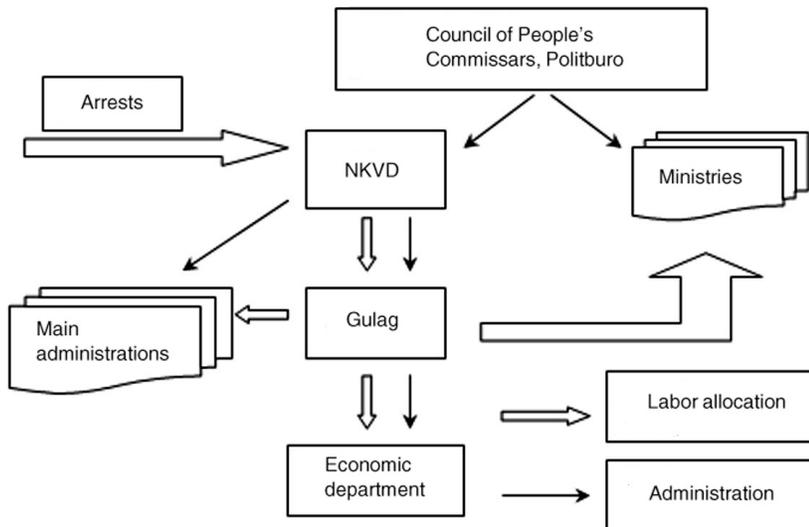
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labor can be extracted by coercion and the realization that people must be offered “carrots” as well as “sticks” if they are to work well. Chapter 2 shows that the Soviet leadership sought in vain the right balance between carrots and sticks in the “civilian” labor force and often combined extreme coercion with extreme material incentives. Chapters 3, 5, 6, and 9 show that material incentives played an ever larger role in motivating penal labor, and Chapter 4 shows that in the last few years of the Gulag, distinctions between free and penal labor were blurred. Chapter 5 shows that eventually prisoners had to be offered material incentives that were distributed among prisoners much as they were distributed among civilian workers. Although prison bosses had an arsenal of tools to motivate prisoners to fulfill their plans—punishment, sentence reductions for good work, moral incentives, and material incentives—they learned that coercion alone was not sufficient. There were, moreover, complicated tradeoffs: prisoners placed on reduced rations for failing to meet their quotas were no longer able to work effectively because of their weakened state. One of the most effective incentive systems—reduced sentences as a reward for exemplary work—deprived the Gulag of its best workers through their early release.

## THE ORGANIZATIONAL STRUCTURE OF THE GULAG

In the chapters that follow, there are references to many organizations related to the Gulag—the OGPU, NKVD, MVD, Gulag main administrations, economic administrations, and regional organizations. We have already explained that the OGPU, MKVD, and MVD were, in effect, different names for the Soviet interior ministry, or the state security ministry, which was the superior of the Gulag administration. To simplify the discussion that follows, we shall use the best-known designation of the interior ministry of the Stalin era—the NKVD. As Figure 1.1 shows, the NKVD received its orders from the highest political and party authority, the Council of Peo-

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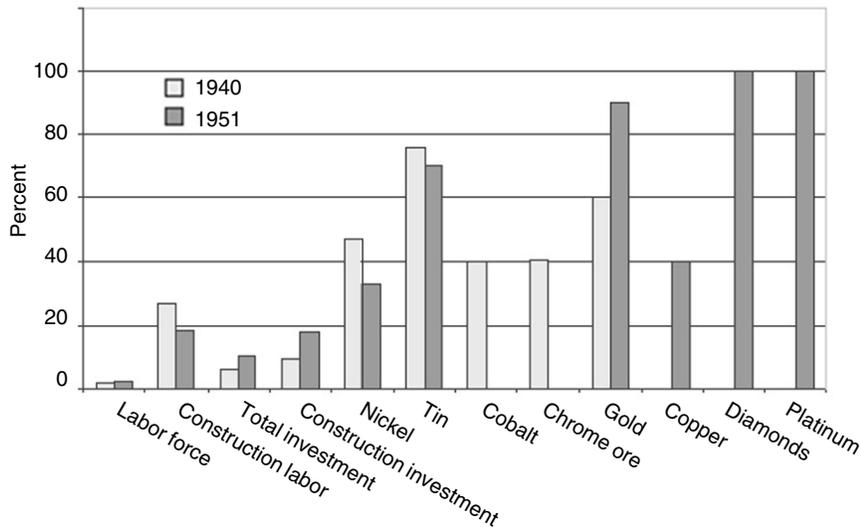


**Figure 1.1 Organizational Structure of the Gulag**

ple's Commissars (the highest state body) and the Politburo (the highest body of the Communist Party). Like industrial ministries, the NKVD was broken down into main administrations, called *glavki*, which were responsible for carrying out the functions of state security. This book is about the NKVD's most notorious main administration, the Main Administration of Camps, or Gulag.

Figure 1.1 illustrates the structure and relationships of the Gulag. The Gulag received its orders from the NKVD, that is, from the minister of interior, such as Yezhov or Beria. The head of Gulag administration was responsible for carrying out these orders and directives. The supply of prisoners was delivered by the courts and justice ministries to the NKVD, and delivered by the NKVD to the Gulag. The Gulag served as a "labor intermediary" by distributing penal labor to its own main industrial administrations, or Gulag *glavki*, or to the economic administrations that it administered directly. The Gulag could also contract penal labor out to other construction and industrial production ministries. Because it had

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**Figure 1.2 Gulag Labor, Investment, and Production as Percentages of the Total Economy (1940 and 1951)**

*Sources:* Gulag labor is from Table 1.2. The total labor including construction labor is from Warren Eason, "Labor Force," *Economic Trends in the Soviet Union*, ed. Abram Bergson and Simon Kuznets (Cambridge: Harvard University Press, 1963), 77, 82. Gulag construction labor is calculated at 75 percent of the total, following Table 5. Gulag investment figures are from GARF 9414-1-28, 9414-1-1312, 9414-1-188. The overall investment figures are from Richard Moorsteen and Raymond Powell, *The Soviet Capital Stock, 1928–1962* (Homewood, Ill.: Richard D. Irwin, 1966), 391. The mineral production shares are from G. M. Ivanova, *Gulag v sisteme totalitarnogo gosudarstva* (Moscow, 1997), 97.

its own construction and production responsibilities and because Gulag *glavki*, although quasi-independent, had to meet their plan goals, the Gulag had to weigh the financial benefit of contracting labor to third parties against the need for prisoners in its own production structure.

Almost all prisoners were confined either in Corrective Labor Camps, called ITLs, or in labor colonies, also known as general places of confinement. Henceforth we refer to the first as "camps" and the second as "colonies." Some prisoners were confined to mental institutions, high-security prisons, special research facilities

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(for elite scientists and engineers) or special camps. Camps provided traditional prisonlike confinement with guards and strict supervision of prisoners. Colonies were located in remote regions, and “colonists” were prevented from leaving by lack of transport and by internal passport rules. The term of custody was the decisive formal criterion for the kind of confinement: “In accordance with criminal laws (Article 28 of the Criminal Codex of the Russian Republic), the Corrective labor camps (ITL) are for those prisoners sentenced to terms of three years or more.”<sup>10</sup>

Before the control of forced labor was unified under the NKVD in 1934, camps and colonies were administered both by the USSR interior ministry and by republican organizations (republican justice ministries and republican NKVDs). The first and most famous prison camp, the Solovetsky Camp of Special Destination (SLON), was founded in 1920 on Dzherzhinsky’s (the first head of the Cheka) initiative<sup>11</sup> to isolate counterrevolutionaries. The systematic use of forced labor began in 1926 and was at first limited to forestry and fisheries in the local environs.<sup>12</sup> Starting with the first Five-Year Plan (1928–33), the OGPU was the agency of colonization. On July 11, 1929, the Council of People’s Commissars created the Administrative Authority of Northern Camps of Special Destination (USLON) of the OGPU for the exploitation of mineral resources in the northern territories. Such remote camps colonized undeveloped regions and isolated individuals posing threats to the socialist state. The emerging network of the prison camp administration was created independently of the existing territorial prison administration system operated by the justice ministry and territorial authorities. As a result, the administration of prison camps was in fact divided into two parts: the OGPU, which distributed the prisoners among the

10. 9414-1-502, l.158.

11. 9414-1-368, l.118.

12. 9414-1-368, l.118.

**Table 1.1 Gulag Camps Created in 1932**

<i>Project</i>	<i>Location</i>	<i>Task</i>
Belomor-Baltisky (White Sea-Baltic)	Karelia	Construction of the White Sea channel
Severo-Vostochny (Northeast)	Kolyma River	Development of the Far East and production of nonferrous metals
Provinsky	Kazakhstan	Fishery
Dmitrovsky	Moscow region	Construction of the Moscow-Volga channel
Baikal-Amursky	Far East	Railroad construction

camps, and the territorial administrative organs, which were responsible for their utilization. Newly created camps, such as the notable camp complexes founded in 1932 (listed in Table 1.1), were subordinate to the OGPU.<sup>13</sup>

The Gulag system was concentrated under the NKVD, in 1934, under its Gulag administration.<sup>14</sup> Under this unified administration, inmate numbers soared, as did Gulag responsibilities. Many projects begun by civil administrations were shifted to the Gulag, eventually overwhelming its administrative capacities, as a 1940 report indicated: “The Gulag has 30 main building projects; none will be completed in 1940. All will continue for several years, with an overall labor budget of 14.7 million rubles. The Gulag is systematically charged with additional building projects, which result in a remarkable backlog. The large number of construction projects requires a fundamental reorganization, and the magnitude of these tasks complicates management in an extreme fashion, leading to a diversification of tasks and to bottlenecks in resource allocation.”<sup>15</sup>

To administer its increasingly complicated production and construction complexes, the Gulag created in 1941 the main economic

13. 9414-1-368, l.120.

14. *Sobranie Zakonov SSSR-1934*, No. 56, p.421 (see 9414-1-368, ll.117-118).

15. 9414-1-2990, l.5.

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administrations, also called *glavki*, to take responsibility for its economic activities.<sup>16</sup> These newly founded administrations guided economic branches, except Dalstroi (Far Northern Construction), which administered 130 separate camp facilities in a territory covering 3 million square kilometers (see Chapter 6). The Gulag's complex structure gave observers the impression of several Gulags developing in the prewar USSR.

World War II reduced the number of prisoners because of transfers to the front and increased mortality, and the number of Gulag organizations declined (see Chapters 2 and 3). Although the Gulag administration expected a continued decline at the end of the war, there was a new influx of returning POWs, wartime collaborators, and inmates sentenced under new criminal codes. Both the number of inmates and the Gulag's economic activities expanded again after 1947.<sup>17</sup> Inmate totals reached their peak at 2.5 million in the early 1950s. Table 1.2 presents a general picture of the Gulag on the eve of World War II, at the end of the war, and in the early 1950s. The increase in the Gulag bureaucracy appeared to outrun the increase in the number of prisoners. The ratio of guards to inmates rose after the war to almost one guard for every ten inmates. These ratios

16. The main economic administrations (*glavki*) independent from the Gulag were founded by decree No. 00212 February 26, 1941, by the NKVD. They consisted of the following:

GUSHDS (Main Administration of Railroad Construction)

GUGidroStroi (Main Administration of Hydraulic Construction / Engineering)

GULGMP (Main Administration of Camps in Mining and Metallurgical Industry)

GULPS (Main Administration of Camps for Industrial Construction)

ULTP (Administration of Camps in Heavy Industry)

ULLP (Administration of Camps in Forestry and Wood Processing)

Administration of Construction of the Kuibishev Industry Plants

Dalstroi (Far Eastern Construction Trust)

GULSchosDor (Main Administration of Camps for Highway Construction)

17. See Chapter 5 (this volume).

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**Table 1.2 Numbers of Prisoners and Camps (First of Year)**

	1941	1947	1951	1953
Total number of inmates (millions)	1.9	1.7	2.5	2.5
Prisoners in camps (millions)	1.5	0.8	1.5	1.7
Total number of camps	76	56	115	158
Number of main administrations	9	6	12	15
Guards (thousands)	107	91	223	257
Ratio of guards to inmates	5.6	5.3	8.9	10.2

Sources: 1941: 9414-1-368, 9414-1-1155, 9414-1-28 (Hoover archives); 1947: 9414-1-86; 1951: 9414-1-112; 1953: 9414-1-507.

must be interpreted with caution because a high proportion of guards were themselves inmates (see Chapter 5).

#### THE GULAG AS THE SUPPLIER OF PENAL LABOR

Throughout the many changes in administration, responsibilities, and inmate totals, the Gulag remained the sole centralized administrator of the camp sector or guard regime. As such, it was the monopoly supplier of prison labor to the economy. As noted by one of the Gulag's chief administrators: "The Gulag ensures the required labor force replenishment of the building projects and industrial plants of the MVD by supplying prisoners to the appropriate camps and colonies. At the same time, the Gulag provides manpower for civilian ministries on a contractual basis in order to organize special colonies for prisoners next to the industrial location and building projects of these ministries."<sup>18</sup> All colonies and several agricultural camps remained under the direct control of the Gulag itself, including special camps for counterrevolutionaries, which were founded in 1948 and which required a special disciplinary regime.

Table 1.3 shows the distribution of prison labor by the *glavki*,

18. 9414-1-374, l.55.

**Table 1.3 Distribution of Prison Labor (1941, 1947, 1950, 1953)**

<i>Main Glavki</i>	<i>Function</i>	<i>Number of Inmates (Thousands)</i>			
		1941	1947	1950	1953
GULZhDS	Railroad construction	486	192	294	205
Glavpromstroï	Military construction	204	124	183	382
Glavgidrostroï	Hydraulic construction/engineering	193	0	46	119
GULGMP	Metal mining	158	173	224	242
Dalstroï	Far North construction	184	102	153	175
GULLP	Forestry	318	244	280	322
GUShosDor	Highways	25	0	24	20
Third Department	Gulag production (special camps and colonies)	704	1,168	1,320	986
Contract workers	Hired out	255	469	636	273
Total MVD		2,290	2,027	2,561	2,482

Note that the numbers involve some double counting; perhaps forestry workers are included both in the forestry *glavki* and in Third Department workers.

Sources: Various documents from 9414 -1 and (Systema ITL . . . , M.1996).

by the Gulag's own operations (the Third Department), and by the prisoners contracted out to civilian enterprises. For the early 1950s, of the 2.5 million prisoners, between 1 and 1.3 million worked in the Gulag's Third Department, between a quarter and a half million were hired out, and the rest worked mainly in forestry, railroad construction, military production, hydroelectric power, and Far North construction. The Third Department was the largest economic subdivision of the Gulag, accounting for more than one-third of all prison labor for more than a decade. Besides gold mining, the Third Department included several old Gulag camps, most of the Special Camps founded in 1948, and all general places of confine-

ment, including colonies whose administration was carried out by the territorial departments and subdivisions of the Gulag. The untold story of Table 1.3 is the five hundred thousand to six hundred thousand penal workers contracted out to civilian employers in the early postwar years. Although they constituted a relatively small share of the Soviet labor force, they were concentrated largely in construction and thus constituted a much higher share of total construction employment.

Although the criminal codex required that prisoners sentenced to fewer than three years be imprisoned in colonies, the Gulag openly defied this law when it faced labor bottlenecks. From the Gulag's perspective, those sentenced to colonies were less valuable because the transport of prisoners to remote colonies could take up to half a year. Hence, the most significant projects were not carried out in colonies. Special decrees allowed the MVD "to displace prisoners sentenced to a term of custody of up to two years from colonies to camps."<sup>19</sup> A memorandum written for the Gulag administration in July of 1947 found that 13 percent of the inmates in camps had been sentenced to terms of custody of fewer than three years, while more than half of all prisoners in colonies were sentenced to more than three years and should have been in camps.

As the Gulag and civilian employers wrestled for penal workers, the MVD and its Gulag administration resisted calls for more civilian control of penal workers. State policy sometimes favored the Gulag, sometimes the industrial ministries. A government decree of November 4, 1947, forbade the assignment of prisoners to civilian projects without MVD-Gulag approval, stipulating that prisoners be sent on a priority basis to the Far North and Far East, where it was difficult to procure free labor. Another state decree obliged the MVD-Gulag to provide labor from special contingents without

19. 9414-1-1170, l.1.

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prior agreement with the MVD.<sup>20</sup> Open battles broke out between the Gulag and the civilian ministries. In 1950, the economic ministries claimed the Gulag “owed” them 125,000 prisoners, while the Gulag accused the ministries of withholding 33,000 prisoners.<sup>21</sup> The ministries lobbied for prime prison labor, while the Gulag supplied a representative cross-section of prisoners with regard to sex, age, qualification, and health. The Gulag preferred to supply women, elderly workers, and unskilled workers, imposing social obligations linked to these categories of prisoners on the hiring enterprise. Frequent quarrels over nonpayments required Council of Ministers intervention, such as the April 21, 1947, special order that ministries pay outstanding debts to the MVD, which could demand its prisoners back if payments were overdue more than one month. As the decree ordered: “These accounts have to be paid from the funds reserved for the payment of the regular wages for workers and employees.” Nonpaying enterprises had to pay transport costs back to the prisoners’ places of confinement.<sup>22</sup>

The Gulag’s supply of labor to civilian employers depended on the influx of prisoners. When the number of prisoners entering the Gulag dropped sharply in 1951, the number of inmates contracted out to outside employers also fell sharply. As stated by a Gulag report: “As a result of the decrease in inflow of newly sentenced contingents, the number of prisoners assigned to other ministries also sharply declined. Within one year alone from November 1, 1950 to November 1, 1951, their number declined by more than a third.”<sup>23</sup> When caught with a labor shortage, the Gulag endeavored to cut supplies to other ministries. A new inflow of prisoners after 1951 led to a new rise in building activity. Stakes were high in

20. 9414-1-112, l.39.

21. 9414-1-112, l.26.

22. 9414-1-1271, (f. 3.5086), l.66 (Circulation letter from the Chief of the Gulag to local administrators of camps and colonies, May 4, 1947).

23. 9414-1-3712, l.169.

disputes between the Gulag and civilian employers because of the large numbers of prisoners involved. Table 1.4 shows that prison labor could account for up to 18 percent of total employment in some civilian sectors, such as heavy industry construction.

Table 1.5 divides the 1950 Gulag labor-staffing plan into construction, industry, and contract employment. It shows that 27 percent of Gulag labor was classified as “free,” although there is considerable doubt as to how “free” such labor was (see Chapter 5). More “free” laborers worked in industry than in the harsh conditions of construction. Most contracted-out inmate labor went to construction. Hence, if we add all contracted workers to construction, we find that penal labor accounted for 81 percent of workers in Gulag construction projects, while only 19 percent of free labor worked in construction projects. In Gulag documents, these free workers are explicitly mentioned as *labor force*, so this figure does not include either administrative employees or guards. Thus the Gulag hired free labor in production while contracting out prisoners to the external construction sector. The number of free laborers working in Gulag industry approximately equaled the number of prisoners “exported” for outside construction employment

The Gulag’s use of “free” labor contradicts both the stereotype of the Gulag and the minister of the interior’s report to Stalin, G. Malenkov, and Beria, which stated that “all orders concerning large-scale construction and industrial production given to the Gulag are executed by prisoners.”<sup>24</sup> The Gulag may have exaggerated the role of prisoners in this instance to claim more budget resources. The Gulag also expected budget subsidies for nonworking and disabled prisoners. One document complained: “In fact, the donation from the budget was lower than the expenses for the maintenance of the non-working prisoners and just covered the

24. 9414-1-118, 1.4.

**Table 1.4 Contract Assignments of Prison Labor Force**

<i>November 1946</i>			<i>July 1950</i>		
<i>Ministry</i>	<i>Number</i>	<i>%</i>	<i>Ministry</i>	<i>Number</i>	<i>%</i>
Building projects in heavy industry	45,940	11.9	Heavy construction	104,943	18.0
Fuel industry	39,772	10.3	Coal industry	76,893	13.2
Nonferrous metallurgy	29,886	7.7	Power plants	51,511	8.8
Coal industry (west and east)	21,641	5.6	Small engineering	41,628	7.1
Transport	20,921	5.4	Oil industry	31,392	5.4
Military and naval industry	19,772	5.1	Wood processing and paper industry	30,597	5.2
Aviation industry	18,213	4.7	Metallurgical industry	25,855	4.4
Power plants	14,841	3.8	Aviation industry	15,249	2.6
Automotive engineering	12,683	3.3	Chemical industry	13,898	2.4
Ferrous metallurgy	12,505	3.2	Food industry	13,563	2.3
Food industry	11,908	3.1	Transportation	13,555	2.3
Special food products	11,420	2.9	Agricultural engineering	13,354	2.3
Wood processing agricultural	11,335	2.9	Building materials industry	12,140	2.1
Engineering	11,204	2.9	Automotive engineering	10,532	1.8
Building materials industry	10,033	2.6	House-building industry	9,726	1.7
Textile industry	7,879	2.0	Civil construction	9,413	1.6
Civil construction	6,644	1.7	Car and tractor industry	9,172	1.6
Other	80,934	19.2	Other	99,780	16.1
Civilian sector	387,531	91.7	Civilian sector	583,201	94.2
Contracted to MVD	35,045	8.3	Contracted to MVD	39,903	6.4
Total	422,576	100	Total	619,274	100

Sources: 1946: 9414-1-2114, I.33, 1950: 9414-1-1343, II.96-98.

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**Table 1.5 Employment in Construction and Industry of Gulag Labor according to 1950 Plan (Thousands of People)**

Category of Labor	(1) Industry		(2) Construc- tion		(3) Hired to Outside Employers		(4) Implied Con- struction (2+3)		(5) Total Employment, Gulag Labor	
	Num- ber	Per- cent	Num- ber	Per- cent	Num- ber	Per- cent	Num- ber	Per- cent	Num- ber	Per- cent
Penal	739	63	596	69	584	100	1180	81	1919	73
Free	437	37	270	31			270	19	707	27
Total labor	1176	100	866	100	584	100	1450	100	2626	100
Percentage distribution by employ- ment activity	45		33		22		55		100	

Source: 9414-1-1312. The calculations presented above are based on the data of the "projected plan of the average annual labor requirements of the industrial and construction sectors for 1950," drawn up by the planning department of the MVD.

expenses for the maintenance of disabled persons and prisoners kept in transit camps until their forwarding to the camps and colonies."<sup>25</sup> Beginning in 1948, there were repeated attempts by the MVD to incorporate the Gulag directly into the state budget to obtain automatic subsidies.<sup>26</sup>

#### THE GEOGRAPHY OF THE GULAG

The Gulag's camps, colonies, prisons, labs, and mental hospitals were dispersed across the vast expanse of the USSR. Although Gulag operations, such as the construction of the metro deep underneath Moscow, took place in major metropolitan centers, the large Gulag camps and colonies (listed in Chapter 3), which employed tens of

25. 9414-1-118, l.4.

26. 9414-1-334 Report by the minister of interior S. Krygllov including a similar proposal written in 1948.

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thousands of prisoners, shared one feature: they were located in the northern and eastern parts of the Soviet Union in harsh climates, far from civilization and transport. Geographical remoteness allowed prisoners to be isolated from the rest of the population and reduced the cost of security. However, the main reason for location in the Far North and Far East was the presence of such valuable resources as Norilsk's nickel ores (see Chapter 7), Magadan's gold ores (see Chapter 6), or the forestry reserves of Siberia, which all required large infrastructure investments to develop and which were shunned by free labor.

Figure 1.3 provides a map of the major Gulag camps and colonies covered in this book. It clearly shows the skewed geographical distribution of camps and colonies to the north and east.

## THE GULAG'S ECONOMIC CONTRIBUTION

The Gulag held somewhat fewer than 2 million prisoners in its colonies and camps in 1940. This number peaked at 2.5 million in the early 1950s after former POWs and other returnees from the war were added to the list of Gulag inmates. Thus, in an economy that employed nearly 100 million people, the Gulag accounted for two out of every hundred workers (see Figure 1.2). This percentage could overstate the Gulag's share of labor because it includes invalids and other nonworking inmates. However, we have already shown that the Gulag had a larger number of "free" workers; so the 2 percent figure is a reasonable estimate. The Gulag was charged with some of the most difficult tasks of the economy, such as heavy construction and work in harsh climates and remote regions, which would have required exceptional pay and effort to attract free labor. Some two-thirds of Gulag economic activity was in construction, often in remote and cold regions where transport was difficult. Although Gulag labor accounted for some 2 percent of the labor force, it accounted for about one in five construction workers in

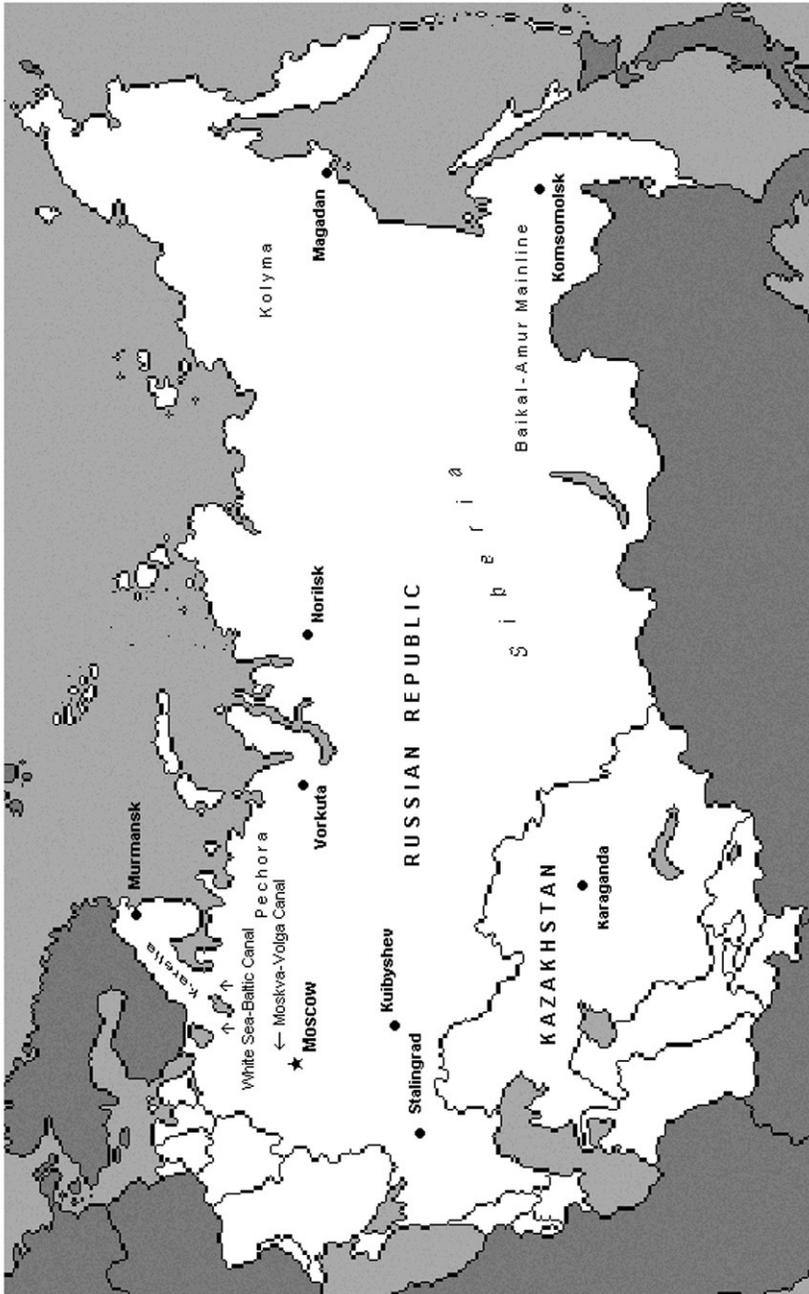


Figure 1.3 Major Gulag Camps and Colonies

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1940 and 1951. While accounting for between 6 to 10 percent of total investment, its share of construction investment was almost 20 percent in 1951. In fact, these figures understate the Gulag's role in construction because, in 1938, 30 percent of the Gulag's construction budget was hidden in civilian construction ministries.<sup>27</sup> Gulag production of the most precious minerals, such as gold and diamonds, reached close to 100 percent (as Figure 1.2 shows).

The Gulag system was a by-product of collectivization, the Great Purges, draconian labor policies, and the aftermath of World War II. It would be contrary to script if Stalin and his political allies had not regarded the resulting pool of inmates as a remarkable economic opportunity. Stalin presumed that surpluses could be extracted from Gulag labor similar to those extracted from the peasants of the early 1930s, who were supposed to deliver grain without compensation. In effect, the presumption was that penal workers could be forced to work efficiently and conscientiously without being offered real material incentives. Chapters 2 and 5 show the degree to which these expectations were not realized. These chapters show that penal workers had to be offered wages and monetary bonuses, thus raising their cost to the state.

27. GARF 9414-1-1139.