Abram Bergson’s first monograph was his 1946 study of the Soviet labor market. In this monograph Bergson began his exploration of what was then the *terra incognita* of how the Soviet planned economy worked.¹ His overall conclusions concerning the Soviet labor market probably surprised the early postwar generation of scholars: He basically concluded that Soviet labor market working arrangements, while markedly different from the West, had many of the features of labor markets in market economies. He found a surprising degree of differentiation – perhaps even more than for U.S. industrial workers, a finding which he explained as follows: “The upward movement in differentials after 1931 is hardly evidence of the application of a peculiarly socialist wage policy. It is rather the response to be expected of wage differentials when skilled labor is scarce and capitalist wage principles prevail.”² In his work on Soviet wages, Bergson was able to gather sufficient information to describe the Soviet labor market, and his basic findings remain basically unchallenged to the present day.
Clearly, Bergson could not have studied one of the most unusual features of Soviet labor – the widespread use of the labor of political and criminal prisoners under the unified direction of a massive integrated concern – the Gulag administration of the Soviet ministry of interior. Some information about prison labor and its output was required for his studies of national income, but despite efforts to penetrate the veil of secrecy, his estimates of the Gulag economy and its financing were based on grossly inadequate information. Bergson wrote: “Actually we are in the dark as to the extent that penal labor is supported out of the budget appropriation to the NKVD.”

The opening of formerly secret Soviet archives can now shed light on the true working arrangements of the Gulag system, including its financial aspects. The recent papers by O.Khlevnyuk and P.Gregory emphasized the perceived advantages of forced labor that could be seized upon by a dictator, like Stalin: Unlike free workers who demanded material incentives to work in remote regions (like Northern Siberia or Far East), penal labor could be dispatched by administrative decree. The use of punishment rather than material rewards could save vital resources and “surpluses” could be extracted from prison workers. Our findings in this paper challenge the stereotype of Soviet forced labor, just as Bergson’s 1946 monograph challenged the stereotypes of that time. We find that even in the Gulag, where force could be most conveniently applied, camp administrators combined material incentives with overt coercion, and, as time passed, they placed more weight on motivation. By the time the Gulag system was abandoned as a major instrument of Soviet industrial policy, the primary distinction between slave and free labor had been blurred: Gulag inmates were being paid wages according to a system that mirrored that of the civilian economy described by Bergson.
Our ongoing research focuses on the different types of motivation of Gulag prison labor. Although the expectation might be that little material motivation was necessary in a work setting ideally suited to force and coercion, we find the presence of different types of material incentive schemes and a trend towards their greater as the Gulag system evolved. We have described an incentive tool unique to prison labor – sentence reductions for good work – in another paper. This paper examines the use of money incentives. Our research is based mainly on archival materials of the State Archive of Russian Federation (GA RF). The archives of the Gulag are located both in Moscow and in the archival department of the Hoover Institution. Most of the information presented in this paper was gathered at the Hoover Institution.

The Gulag Administration Versus Gulag Camps: Principal and Agents

Berliner and Granick in their classic studies of the Soviet enterprise dispelled the myth of a harmonious hierarchy – ranging from the Politburo to enterprises – of communist leaders dedicated to the single goal of building communism. Subsequent research has shown the presence of vast principal/agent problems within the vertical command system, with the principal conflict between those who issued orders and those who had to fulfill them. When we study the Gulag economy, we must consider similar issues: Was there a distinction between the ministry of interior and its Gulag administration and the top leadership of the Soviet Union, or were they one and the same? Was the Gulag Administration, like its industrial ministry counterparts, in constant conflict with the leadership over plan targets and material inputs? Were the individual Gulag camps – the equivalent of Soviet enterprise – engaged in a principal/agent conflict with their superiors in the Gulag administration?
Although such conflicts are not the prime focus of this paper, we can report that the Gulag archives provide ample evidence of conflicts between the director of the Gulag administration (or, more generally, the heads of the Gulag’s own main administrations) and local camp administrators. Judging from such documents and the practices they describe for the period from the 1930s through the 1950s, the Gulag Administration was oriented towards keeping the Gulag labor force in reasonable condition for hard work so that they could fulfill construction and production plans handed down from above. Hence, the Gulag Administration’s decrees concentrated on the provision of acceptable levels of food, clothing and living conditions. In contrast, Camp Managers (and their immediate subordinates) (to our surprise) appear less interested in living and working conditions, and they were often crude, cruel, and indifferent in their dealings with inmates. This impression is gained from the thousands of pages of archival materials generated by camp inspections organized by the Gulag Administration’s own “revision” department. The Gulag Administration’s intense interest in inmate labor productivity is seen in the large number of requests sent to their NKVD/MVD bosses asking permission to introduce more efficient labor motivation systems. The most important decisions concerning labor motivation programs in the Gulag were made by the supreme Soviet authorities. Sometimes it took several years to get such permission “from above”.

Living Conditions as Work Incentives

It would appear Gulag that camps offered ideal environments for coercion. One would therefore question why incentive systems, as such were even necessary? The work of prisoners could be monitored and poor work punished. Indeed, Gulag labor was
regulated by harsh measures. The “Temporary instructions concerning the regime for holding prisoners in corrective-labor camps and colonies” issued by the NKVD on August 2, 1939 placed prisoners refusing work on a “penalty regime, and hardcore “work refusers” were subject to criminal punishments. Depending upon the violation of work discipline, workers could be deprived of correspondence for six months, deprived of the use of their own money for three months, transferred to general work (for specialists and office personnel), placed in isolation for twenty days, or they could be placed on reduced rations and poorer living conditions. The administration of every camp fought a constant battle against “tufta,” a hidden form of work refusal or the “imitation” of work.

The tying of consumption to work performance in camps where inmates were already close to subsistence would represent a combination of material incentives and coercion. The “stick” in this case would be that if you worked poorly, your rations could be reduced below subsistence to leave you a victim either of starvation or a starvation-related disease. In camps, as in the economy as a whole, labor-motivation systems were directed at the fulfillment of work norms which were dictated according to the branch of the economy. Some provisions lowered norms for “physically weak” workers. Thus, prisoner living standards depended on fulfillment of norms. Norm underfulfillment typically meant reduced rations, but the lowering of rations had to be used cautiously. Reduced rations could so weaken workers that they could not fulfill their norms with even more severe long-term consequences such as dysentery, tuberculosis, and death. On the flip side, prisoners who overfulfilled their norms received improved rations and other advantages.
Such penalties and rewards were often applied to the work brigade as a whole, which meant that the work of one prisoner affected the rations and living conditions of other brigade members. Within the brigade, there were mechanisms for maintaining work discipline and helping one another, that is, brigades developed their own material incentives, punishments, and awards. Brigade leaders, who achieved good work results, received better rations, posting on the “red board”, better clothing, and the right to buy goods in the company store. Prisoners could also receive commendations that were placed in the prisoner’s record, monetary rewards, rewards in kind, the right to receive packages without restrictions, the right to send money to relatives not exceeding 100 rubles per month, and the opportunity to transfer to more qualified work. Prisoners working according to “Stakhanovite” measures received additional privileges such as a place in a better living quarters, boots or coats, special rations, a separate dining room or the right to be served first, first access to books or newspapers in the prison library, the best seating in the camp theater, or a place in training course to raise qualifications.

Incentives, which directly linked inmate living conditions to labor productivity, were powerful motivators for prisoners living at the margin of subsistence. They raised the productivity of successful workers with only minor managerial expenditures on other forms of bonuses. On the other hand, the loss of manpower caused material deprivation of those unable to adapt to severe working and living conditions raises serious questions about the economic effectiveness of incentive systems that linked work to living conditions in prison communities living on the edge of subsistence.

This “catch 22” of tying living standards to work did not prevent its widespread use throughout the entire history of the Gulag. The best workers could always count on
receiving something extra, either in the form of more food during times when others were starving or in the form of some less vital privilege, such as better housing, or even linen sheets.

**The Work Credit System**

The Gulag administration used a “work credit” system, whereby sentences were reduced (by two days or more for every day the norm was overfulfilled). The evolution of this specific motivation system implemented in GULAG in 1930s and at the end of 1940s – beginning of 1950s is described on our separate paper (see endnote). This incentive system, which all participants understood was among the most effective, also threatened to drive a wedge between camp managers who needed more production now and the Gulag Administration, which had to consider the loss of inmates through early releases.

**Monetary Bonuses for Good Work**

Starting from the very beginning (in early 1930s) the Gulag Administration used differentiated monetary payments (*premvoznagrazhdeniia*) for work performed by Gulag inmates. Those payments were not substantial (1.5-2 rubles per day) and they were paid to inmates as rewards for fulfilling work plans. Throughout the 1940s, administrative reports referred to these payments as “monetary rewards” and “monetary bonus remuneration”. Prior to 1950, monetary payments were basically in the form of supplemental bonuses. The 1939 “Provisional Instructions on Procedures for Inmates in Correctional Labor Camps” required that monetary bonuses be credited to the inmate’s
personal account up to a monthly upper limit. Inmates could also be given personal cash totaling no more than 100 rubles a month, subject to the approval of the division chief. Bonuses and personal cash were to be issued “piecemeal at different times, in such a manner that the total amount in an inmate’s possession does not exceed 50 rubles.” The 1947 procedures for Gulag inmates spelled out a similar terms for monetary rewards for overfulfilling production norms. According to Gulag director (Nasedkin), writing in 1947, inmates could receive cash amounts of not more than 150 rubles ?t one time. Any sums over this amount were credited to inmate’s personal account and were paid out as previously issued cash was spent.

Figure 1 shows monetary payments per man day worked for the period 1939 to 1949 to all inmates working at the Norilsk integrated metallurgy plant – one of the most important Gulag industrial projects located above the Arctic Circle. Probably most inmates did not receive bonuses; therefore the average figures are lower than the actual bonuses. Bonuses paid out hovered around 2 rubles per day, suggesting that the average worker would have to overfulfill norms for 50 days to accumulate the 100 ruble maximum. The average amount of the monetary remuneration in Norilsk was somewhat higher in 1936 than in subsequent years because of normal overfulfillment, an increase in bonuses for skilled workers, and, for certain projects, “there was an artificial increase in bonus remuneration for the purpose of accelerating projects of an extremely urgent nature.” There were also cases in which “the amounts of work completed were artificially inflated.” The increased bonuses for skilled workers graphically shows that the first directors of Norilsk were actively and deliberately using monetary rewards at the start of operations as an incentive. In 1937, the overexpenditure of the monetary-reward
fund was viewed as a problem because “even a small overfulfillment of output norms by individual groups of workers” could cause large increases in bonuses, which would raise the bonus-remuneration fund with respect to fulfillment of the capital-projects plan\textsuperscript{13}. Thereafter, Norilsk management drew up new rates “to lower the growth of bonus remuneration for overfulfillment of norms” and introduced “bonus bread.” Four hundred grams of bread were “moved from the basic allotment to bonus bread that was issued instead of money bonuses”\textsuperscript{14}. These and subsequent measures drove down expenditures on money rewards\textsuperscript{15}. The Norilsk plant’s 1937 report raises some doubt about how reliably money was managed inside the camp: “Accounts of inmate depositors were managed in 1937 by the divisions themselves, which caused numerous abuses, both on the part of workers and on the part of accounting employees”\textsuperscript{16}.

Monetary rewards paid out in the 1940s, especially in the second half of the decade, were lower than planned amounts, even though the Norilsk plant was fulfilling and overfulfilling its norms. In 1948 the planned amount was apparently reoriented toward a more realistic, lower figure. From the plant management’s perspective, bonuses were part of the expenditures on man-days of work in production. Managers under pressure to lower production costs reduced bonuses as a convenient means of lowering costs. Norilsk plant data shows that savings on “monetary rewards” in the 1940s kept overall expenditures per man-day of work below planned levels right up until 1948. This effect was especially noticeable from 1944 to 1947, when savings on other types of costs were disappearing. Given that cost economies not only improved the general financial capabilities of the enterprise but were cited in the plant’s reports as distinctive achievements, it is clear that the reducing monetary rewards as a way to cut costs was no
less important the incentive effects of these small bonus remunerations. Gulag administrators realized year by year inefficiency of that incentive system.

**The Move Towards a Wage System**

During the second half of 1940s a number of requests from the Gulag Administration and local camps administrations were sent to NKVD/MVD bosses asking them to introduce wages for Gulag inmates in order to increase labor productivity. In January of 1948, the head of Enterprise #4 of the Glavneftgazstroy complex wrote a letter stating that the labor productivity of the inmates was decreasing due to the lack of incentives. The lack of incentives was intensified by the abolition of the rationing system, which meant that inmates no longer received additional hot dishes for overfulfillment of daily tasks and output norms. “Still no other incentive has been created, and this influences their productivity”\(^{17}\). In his letter, the head of the Glavneftgazstroy suggested a progressive scale of cash bonuses for those overfulfilling output norms.\(^{18}\)

The memo on payments for inmate labor prepared by the MVD Deputy Minister (Chernyshev) in July 1948 is of special interest. Chernyshev provided a brief history of the pre-revolutionary experience of labor remuneration of prisoners. Chernyshev emphasized that in the pre-revolutionary period the costs of maintaining inmates were covered by the Department of Treasury\(^{19}\), while, according to current policy, Gulag expenditures on correctional labor camps and colonies were to be covered by revenues from inmate labor. According to Chernyshev, Gulag outlays were covered without any government subsidies until 1946. “Starting in 1946, in connection with such factors as rising prices of rations and clothing and increases in other expenses, the state is budgeting subsidies to cover the costs of nonworking and disabled inmates only”\(^ {20}\). In his memo
Chernyshev pointed out that the inmates received no monetary labor remuneration except for insignificant monetary payments (1.5 -2 rubles a day per person) for those fulfilling and overfulfilling output norms. Chernyshev went on to point out that the share of inmate labor costs to total costs was smaller than that of civilian workers due to minimum expenditures on inmate rations and clothing. The memo provided a unique assessment of forced labor “profitability” by calculating additional labor costs under the assumption that inmates were paid the same as free workers: “It should be stated that if we settled the accounts according to the norms established for civil workers, Dalnostroy, for example, should be paid additional 300 mln. rubles”. 21 Chernyshev concluded that MVD enterprises were operating under more difficult conditions than their civilian counterparts and that Gulag expenditures in excess of revenues should be covered by the government budget. As an incentive, inmate should receive minimum wages supplemented by progressive bonuses for plan fulfillment and overfulfillment. In order to measure the profitability of Gulag camps and colonies, all calculations of production and construction should conform to the norms and pricing of the civilian workers of corresponding civilian ministries. 22 This document, prepared by one of the highest MVD officials, stated that the basic principal of Gulag self-financing could be no longer maintained and suggested a changeover of Gulag practices to those of civilian economy.

Chernyshev’s call for a differential wage system found sympathetic listeners in the top leadership. On November 20, 1948, the Council of Ministers adopted Regulation (#4293-1703) for the Dalnostroy camps – due to the high priority of this industrial complex. During the next few months, a succession of similar decisions was made aimed at work effort stimulation in other important industrial units. On January 11, 1950, the
Council of Ministers adopted regulation (#92-22c), extending the Dalnostroy wage plan, to the inmates of camp subdivisions involved in Mingechuarsky hydropower plant construction.\textsuperscript{23} The Decree of the Ministry of Interior governing the changeover of inmates to the wage system also ordered: “to extend to the inmates the operation of progressive piece-rate and bonus system introduced for civilian personnel”.\textsuperscript{24}

As a final step, in the beginning of 1949, the MVD Minister (S. Kryglov) sent a letter (\textit{Dokladnaya zapiska}) to the USSR Council of Ministers titled “On the Measures of Labor Improvement in MVD Correctional Labor Camps and Colonies”.\textsuperscript{25} In this document Kruglov stated that due to the decrease in the number of inmates ”the situation with provisioning of inmate labor force to activities entrusted to the MVD and to contract activities of other ministries has become extremely difficult”\textsuperscript{26}. The Minister suggested the creation of incentives to raise inmate labor productivity as an important source of covering the lack of labor force, and pointed that existing incentives “are extremely insufficient and do not provide the necessary effect”.\textsuperscript{27} Dwelling upon the current system of bonuses, Kruglov stated that it “insufficiently motivates the increase of labor productivity, and that is why it should be replaced by \textit{monetary payment for the inmate labor}”\textsuperscript{28}. Further in his letter, the Minister suggested a system of wage accounting for inmates based on that of civilian workers that should “provide inmates interest in greater output, improve their physical condition, as they would buy additional food from their extra earnings, which would result in the increase of number of able-bodied labor force”.\textsuperscript{29} This document, as well as a whole number of other documents sent to the Council of Ministers by Gulag and MVD administrative authorities, suggested that the “overall appreciation of the costs of maintaining prisoners associated with the impending
cost increases” requires a fundamental change in procedures for financing camps and colonies; namely, to assign them to the state budget.\textsuperscript{30}

Thus it was suggested to abandon the basic idea of Gulag’s self financing. Commenting on the irrational use of inmate labor in contract activities of other ministries, Kruglov stated that these activities cost the MVD 111 mln. rubles for the first half of 1948 alone, while: “At the same time, the inmate labor force costs these ministries much more than civilian workers, since they have to provide considerable number of guards, due to implementation of working activities in crowded units and small groups of inmates distributed among civilian workers”.\textsuperscript{31} Kruglov suggested to limit the use of prison labor in civilian ministries only in the Eastern and Northern regions, where “the possibility of use of civil labor force is really hindered”.\textsuperscript{32}

The basic resolution: “Pursuant to USSR Council of Ministers Resolutions 1065-376ss of 13 March 1950” introducing wages for Gulag inmates\textsuperscript{33} was introduced in early 1950. Wages were officially introduced to Gulag camps (excluding special camps) by the MVD decree of April 1950.\textsuperscript{34} Prisoner wages were based on rates corresponding civilian sectors, but with an appropriate reduction. Inmates received only a small portion of their wages in cash after deduction of food and clothing costs and income taxes. After these deductions, inmate cash wages were to be not less than 10 percent of their total earnings. Progressive piecework and other bonuses for free workers at MVD enterprises were also applied to prisoners. Inmate administrative and managerial personnel received 50 to 70 percent of the pay of free workers in equivalent jobs.

By directly linking Gulag wages to the civilian economy, inmate wages followed the same principles of wage differentiation as in the economy at large. These principles
included the use of piece rates and bonuses to motivate the fulfillment of production norms, higher pay in high priority branches, such as coal, gold mining, and metallurgy, higher wages for qualified and skilled workers, and higher wages for production workers as opposed to secondary and auxiliary production. Prisoners who were temporarily excused from work due to illness and other reasons were not credited with wages while away from work, but their food and clothing costs were not withheld. Certified disabled prisoners who were used in piecework were paid according to prisoners’ piecework rates for the amount of work they actually completed.

**A Case Study of the Introduction of Wages**

The introduction of wages in Norilsk created financial problems because the MVD order required that cash wages be paid from the total appropriation limit authorized for 1950. In other words, no supplemental funds were allocated. The Gulag’s metallurgy administration, under which Norilsk fell, reported “inevitable difficulties in the camps’ work during this transitional period” and significant deviations “between the authorized estimates of the revenues and expenditures of correctional-labor camps and actual results.” Camps such as Norilsk attempted to close the financial gap by reducing “food and clothing allowances as compared with estimates,” but these cutbacks “did not offset the increase in wages paid out, since wages at a number of camps were paid out in increased amounts due to the overfulfillment of production norms.” A 1952 inspection report on Norillag points out some positive results: “The changeover of inmates to wages was a major incentive for most inmates to raise productivity.” The deputy director of the Norilsk Correctional-Labor Camp and the Mining Camp, expressed a similar view in a letter dated 5 June 1952, stating certain groups of inmates, especially in the skilled
vocations, had begun to work much more efficiently as a result of the introduction of wages. Figure 2 shows the distribution of money wages in 1951-1953 for the entire contingent of Norillag’s working inmates. The average wage per worker credited as cash was about 225 rubles (after deduction of cost of food, working cloth, etc.). Because of higher wages in the metallurgical industry, Norillag wages were higher than at other camps. We should note that the average wage of a qualified worker in the civilian economy stood in that year at 1465 rubles per month in mining, 1343 rubles in ferrous metallurgy, and 651 rubles in garments and shoes. Therefore Norilsk inmates received about one third the pay of the lowest-paid civilian workers and about 15 percent of the pay of workers in comparable jobs, although they did receive “free” housing and food. Figure 2 shows considerable dispersion of money wages: while almost 5,000 Norilsk inmates received more than 500 rubles a month, more than 8,000 received less than 75 rubles.

**The Distribution of Wage Income in the Gulag System**

It would be of great interest to compare the distribution of Gulag inmate wages with those of the civilian economy for the same year, but we lack such data. Rather we can compare (Figure 5) it with the 1934 distribution of industrial workers’ wages in the USSR, which yields a similar level of differentiation in the “noncamp” economy. Such substantial differentiation in inmate wages shows that the Gulag, like the civilian economy, held out the prospect of higher monetary earnings to motivate labor. Those who worked well received relatively large material rewards; those who did not received little.
Figure 3 shows the distribution of wages received by the Gulag inmates (total number of workers was about 430 thousand) in 13 regions in the first and second quarters of 1951. The diagram shows that along with rapid decrease of the number of inmates underfulfilling the norm (from 31.9% to 20.9%), the share of those receiving relatively high wages increased (the last three intervals) – from 7.8% in the first quarter to 11.1% in the second. The number of prisoners who did earn sufficient wages to cover required withdrawals (for the cost of their maintenance) fell by more then 75 000 people in the second quarter.43

Archival documents provide data on monthly average salary distribution in a number of other Gulag units. Figure 4 shows that the distributions varied considerably (especially in comparison to Figure 3). The level of wages in colonies were on average lower than in camps. The most important fact, however, is that inmate labor payment differentiation is rather high in all the cases, which underscores the real intention of Gulag authorities to introduce remuneration of labor as incentive to improve the inmate productivity. There was no place for “countervailing” principles of remuneration of labor in both civilian and Gulag economy.

The Gulag’s Assessment of the Impact of Wages

The Gulag archives contain multiple documents revealing the great interest of the Gulag authorities in the impact of the introduction of differential wages on inmate labor productivity. To monitor the implementation of the MVD Resolution #365 of April 6 1950: “On improvement of characteristics of inmate labor use”, local authorities were ordered provide to detailed assessments of the impact of differential wages on labor productivity and inmate labor use improvement. Top officials of the Gulag’s Third
Administration were deputized to a number of republics, oblasts, and krays and conducted inquiries in 13 regions (3 republics, 10 oblasts and krays, and in Karlag). According to a memo prepared by the Organization Department of the Gulag Administration, during the first two months of the second quarter, unfulfilled output norms were reduced from 34.9% to 27.2% in Gulag subdivisions that had their own production facilities. In the second quarter, labor productivity increased by 14.3% - average output per worker in Gulag was up to 9394 rubles in the second quarter, while in the first quarter it was up 8219 rubles. Average monthly wages (paid) increased from 259.47 rubles in the first quarter to 284.85, in the second.

The “Short Review on the Results of Changeover of the MVD USSR Corrective Labor Camps and Colonies to the Salary System for the First Half of 1951” sent by MVD Planning Office to the Deputy Minister of Interior (Serov), stated that “now, with a new payment system, and prevalence of individual work delivery, each inmate receives payments in direct dependence on the results of his personal work. That is why the inmates, interested in the increase of their wages, demand of the leadership of the country for liquidation of the existing defects of the system… The received wages give them the opportunity to obtain additional food and clothing, and have a favorable effect on the physical condition of inmates. The factors listed above have resulted in an increase in labor productivity and improvement of the financial position of the camps, fulfilling the main objective of the inmate changeover to the salary system”. This document also commented on increase of the share of the inmates involved in production (in addition to previous workers pool). For example for in one camp administration (Gushosdor) this share increased from 75.9% in the first quarter to 84.6 in the second.
More expansive data on the results of the introduction of money wages was presented in a March 15 1951 memo, prepared by the head of Vorkuto-Pechorskiy ITL and “Vorkutaugol” industrial complex for the head of the Gulag Administration. This memo commented on positive outcome of the inmate’s changeover to the monetary wage system, in particular, to the considerable increase of the number of inmates involved in production (from 57.7% in the first half of 1950, to 65.2% in the second half). Per worker output increased from 33.98 rubles per day to 36.43 correspondingly. Average monthly earnings were 610 rub. (266 rub. after the deduction of maintenance costs). Money balance in the inmate personal accounts were growing as the following figures show:

- by July 1, 1950: 7753000 rub
- by October 1, 1950: 13254000 rub
- by January 1, 1951: 18839000 rub

And in 1950 the trade turnover of the camp distributive network was:

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<tr>
<td>Manufactured goods</td>
<td>1495000 rub.</td>
<td>2480 000 rub.</td>
</tr>
<tr>
<td>Food products</td>
<td>2244 000 rub.</td>
<td>11481 000 rub.</td>
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Due to the increase of labor productivity and subsequent earnings increases, there were increases in the sums that the inmates sent to their relatives:

- During the first half of the year: 280 000 rub. (2750 transfers)
- During the second half of the year: 683 000 rub. (5012 transfers)

To which extend can we trust these optimistic evaluations of the first outcomes of the wage system introduced as a major incentive for the forced labor in Gulag? Of course,
it does not deserve our absolute trust, a fact that can be corroborated by the following fragment from the above-discussed “Short Review”: “There are still a lot of drawbacks in the organization of labor, control, and accounting of completed work. There are all kinds of forgery; sometimes the amounts of work completed by one brigade are ascribed to another brigade aimed at charging to it the monetary bonuses, so on…. A considerable part of local regulatory authorities is still manned by prisoners, who often forge specifications under the influence of bandit elements, under physical menace, or on agreement”.

Overall, it can be assumed that the introduction of salary as the most effective monetary incentive resulted in some increase in productivity of the inmate labor. However, it still could not solve the problem of Gulag self financing. According to the note of the General Accounting Office of the Gulag on production plan implementation for the first half of 1954, the investment plan was underfulfilled by 25.2%, inmate labor revenue plan was only 91% fulfilled, and the costs of maintaining camps and colonies exceeded the revenue 448.1 mln. rubles, or 50.6 mln. rubles more then planned. To cover excessive costs, the government provided subsidies in amount of 270.7 mln. rubles (which meant 177.4 million rubles of underpaid subsidies), which “created financial tension in camps and colonies”, and resulted in spending of “the inmate personal money in amount of 46 mln. rubles” (it may be assumed that this money was simply not paid to the inmates). In his memo the head of Gulag Financial Department (Lt. Colonel Lisitsyn) concluded that 1955 costs of maintaining camp and colonies inmates exceed the revenue from labor force use to even greater degree (by 3459.9 mln. rubles), requiring budgetary subsidies by 859 mln. rubles.
The “management” expenditures made about 10% of the inmates keeping expenditures (custodial guard expenditures made another 20-25%). In the last years of Gulag, its enormous bureaucratic apparatus continued to breed huge amount of documents. The head of the Secretary of Gulag commented in his note of November 22, 1954, that during ten month of 1954 Gulag received 329501 and distributed 259345 documents\(^52\). Total amount of documents “that passed through Gulag during last 10 months” exceeded 709 000, including orders and notations of Gulag’s departments distributed to its peripheral units. Only during 9 months of 1954, 5544 kg of writing paper was used\(^53\).

Still neither hundreds of thousands of circular orders distributed by Gulag Administration nor hundreds of thousands of military guards, not even the attempts to introduce rational incentive system could change the fact that inmate labor efficiency and productivity was much lower than that of civilian workers. In 1951 at all the enterprises of MVD the share of civilian workers who underfulfilled output norms was 10.9%, while among the prisoners it reached 27.4% (2.5 times more). At some enterprises, this difference was even bigger. For example, for Sheksnahidrostroy this rate was 8% and 69.2% correspondingly.\(^54\) At the same time, among the civilian workers 4.5% overfulfilled the norms by 200 percent or more; while corresponding share among the prisoners was twice smaller (2.2%).\(^55\)

**Conclusions**

The conclusions to this article can be stated as follows.

1) The leadership of OGPU-NKVD understood from the very beginning, that labor productivity in camps needed motivation. The major incentives introduced in the
camps were ration regulation depending on fulfillment and overfulfillment of output norms, introduction of credit days system to reduce the term of imprisonment; and monetary payments – small sums of money for fulfillment and overfulfillment of norms. Still, shortly after the war, the Gulag (and later MVD) administrative authorities started to question the effectiveness of these measures of inmate labor motivation (by that time the credit day system had been already abolished), and suggested to introduce wage system in the camps, based on the rates in corresponding civilian sectors. As a result, the Council of Ministers made a decision about changeover to the wage system first for the Dalnostroy - one of the MVD Glavks, and later (in 1950) for all the MVD Glavks using inmate labor.

2) Starting 1946, the Gulag administration admitted that Gulag could no longer perform its functions on the basis of self financing and needed considerable government subsidies to cover the increasing expenses of camps and colonies. The idea of Gulag’s system changeover to state budget was introduced.

3) In 1951-1952, MVD conducted an inspection on the effectiveness of wage system introduction in Gulag. The results of the official inspections reflected rather high evaluation of the system’s effectiveness: the increase of labor productivity and share of the inmates involved in production; reduction of share of the inmates underfulfilling output norms, etc.

4) Differentiations of wages in Gulag were rather considerable and pretty close to the differentiations level in corresponding sectors of the Soviet economy (since the same wages scales were used).
5) Despite the introduction of new incentives, Gulag’s self financing could no longer be exercised; inmate labor productivity was lower than that of civilian workers while the cost of camps and colonies system maintenance increased. This economic factor was one of the most important factors that drove Gulag’s system to its end in 1960.
DIAGRAMS

Figure 1. Monetary Incentive Fund of Norilsk Complex and its Usage (average monetary incentive payments per prisoner worker per day, in rubles)

Figure 2. Average Number of Working Inmates by Monthly Average Salary Paid in Norilsk, 1951-1953

Source: GARF 9414. 1.174: 34ob.
Figure 3. Average Share of Working Inmates by Monthly Average Salary Paid in 13 regions (1951)

Source: GARF 9414.1 dop. 150: 90-91.
Figure 4. Average Number of Working Inmates by Monthly Average Salary Paid in four GULAG Large Camps, 1951
Figure 5. Monthly Salary Distribution of Industrial Workers in USSR, 1934

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<thead>
<tr>
<th>Intervals in salary (rubles)</th>
<th>Share of workers (percent)</th>
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<td>&gt;1000</td>
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<td>780.1 - 1100</td>
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<tr>
<td>500.1 - 780</td>
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<td>300.1 - 500</td>
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<td>200.1 - 300</td>
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<td>140.1 - 200</td>
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<td>100.1 - 140</td>
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<td>80.1 - 100</td>
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<td>50 - 80</td>
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7 Order ? 00889 NKVD of August 2, 1939.
8 We can compare those payments with average monthly worker’s wage in civil industry which increased from 250 rubles in1937 to 767 rubles in 1953. See: A.Bergson_The Structure of Soviet Wages. A Study in Socialist Economics. Cambridge, MA. 1946. P.422.
9 Order ? 00889 NKVD of August 2, 1939.
10 GARF 9414.1.77: 28.
Workcredits to reduce prison term were also introduced as established by the Council of Ministers regulation (May 18, 1949).

See also 9401.4.2693: 177. "In reality the mention of "... work experience of camps and colonies where prisoners received wages..." in this decree give an opportunity to assume that in some camps wages were paid earlier".

On this, see Borodkin and Ertz in Gregory and Lazarev.

Taking into account prisoners who were bereaved of wages. However, data do not allow calculating precisely the average wage. That is why it is necessary to proceed from possible error in this estimation of a sequence 5–10%. For 1953 civilian wages, see V.P. Popov, *Ekonomicheskaia Politika Sovetskogo Gosudarstva. 1946-1953* (Moscow, Tambov, 2000), p. 65.

We conclude that prisoners who received guaranteed 10% from payroll salary accounting are also in this category. Prisoners who were bereaved of wages at all are not included in this sum.

Unfortunately, we do not have reliable data about distribution of salaries of industrial employees in USSR at the beginning of 1950s.