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The review “Russian Economy. Trends and Outlooks” has been published by the Gaidar Institute since 1991. This is the 42th issue. This publication provides a detailed analysis of main trends in Russian economy, global trends in social and economic development. The paper contains 6 big sections that highlight different aspects of Russia’s economic development, which allow to monitor all angles of ongoing events over a prolonged period: global economic and political challenges and national responses, economic growth and economic crisis; the monetary and budget spheres; financial markets and institutions; the real sector; social sphere; institutional changes. The paper employs a huge mass of statistical data that forms the basis of original computation and numerous charts confirming the conclusions.

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4.3. Russian industrial sector in 2020:

(based on business survey findings)

This Chapter has been prepared on the findings of business surveys of industrial enterprises, which have been conducted by the Gaidar Institute using a European harmonized method in monthly cycles since September 1992.

Business survey questionnaire contains a limited number of questions (not more than 15-20). The original composition of questions of the IEP questionnaire was developed in 1992 on the basis of recommendations from the Organization of Economic Cooperation and Development that monitor business surveys in all countries of the world. Present IEP business questionnaire numbers not only the minimum set of questions recommended by OECD but includes other questions developed on the many years' experience of monitoring the state of the Russian economy and allowing to better understand the features of the dynamic and state of the industry. It became especially important in recent years.

The questions in the business survey questionnaire deal with actual and projected changes in the key indexes of enterprises performance as well as with assessment of the current state. Enterprises are offered to give responses across scale "go up", "no changes", "go down" or "above normal", "normal", and "below normal." We use specific derived index, which we call balance, for the analysis of business surveys' findings. Balances are calculated as difference between the percent of those who answered "go up" (or "above normal") and percent of those who answered "go down" (or "below normal"). The obtained difference allows us to present responses to each question by one number with "+" or "-". Business survey questionnaires practically lack classic quantitative questions (customary for economists).

A simple construction of questions and responses gives the respondents the chance to fill out questionnaires quickly and without turning to consult documentation. It is paramount that the respondent at each enterprise be a

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manager of the highest rank having complete idea about the state of affairs at the enterprises and be directly involved in the administration.

4.3.1. First quarter. Waiting for a crisis

The slow slowdown in demand that commenced in late 2019 forced the industrial sector to hold back output growth in early 2020. Furthermore, in January, the expectations (plans) and forecasts of enterprises maintained a stable level of optimism. And the shortage of personnel forced businessmen to make every effort to retain workers and to plan to expand hiring.

In January 2020, the negative trends in the demand dynamic for industrial products that formed at the end of 2019 remained – the balance of sales changes continued declining. However, it is extremely slow and difficult to catch: if this indicator lost 3.5 points in the 12 months of 2019, then in January it added another 0.4 points. Sales forecasts, which displayed an amazing stability in the range of +3..+4 points during the 11 months of 2019, still symbolically fell to +2 points in December and remained there in January 2020.

In January 2020, the industry managed to cope with the December jump in excess inventory of finished goods. Then the balance of estimates rose immediately by 5 points and hit a 28-month high. At the beginning of the new year, the index returned to its previous levels. Having said that, the absolute majority of enterprises considered their stocks of finished goods “normal”. In January 2020, such responses were received from 76% of the surveyed enterprises, which was another all-time (1992-2020) maximum of this index – the share of normal stock estimates.

The slowdown in output was quite a natural reaction of the industrial sector to the nominal deterioration in demand dynamic and the December increase in the surplus of stocks of finished goods. In January, the balance (or in the usual terms for economists – the growth rate) of actual output lost another half-point (this accuracy has to be used to describe the then Russian stagnation) and shifted slightly “in the negative”.

However, since July 2019 production expectations (plans) have remained remarkably stable (being in the range of +11..+12 points) and remarkably optimistic. The latter was indicated by the excess of the balance of expectations over the balance of actual changes in output. In early 2020, it reached 12 points, despite the fact that the maximum gap between the expectations and the actual dynamic was 15 points and was registered in 2015.

In Q1 2020, the recruitment policy of the Russian industrial sector continued to be formed amid a shortage of personnel, even with relatively modest business forecasts of the demand. Since July 2019, the share of “not enough” responses in assessing the headcount has consistently exceeded the share of “more than enough” responses. In this context, the industrial sector tried to retain workers and achieved some success in this endeavor: the actual headcount dynamic at the end of 2019 did not look as gloomy as at the end of 2018, and January 2020 even demonstrated an increase in the headcount. The second consequence of the

shortage of personnel seen at the beginning of 2020 was an unusually high for recent years desire of enterprises to recruit new workers.

If the enterprises were short of workers, then the industrial sector was boasting surplus of provision of capacities. The capacity shortage for all 29 years of our surveys was registered only in 2007-2008. With the onset of the 2008–2009 crisis, the shortage instantly disappeared (it was logically replaced by a significant overhang of excess capacity) and did not appear until 2020. It should be noted that the official crisis of 2015-2016 did not cause a drastic change in enterprises' assessments of their existing capacities. The scale of redundancy in 2015 remained the same, "pre-crisis". In January 2020, surveys have registered an unusually sharp shift in capacity estimates by businesses over the past three years. The share of "more than enough" responses increased by 11 points on the back of the same decrease in the share of "enough" responses. As a result, the balance of capacity estimates reached a 15-quarter high of surplus headcount.

This aspect was one of the reasons for the sharp and negative revision of investment expectations by enterprises. The balance of these intentions at the beginning of 2020 lost 8 points and went "into the negative", which was abnormal for the beginning of the calendar year.

In February, a slight uptick in demand dynamics provided an equally symbolic improvement in output dynamic and helped the industrial sector to finally cope with the surge in excess inventory of finished goods. However, the sales forecasts and output expectations of the enterprises continued to lose optimism. The balance of the industry's investment expectations remained close to zero mark.

The positive demand dynamic helped the industrial sector to exhibit better production movement than before. In February, the balance (growth rate) of output nominally (which then was the norm of Russian stagnation) went up. However, the output expectations subsequent to the demand forecasts and that is very logical, continued to lose optimism. In February, they fell by another 3 points, although they remained "in the black", i.e. there were still more expectations for output growth than expectations for its decline. However, the February balance of these 2020 expectations was a 25-month low.

After the traditional for the Russian economy January jump in prices, the industrial sector straightaway moved to an absolute price reduction in February. Note that the January increase in selling prices in 2020 was extremely modest and amounted to only +4 balance points. Smaller values of this index over the past 20 years were recorded only during January 2009 crisis. Then the balance was -4 points. Price forecasts for the end of 2019 and the beginning of 2020 were also moderate. In December 2019, they rose only to +18 points (a 10-year low in December), and in February they already fell to +5 points

In the face of a continuing shortage of workers reported for three consecutive quarters, the industrial sector has made efforts to retain staff. In late 2019 – early 2020, the usual decline in the headcount number was not so large-scale (intensive) as in previous years. As a result, the balance of changes in the number of headcount in January-February demonstrated an increase that has not been seen since the end of 2010. The optimism of forecasts of changes in the headcount

number also reached a multiyear high. However, in February, the optimism of forecasts stopped growing, which was probably due to a negative adjustment in demand forecasts.

Enterprises stubbornly adhered to the balance of investment expectations close to zero mark. This situation has been observed for 6 months in a row, and if we exclude the one-time (and, apparently, accidental) August rise in investment optimism, then it has been observed since March 2019. During this period, the balance of investment expectations for 11 months out of 12 was in the range of -4..+4 points.

In the pre-crisis March of 2020, the Russian industrial sector reported a slight deterioration in the dynamic of demand for manufactured products: the balance fell by a token 2 points in the lieu of the upcoming “events”. However, the achieved sales volumes in the context of the impending plague of the XXI century and the possible complete shutdown of the entire economy were highly appreciated by the industry – 60% of its enterprises considered them “normal”.

In March, the balance of estimates of stocks of finished goods deteriorated and reached +13 points. Such a high level of surplus has not been recorded by surveys since 2013. The March balance sheet value (and the enterprises’ view of the near future) most likely did not reflect all the features of the upcoming months.

A moderate deterioration in demand dynamic and an increase in excess inventory of finished goods logically triggered a negative trend in output dynamic, which was a relatively small one. The balance of real production changes decreased by only 2 points in March. Slightly larger changes were registered in the production expectations of the enterprises. In March, the balance of these expectations shed 3 points, and the final decline for the first 3 months of the year came to 8 points. As a result, the index fell to the worst values of the previous full-fledged crisis of 2008-2009.

The personnel shortage forced the industrial sector to recruit workers even in March. The rate (balance) of the increase in the number of workers reached +10 points. Such a high value of this index in March has not been recorded since 2011. But the industry seemed unlikely to maintain such a recruitment policy in April-May. The balance of expected changes in the number of workers in March collapsed by 11 points and stood at zero mark.

In March, the industrial sector was able to keep its investment expectations within the previous, near-zero corridor formed 12 months earlier. Moreover, the balance of investment expectations increased by 8 points and moved from the negative closeness to zero to the positive trend. Perhaps the viral shutdown of the Chinese “workshop of the world” gave hope to Russian enterprises to replace its products with domestic analogues.

4.3.2. Second quarter. Crisis and rebound from the bottom of the crisis

The result of the first crisis month for the industry was quite predictable according to the traditional set of indicators. And it is specific for a number of other indicators. The logical and expected decline in demand surpassed the “fallout”

of 2008-2009 and entailed an equally strong decline in output. However, the forced shutdown of production saved the industry from the problem of excessive stocks of finished goods and the long-standing shortage of personnel. The logical curtailment of investments in the face of real uncertainty did not spark a shortage of capacities - the estimates of their sufficiency did not change in April. As well as the rate on ruble loans offered to the industry. However, forecasts of demand, output and financial standing witnessed to the expectations of exacerbation of crisis in the months following April.

In April, the industrial sector fully felt the arrival of the virus crisis and the consequences of the anti-epidemic measures taken by the authorities. Demand for industrial products collapsed on a scale comparable to the events of late 2008. And maybe even more. Then, in 2008, the decline in demand commenced in September and reached 60 points at the crisis peak according to the benchmark data, and solely in April 2020 the decline constituted 45 points. That said, in January-March 2020, surveys did not register any crisis decline in sales. Demand forecasts for the first crisis month of 2020 shed 30 points according to the initial data.

The anti-epidemic (full or partial) shutdown of production allowed the Russian industrial sector to cope with the surge in surplus stocks of finished goods registered by surveys in March. In the first crisis month of 2020, the balance of their estimates (“above normal” – “below normal”) decreased by 5 points, which is unusual for the beginning of the classic overproduction crisis. Such a classic crisis surge in inventory surplus was registered in early 2009, and nothing like this happened in early 2015. Now the situation is also unusual: stocks of finished goods in the context of forced production stoppage can be a valuable resource for businesses, and not a burden.

A sharp decline in demand on the back of the anti-epidemic measures introduced by the authorities led to a sharp drop in output in April 2020. The initial balance (growth rate) lost 50 points in the first month of the crisis. In November 2008, this index decreased “solely” by 39 points, but then the reduction in the balance sheet commenced in September, and the total amount of decline by November stood at 60 points.

In April, the industry moved to a large-scale reduction of headcount. The balance (rate) of change in the actual number of workers fell to 30 points after +10 points in March. Our surveys have not yet registered such a sharp decline in the indicator in one month. At the end of 2008, it took 6 months to achieve a comparable change in the industrial balance. Forecasts of changes in the number of workers in April fell only to -12 points. The industry, therefore, was ready to reduce the scale of layoffs in May-June after their April spike. Meanwhile, the full-blast staff reduction did not trigger a shortage of personnel at the enterprises. Rather, the opposite is true. In industry, for the first time since the 2008-2009 crisis, a significant overhang of excess “due to the expected demand constraints” of the number of headcount was formed. The balance of estimates of the headcount after demonstrating -4 points in January rose to +9 points in April, i.e. the shortage of personnel was replaced by their surplus. At the same time, solely

6% of enterprises reported a shortage of personnel in April – the minimum since the default of 1998.

The investment expectations of the Russian industrial sector responded duly to the crisis only in April. Over a month, the balance of investment expectations dipped by 40 points and exceeded the nadir of the 2015-2016 crisis. Then, to note, the decline in investment optimism commenced after Russia entered the war of sanctions. Changes in this index in January-February 2015 (i.e. after the official announcement of the crisis outbreak) only slightly “aggravated” the situation – the balance for two months decreased by 13 points.

In April 2020, the industrial sector managed to maintain the previous, pre-crisis structure of assessments of its financial and economic situation with predominantly “good” and “satisfactory” responses over “bad” and “extremely bad” ones. The balance of these estimates remained positive. This situation has been recorded by surveys since 2017 – from the exit out of prolonged 2012-2016 stagnation. However, business forecasts regarding financial condition suffered an unprecedented collapse in April 2020. After quite favorable January expectations for recent years (with a balance of +11 points), in April the index plunged to -33 points. Neither such a drop, nor such a survey findings have been recorded since 1993.

However, in May, the Russian industrial sector weathered the shock of the first crisis month. The real changes in demand, output, and employment demonstrated unmistakably positive dynamic (for the crisis). And the forecasts and expectations of enterprises highlighted the readiness to restore the former business activity. In May, the industry’s investment expectations began making a U-turn. However, the lending conditions offered by banks continued to tighten.

Following a sharp April decline in the rate of change in demand, this index gained 11 points in May. According to enterprises’ estimates, the first (April) impact of the coronavirus crisis on the industrial sector was comparable in terms of sales plunge to the 2008-2009 crisis. Business demand forecasts also began to recover in May: the balance of these expectations rose by 18 points and almost reached its pre-crisis March values.

The 2020 crisis outbreak in April was coupled for the Russian industrial sector with a strange, at first glance, decrease in the surplus inventory of finished goods. This index exhibited its local maximum in March 2020, when the industry was bracing for a classical recession, traditionally triggered by a decline in oil prices. However, the partial or total shutdown of production to face the pandemic and logistics issues forced enterprises to rethink the role (and not just reevaluate the volume) of stocks of finished goods in such extraordinary conditions. As a result, by May, the surplus of finished goods stocks had already decreased by 8 points.

Positive changes in demand dynamic helped enterprises to adjust likewise their actual output. In May, the balance of changes in production volumes also improved by 10 points. Enterprises made even more significant changes in their production expectations. After April’s 30-point dip, the May survey recorded an unprecedented 31-point increase in the balance. As a result, all April losses of

optimism were recouped – the industry was ready to restore its former production activity.

The next planned (quarterly) question related to the limits of output growth, which we have been asking since 1993, fell for April 2020, which was the peak of the current crisis (or its first wave). At least – for the industrial sector. As a result, we received the assessment of views of industrial enterprises about the obstacles to the output growth in the context of a unique crisis.

The 2020 crisis has brought to the fore such obstacle as “the uncertainty of the current situation and its prospects”. In Q2 2020, this obstacle was mentioned by 72% of respondents following 30% of such responses recorded in January 2020. The previous local maximum of responses of ambiguity was recorded in January 2016 – nowhere near the beginning of the 2015-2016 crisis, as it should have been. In April 2020, demand constraints took a back seat in the industrial sector. Sixty-six percent of enterprises pointed to insufficient domestic demand (plus a modest 12 percentage points compared to January), to low export demand – 31% (+3 points).

The weak ruble and non-payments share the fourth place with 25% of responses. The latest ruble’s devaluation increased its negative impact on Russian industrial growth from 6% of responses in January to 25% in April 2020. However, the same factor reduced the negative impact of competition with imports by 10 points – from 28% of responses to 18% (rated 6th on the list). And it brought the issue of the “expensive ruble” to the nadir of the negative impact on industrial growth – up to 2% (last, rated 17th).

In April, non-payments as a constraint of industrial growth were quite dramatically spread in the Russian industrial sector. True – only by the standards of not quite the 2015-2016 crisis and came a modest 25%. In 2009, the negative impact of this factor hit 41%, and in the 90s of the twentieth century - 75%. Non-payments have not yet led to issues with working capital. In the wake of state support, only 11% of businesses indicate the shortage of the latter in April 2020, which is the absolute minimum for the entire period of our surveys. The lack of a negative impact of lending on ensuring the current volume of industrial production is a logical addition to the previous thesis. Solely 5% of respondents mentioned this factor in April 2020

In May, enterprises weathered the April shock of recruitment policy. Then, the industry reported such large-scale layoffs that the initial balance values (growth – decline) were the worst since the beginning of the 2008-2009 crisis, and seasonally adjusted index demonstrated compatibility of headcount cuts in January 2009 and April 2020. But in May, the scale of layoffs in the industry decreased by 3-fold, and the balance of expectations to change the workforce number came to zero mark.

In May, the investment expectations of the Russian industrial sector also began to make a U-turn. Following the April plunge by 40 points (from a nominal optimism of +2 points to a full-fledged crisis pessimism of -38 points), in May the balance of these expectations rose to -29 points.

Bank lending terms and conditions offered to industry continued to tighten. In May, only 46% of businesses rated the availability of loans as normal. Although in February, 73% of enterprises adhered to such estimates. The decline in the optimism of forecasts of changes in financial and economic condition of enterprises adversely affected the options of producers to service existing loans. In Q2, this index shed 10 points and stood at 83%, although in Q1 2020 it reached an all-time high of 93% of the number of enterprises with loans.

In June, the industrial sector continued to recover from the 2020 coronavirus crisis. The recovery in actual sales and improved demand forecasts, with a modest surplus in finished goods stocks, paved the way for further deceleration in output decline. And in the following months, the industry was ready to raise production volumes. The recovery and investment expectations of enterprises continued getting momentum, but in May-June they managed to “win back” only 10 points out of 40 lost in April.

In June, according to enterprises’ estimates, the recovery in demand continued after the April collapse. Then the balance (rate) of change in demand plunged by 44 points after seasonal adjustment. In May-June, the index gained 36 points, thus recouping a significant part of the April losses. The forecasts attested to the hopes of enterprises for further recovery in sales: in June, the balance of demand forecasts increased by another 10 points.

The coronavirus induced 2020 crisis, which in case of the industrial sector commenced in April, still did not entail a crisis increase in the excess inventory of finished goods. Rather, the opposite is true. In April, the share of surplus inventory estimates dipped to 15% and stood at this level in May, and in June dropped to 12%. Thus, the crisis maximum of this index fell on the pre-crisis March of 2020 and came to a modest 21% and very quickly was gone. Moreover, in June 2020, the absolute (1992-2020) maximum of normal estimates of stocks of finished goods was reported: 78% of enterprises estimated their stocks as “normal”.

The recovery in demand and the modest level of surplus stocks of finished goods have created conditions for further slowing down the decline in industrial output. If in May the balance (rate) of production decline increased from the peak for this crisis -38 points to -28 points, then in June the index already went up to -6 points. Thus, the decline in output continued in June, but less rapidly. In June, the production expectations of enterprises already came out “in plus” – the industry was set for an output growth in the following months.

The recruitment policy of enterprises bears out the robust industrial recovery. In June, the rate of layoffs decreased by another 9 points and almost stood at zero mark. And the balance (rate) of expected changes in the number of workers negotiated the crisis-related downturn of personnel forecasts.

Investment expectations of the industrial sector following the crisis-led collapse in June continued to recover. However, they were able to “win back” solely 10 points in May-June out of 40 point lost in April. In June, the balance of these expectations remained markedly negative (-28 points) - i.e., the industry demonstrated intentions to reduce investment activity in Q3 2020 compared to the same period in 2019. And even in the context of a logical decrease in satisfaction

with investments in Q2 down to 45%, when 60% of enterprises considered the investments as sufficient in Q1 2020.

In June, the availability of credit for the industrial sector stopped declining and increased by 4 percentage points. As a result, by mid-2020, 50% of enterprises considered availability of credit as normal. Thus, during the current crisis the minimum of this index occurred in May 2020 and constituted 46%. In the previous 2015-2016 crisis, the normal estimates of availability of loans decreased to 34%, and in the 2008-2009 crisis – to 19%.

4.3.3. Third quarter. Weathering the crisis

At the beginning of Q3, a representative set of survey statistics displayed positive trends in the Russian industrial sector to remain after the April collapse. Demand and output continued to rebound, with stocks of finished goods showing minimal surplus. The newly recorded shortage of workers could be easily neutralized in the context of maintaining “normal” wages in industry. However, forecasts and expectations have stopped gaining optimism, which indicates an adjustment in the perception of enterprises regarding the speed of recovery from the coronavirus induced crisis in 2020.

In July, according to enterprises’ estimates, the dynamic of demand continued to recover from the April plunge. Seasonal adjustment displayed an increase by 27 points in the balance (rate) of actual change in sales in May-July. However, the recovery of demand forecasts has slowed. In July, the balance of this index gained only 2 points on an increase of 11 points in June and 14 points in May.

Already 49% of enterprises considered the sales volumes restored by July as normal. The April collapse of this estimated figure (“above normal”, “normal”, “below normal”) was the all-time high during the entire history of 343 business surveys and hit 23 points. At the beginning of the previous 2015-2016 crisis, the decline in the share of “normal” responses in the estimate of demand came to 1 (one!) percentage point in January 2015, and the nadir of the crisis was in January 2016, when the frustrated industry degraded the level of normal demand estimates by 11 points to 39%. In the 2008-2009 crisis the index fell by a maximum of 17 points in one month, in the 90s of the XX century the maximum one-month decline in demand satisfaction was 13 points.

The balance of estimates of stocks of finished goods (“above normal” – “below normal”) fell in July to +3 points, and thus continuing to signal the firm business control over the supply-demand ratio. This situation is developing for the second crisis in a row: the previous crisis of 2015-2016 was met by the industrial sector even with a lack of finished goods inventory, and the worst balance figure was obtained in February 2016 and demonstrated a modest +9 points. In the 90s of the twentieth century, the balance of estimates of finished goods inventory rose to +55 points

The July business estimates of output dynamic exhibited an increase in industrial production compared to June 2020: the seasonally adjusted balance (rate) of output change reached +5 points. However, the output expectations have stopped gaining optimism. The industry has made adjustments to its understanding of the

speed and trajectory of the exit from the coronavirus crisis in 2020. In May-June, the balance of output expectations gained 45 points after losing only 30 points in April. Such a leap of optimism, apparently, seemed excessive to enterprises.

In July, enterprises maintained the lowest rate of layoffs recorded in June. Hiring expectations fell by 3 points and as a result stayed at near zero mark for 3 consecutive months – the industry was still not ready to resume hiring workers, which it planned in early 2020.

Meanwhile, a cautious recruitment policy is coupled with the expected shortage of personnel, which surveys again recorded in July 2020. At the beginning of Q3, the balance of estimates of the current workforce number again turned negative “due to expected changes in demand” – there were again more responses “less than enough” against “more than enough” responses. However, the most of the industrial sector (84% in July 2020) had a sufficient supply of personnel.

However, the Russian industrial sector can easily do away with the deficit of workforce in the face of rising unemployment and declining real household incomes by maintaining an acceptable level of wages in times of crisis. In mid-2020, 86% of enterprises rated their workers’ salaries as normal. This result was the maximum of the 13-year monitoring of our estimated index. Thus, there was no crisis-led collapse (relative, of course) in the compensation rate in the industrial sector. Although in April 2020, there were forecasts of a reduction in wages. Then the balance of expected changes in real wages shed 34 points and fell to a historic (though only 2014-2020) low. But already in Q3, the salary expectations of the industry “won back” 23 points.

While output expectations, demand and employment forecasts stopped growing in July, investment expectations in July showed the highest increase since the April dip. As a result, for the first 3 post-crisis months, the index gained 23 points (10 of which were in July), but still remained in the red. The industry maintained its logical investment caution in the face of an unpredictable crisis.

In July, the industrial sector reported a significant increase in the normal availability of loans. During the month, the index gained 14 points and hit 64% – this is the percentage of enterprises that considered their access to bank lending normal at that time. This led to the fact that at the beginning of Q3 2020, only 2% (two!!!) of enterprises considered the lack of credit as a hindrance to their output growth.

In August, the Russian industrial sector decelerated its exit from the 2020 coronavirus crisis. Ensuring the gains in growth rates of demand under the nadir of the surplus of finished goods inventory and an increase in the optimism of sales forecasts helped the industrial sector to maintain positive production dynamic and contributed to maintaining high optimism of output expectations. According to enterprises, the recovery of the pre-crisis structure of restrictions on industrial growth has begun. By August, the availability of loans for industry reached its pre-crisis level.

In August 2020, the industrial sector reported retaining the previous July (and very good by the standards of previous stagnant years) growth rates of demand.

And the balance of sales forecasts gained 10 points in August and reached the pre-crisis level.

Such dynamic of actual and expected changes in demand led to an improvement in satisfaction with sales volumes up to 60%. Business surveys recorded similar value of this index in March 2020, when the industrial sector was just bracing for the onset of the coronavirus crisis, watching from the outside the decisive actions in China.

In the context of growing optimism of sales forecasts, enterprises reduced the share of “surplus” estimates of finished goods inventory to the all-time (!) low for all 339 previously conducted business surveys, and the share of “normal” estimates of inventory raised to the all-time high. In still crisis August 2020, business surveys reported 9% of the former estimates and 78% of the latter ones. The share of “insufficient” estimates of finished goods inventory accounted for 10% (3% of enterprises found it difficult to answer this question). As a result, the balance (“above normal” minus “below normal”) ceased to be positive – in the fifth month of the crisis, the industrial sector got rid of a modest surplus of inventory, which, among other things, fell on the formally pre-crisis March 2020.

The current crisis, as well as the previous one in 2015-2016, did not cause problems with the provision of industrial inputs to the Russian industrial sector. Quarterly monitoring of enterprises’ estimates of industrial inputs exhibited a nominal decrease in the share of “normal” responses in the crisis-related May by 4 points following an all-time high reported in February 2020, and an equally nominal increase by 3 points against August. As a result, in Q3 2020, 84% of enterprises had sufficient provision of industrial inputs.

Good (by crisis standards!) sales volumes, the lack of surplus of finished goods inventory and continued growth of optimism in demand projections helped the industrial sector to maintain an upward trend in output. In August, according to surveys, the industry again managed to produce more goods than in the previous month. For the first time (after the April collapse), this ratio was recorded in July. However, a sharp rise in the optimism of output expectations seen in May-June seemed excessive to enterprises, and the industry decided not to further increase its output projections. Throughout the summer months, the balance of the index remained at the same level – the best since April 2019 and surprisingly stable.

By August 2020, industrial enterprises, together with the Russian banking system, under the leadership of the Central Bank of Russia, restored the normal availability of loans for the industrial sector. The scale (prevalence) of easy access to credit has reached 70% and has completely got over the next credit crisis. Unless there is another wave of the coronavirus, this credit crisis will be the most short-lived. It took 3 months to reach pre-crisis credit availability in 2020, 24 months in 2015, and 18 months in 2008.

If the availability of loans in the summer months reached the pre-crisis level, the investment expectations of the industry recovered only 25 points by August out of 40 lost in April and remained in the negative zone. At the same time, they improved by only 2 points in August. The industry was still not ready to invest in

the wake of the second to none crisis and a ample provision of capacity for both the current output and the expected changes in demand.

In September, the Russian industrial sector attempted to continue its recovery from the coronavirus crisis. Improved demand dynamic with an increasing shortage of finished goods inventory helped enterprises to produce more goods in September than in August. However, the output expectations began to lose optimism gained in the previous months. And hiring expectations have not gained optimism, although in September the industry already started (unplanned) to raise the number of workers. In anticipation of the second wave of the coronavirus crisis, the industry refused to restore investment projections.

In September, the industrial sector reported a resumption of positive changes in the demand dynamic. Following the August slowdown in growth, in September, the balance of actual sales changes increased, however, by a modest 4 points. However, even this result helped the index to reach a 26-month high. Following the August jump, demand projections stood in a positive area and displayed enterprises' expectations to maintain upward trends.

In the meantime, a steady decline in the balance of estimates of finished goods inventory on the back of an increase in the share of responses "below normal" indicated the uncertainty of enterprises in the implementation of their own projections. By September 2020, the share of such estimates rose to 17%, which was a 10-year high. The industry, thus, even with a significant overhang of surplus capacity, was in no hurry to use them to replenish empty, in its opinion, finished goods warehouses.

In September, the industry again produced more goods than in the previous month. The balance (growth rate) of actual output changes remained positive for the third consecutive month without significant growth. Meanwhile, the balance of enterprises' projections shed 5 points in September, but remained positive: expectations of industrial output growth were still more than expectations to reduce it.

The pricing policy of the industry underwent a sharp change in September: enterprises abandoned the extremely restrained and non-recurrent growth and showed the upsurge in selling prices for the previous 26 months. The seasonally adjusted balance of actual price changes gained 15 points over the month. In September, the balance of projected price changes rose by 8 points and turned out to be an 18-month high.

The industry's vigorous exit from the first wave of the coronavirus crisis prompted enterprises to recruit staff only in September. The balance of actual changes in the workforce number became positive for the first time since April and amounted to +4 points. In April 2020, this index collapsed from the March +1 point to -36 points. There has never been such a one-time plunge in hiring and such a quick recovery from the personnel crisis in the entire history of our business surveys. In the generally recognized crisis of 2008-2009, the balance downward trend lasted 8 months, and the recovery from the crisis (transition to recruitment) took 16 months. During the official crisis of 2015-2016, the industry did not resort to either crisis-related layoffs or post-crisis headcount reduction. However, the

balance of hiring expectations after the May (again surprisingly fast!) recovery, remained close to zero mark for 5 months. The industry could not move to the projected hiring of workers and solved its workforce issues as they arose.

In anticipation of the second wave of the coronavirus crisis, the industry backed down from the return of investment projections in September. Following a not too rapid increase in the balance of investment expectations in May-August, in September the index again slipped down outright by 14 points. In the meantime, satisfaction with the actual volume of investments in Q3 2020 rose to 56% following the crisis-led collapse of Q2 estimates, when only 44% of survey enterprises recognized it as “normal”. The latest result is comparable to the assessment of investment activity seen in Q1 2015.

4.3.4. Fourth quarter. Pause and continuing recovery from 2020 crisis

A clear slowdown in the post-crisis recovery of demand and output in the face of an obvious deterioration in the epidemiological situation and unobvious actions of the authorities forced the industry to continue getting rid of surplus finished goods inventory and held back the recovery of investment activity in October. However, the demand projections and especially the output expectations of enterprises had no obvious signs of the imminent onset of the second wave of the crisis. Against this backdrop, the Russian industrial sector continued to recruit workers and swung the balance of hiring expectations to the pre-crisis mark.

At the beginning of Q4, demand, according to enterprises’ estimates, again demonstrated a halt to the post-crisis recovery. The seasonally adjusted balance (growth rate) of actual sales decreased by 1 point in October after rising by 3 points in September. Such a modest and multidirectional dynamic of this index has been recorded by business surveys since August. During this period, the index was able to improve only by 3 points. While in May-July, the balance gained 46 points. Sales projections reached a post-crisis high in August, increasing by 38 points in the first four post-crisis months and reaching a “good” pre-crisis level as a result. But in September-October, they fell by 4 points. On the back of these dynamics of actual sales and demand projections, satisfaction with sales began to fall. The share of normal demand estimates for September-October dropped to 53% after reaching a post-crisis high of 59% in August.

Estimates of finished goods inventory continued to indicate minimal expectations of the industrial sector for demand growth in the face of growing unpredictability of the authorities’ actions with an obvious increase in the number of coronavirus cases. In October, the balance of inventory estimates fell by another 4 points and turned out to be a 10-year low. Such a large shortage of stocks has not been recorded since October 2010, when the industry was not fully confident of completing the recovery from the 2008-2009 crisis. But the biggest shortage of stocks in the entire history of the Russian industrial sector occurred after the 1998 default. Then the industry for a very long time – more than 30 months (from September 1998 to the beginning of 2001) – could not believe in the end

of the protracted crisis of the 90s and, having learned from bitter experience, deliberately minimized warehouse inventory.

In October, for the first time since May 2020, the balance of actual changes in output stopped growing, shed 5 points and stood at zero mark. That is, in October, according to the enterprises' estimates, the industry produced as much as in September. In May-July, the balance gained 38 points and became positive, and in August-September, it could only gain 4 points. However, production expectations improved by 5 points in the face of a growing shortage of finished goods inventory and even with a decrease in the optimism of demand projections.

In October, the industry continued to recruit workers and swung the balance of hiring expectations to pre-crisis marks. The surveys recorded the growth of actual employment in the Russian industrial sector for the second month in a row. In April, this index plunged to -36 points, at the beginning of Q4 it was +6 points. In October, the balance of hiring expectations for the first time during the current crisis climbed into positive territory, however, could only reach +3 points.

Industry investment projections, which declined by 14 points in September after an extremely weak recovery, lost another 2 points in October. The strategy of a quick exit from the April 2020 collapse, which was demonstrated by enterprises in relation to demand, output and employment, was not implemented in terms of investment. The industrial sector was definitely not ready to return even to the extremely moderate pre-crisis investment expectations of 2019.

The share of enterprises with "normal" credit availability, after a quick restoring in August the usual pre-crisis level of 69%, tried to evade from sliding into the second wave of tightening credit conditions in September-October. In September-October, this index decreased by only 3 percentage points: in October, 66% of enterprises reported "normal" credit availability.

The resumption of positive dynamic of actual sales and demand projections in November improved satisfaction with their achieved volumes, helped the industry to restore output growth, and improved the optimism of production projections and hiring expectations. In November, investment projections of enterprises also demonstrated growth after a two-month decline. The tightening of credit conditions did not affect the dynamic of industrial output, as the lack of credit still was at the bottom of the rating list of constraints to industrial growth according to a host of enterprises. The main constraint to the output growth in 2020 for the industry were demand, uncertainty of the situation, competition with imports and ... weak ruble.

In November, the Russian industrial sector reported a resumption of positive demand dynamic. The balance of sales for the month gained 9 percentage points after a pause in August-October, when this index remained almost unchanged. A pause in the recovery of demand projections occurred in September-October, and by October the balance of expected sales changes even decreased by 4 percentage points. However, in November, the index gained 12 points and reached an 8-year high – such optimistic projections of demand have not been recorded since the beginning of 2013.

Having said that, in November the balance of estimates of finished goods inventory continued to decline – the share of “below normal” responses increasingly exceeded the share of “above normal” responses. The industry was well aware that its inventory holdings were falling further behind the current demand and its possible and, most likely, positive changes, but it was not ready to move on to maintaining a small manageable surplus of stocks in the wake of a very unusual crisis.

The resumption of demand growth with a growing shortage of finished goods inventory helped the industrial sector to continue output expansion, which halted in October. The balance of actual production changes gained 12 points in November, after a decline of 5 points and a return to almost zero growth in October. Output expectations for October-November fully recovered from the September decline and returned to the pre- and post-crisis level of optimism lost by the industry in the period from February to May 2020.

The quarterly monitoring of constraints to output growth, which we kick started in 1993, makes it possible to assess the significance of the constraints to industrial growth in the 2020 crisis year from the point of view of a wide range of enterprises. In general, at the end of 2020, insufficient domestic demand topped the rating list of constraints. However, the reference to this factor during the crisis year went up only from 50 to 54%. Besides, there have been more remarkable situations in the history of our surveys. Thus, in the officially recognized crisis year 2015, insufficient demand was mentioned even less often than in the officially non-crisis year 2014: 48% against 52%.

“Uncertainty of the current economic situation and its prospects” triggered the surge in insufficient domestic demand references in 2020. An average of 50% of enterprises mentioned this factor against 33% in 2019. Having said that, the April survey findings primarily contributed to the average annual growth of references to this factor, when 72% of enterprises ranked it to top the list. In Q1 2020, its mention was the usual 30% for previous pre-crisis quarters. In Q3, in the course of dynamic recovery from the April collapse, “the uncertainty of the situation” factor reduced its adverse impact to 50%, nevertheless, staying at the top of the list. At the beginning of Q4, when the industrial recovery paused in order to understand the authorities’ reaction to the apparent increase in morbidity, the uncertainty increased the negative impact on the Russian industrial sector to 61% and still remained at the top of the list. However, there is traditionally a significant excess of “insufficient demand” over “the uncertainty of the situation” in Q1 2020 (54 against 30%) and a small gap in mentions in the other three quarters (5-8 points) did not allow the factor of “uncertainty of the current situation and its prospects” to top the list of constraints by the end of 2020.

Enterprises ranked “low export demand” third on the list even in the context of the ruble’s weakening increased in 2020 compared to 2019. The reason, most likely, lies in the global COVID-19 crisis, which has had a strong negative impact on traditional consumers of Russian exports. The Russian industry competition with imports was fourth on the list, which at first glance is surprising with a weakening national currency. However, the smooth nature of the devaluation has intensified

the outstripping demand for imported products or for Russian goods with a significant share of imported components. To the detriment, apparently, of sales of purely Russian goods.

“The weakening of the ruble exchange rate and the rise in price of imported equipment and raw materials” closes the top-5 constraints to industrial growth in 2020 according to the enterprises’ responses. The mention of this factor exhibited the second largest (after the “uncertainty of the situation”) growth: from 9% in 2019 to 19% in 2020. As a result, the “weak ruble” rose from the 15th place in the rating of 17 constraints to the 4th place and for the third quarter in a row strongly holds in the top-5 constraints, displacing the “lack of qualified personnel” from there. That said, the “strong ruble” was able to achieve only 9% of responses (at the end of 2019 - early 2020) and reached only the 13th place (out of 17) in this rating as a negative factor for Russian industrial sector growth.

In the last, 17th place on the rating list of constraints to growth of output, enterprises put the still popular lack of credit. The industrial sector as a whole (and not its media representatives) for the third consecutive year ranks this factor last with only 3% of references.

After a robust recruitment in September-October (the balance reached +5 points in these months, which was the highest value of the index after the April dip to -36 points), in November the industry decided to adjust the speed of hiring – the balance fell to +3 points. However, enterprises’ hiring expectations of qualified personnel continued to gain momentum and rose in November to +8 points, which was a 10-year high. The resumption of recruitment and projections for its continuation were formed by the Russian industrial sector in 2020 under the influence of “lack of qualified personnel” factor at the top on the sub-rating list of input constraints to industrial growth. In the meantime, the current crisis helped the industry to do away with the shortage of headcount recorded in 2019, and to close 2020 with a zero balance of estimates of provision of personnel amid the expected change in demand.

At the end of the two-month pause, the industrial sector resumed restoring investment projections. However, it was very restrained: in November, the balance gained only 4 points. Though, after a two-month drop in this index, the November growth gave hope that there will be no second lockdown. In April, the lockdown led to a collapse of the investment expectations of the industrial sector by outright 40 points.

In December, the balance of change (growth rate) in demand after seasonal adjustment gained another 2 points and reached values that have not been recorded by business surveys since 2010. Thus, the demand for Russian industrial goods continued to rebound after a pause in August-October. However, sales projections for the first months of 2021 demonstrated a sharp decline in optimism of the Russian industrial sector. In December, the balance of these expectations collapsed outright by 31 points – from the level of very good optimism to the level below only to that recorded in April 2020.

The average annual balances of changes in demand demonstrate that the crisis-led decline in the index in 2020 was a continuation of the negative dynamic

that formed in 2018. Then, the industry could not continue to emerge from the 2012-2016 stagnation and began to be drawn into a slump, interrupted by the COVID-19 crisis of 2020.

The balance of estimates of finished goods inventory fell to -13 points by December. Surveys have not registered such a predominance of “below normal” responses over “above normal” responses for twenty years – since December 2000.

The consistent minimization by enterprises of their stocks of finished goods provided an amazing result amid the 2020 crisis – the average annual balance of stock estimates is almost no different from zero (+1.6 points). However, such a modest result amid a crisis year is recorded for the second time in the past decade: in the 2015 crisis year, the final balance was equal to +3 points, and at the beginning of that crisis (January 2015), there was even a shortage of stocks of finished goods.

Rising demand and a growing shortage of finished goods inventory helped the industry to maintain output growth in December. The balance (growth rate) of actual changes in production remained positive (retained growth compared to the previous month) and gained 5 points (growth, according to enterprises’ estimates, became more robust). However, the December output projections lost all the optimism gained by the industry in May-November 2020. The balance of expected changes in output decreased to +1 point. The surveys recorded worst expectations only in April 2020.

Despite pessimistic expectations for the beginning of 2021, long-term recruiting challenges are forcing the industry to recruit personnel. In December 2020, the balance of changes in the actual number of workers displayed robust growth, which has not been seen for many years. On the other hand, the workers themselves were convinced that the authorities would not again risk forced restrictions on work or shutdown of industrial enterprises. In this context, industrial jobs have become very attractive. This saved the industry from the traditional December mass outflow of personnel.

The robust post-shock recovery of recruitment and the unique (in the context of pandemic restrictions on the activities of other industries) opportunity to resolve their long-term staffing issues at the expense of “neighbors” kept the annual balance of changes in the number of industrial workers away from a crisis-led collapse. As a result, 2020 “did not make it” even to the worst years of 2012-2016 stagnation, not to mention the 2008-2009 crisis.

In December, the industry decided to continue restoring investment optimism after a pause in September-October. The balance increased by another 14 points and reached the highest values since the beginning of the coronavirus crisis. However, it remained “in the red” – that is, there are still more expectations to reduce investment in the industrial sector than there are expectations for their growth. In this context, it is more correct to speak not about the growth of investment optimism, but about the decrease in investment pessimism.

The decline in the normal availability of credit for the industrial sector, which enterprises reported in September-November, has stopped. In December, the

index gained 2 percentage points and went up to 62%. The best result of the year was recorded in February 2020 and was equal to 73%.

The credit crisis of 2020 was the weakest for the Russian industrial sector compared to three crises that occurred in the first 20 years of the XXI century. The normal availability of loans according to the average annual data decreased only to 62%, whereas in 2015 it fell to 44, and in 2009 – to 37%.