#### GAIDAR INSTITUTE FOR ECONOMIC POLICY

# **RUSSIAN ECONOMY IN 2019**

TRENDS AND OUTLOOKS

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The review "Russian Economy. Trends and Outlooks" has been published by the Gaidar Institute since 1991. This is the 41<sup>th</sup> 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.

By contrast to the previous publications the present issue includes also a short analysis of the first three months of 2020 from the perspective of the COVID-19 pandemic impact on the Russian economy development.

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## Sergey Tsukhlo

### 4.3. Russian industrial sector in 2019 (based on survey findings)<sup>1</sup>

This Chapter has been prepared on the results 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 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. General assessment of 2019

Prolonged period of industrial business surveys conducted by the Gaidar Institute and representative range of indicators permit to resolve the first task – analyze the situation in the sector in 2019 – determine the place for the year 2019 in all the 28 years' history of our monitoring the industrial sector. For this purpose, first of all, we will use aggregate indicators. The latter are usually calculated on a monthly basis on the findings obtained from monthly surveys and became widely popular owing to promptness of the findings and limitations of official data released on the Russian industrial sector. However, this approach to present surveys' findings complicates assessment of each year as a whole. That is why we analyze all

<sup>&</sup>lt;sup>1</sup> This section was written by *Tsukhlo S.V.*, Candidate of sciences (Economics), Head of the Business Surveys Department, Gaidar Institute.

consolidated indicators in a year-on-year basis for the entire period of IET business surveys launched in 1992.

The IEP Industrial Confidence Index<sup>1</sup> is the most general characteristic computed by all organizations on the basis of surveys and provides the first insight into the state of business in the sector.

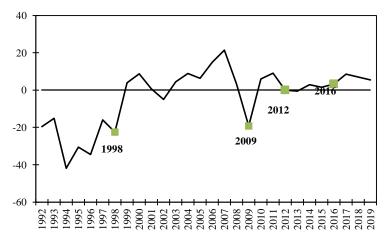


Fig. 14. IEP Industrial Confidence Index, 1992-2019, percentage points

In 2019, the Index demonstrated an ongoing downward trend in the Russian industrial sector following the local maximum seen in 2017 (*Fig. 14*). Over the last year, this Index shed another 1.5 points, and the total decrease after 2017 constituted -3 points. In 2017, when industry commenced recovering from the 2012–2016 stagnation, the Index abruptly went up by 5 points. However, in 2018 the recovery halted and reduction of the index seen in 2019 can signal a protracted entrance of industry into a new wave of stagnation. Slipping into the previous stagnation was tougher for the Russian industry – in 2012 the Index abruptly shed 9 points. In the officially crisis year of 2015 the index contracted by merely 1 point.

Decrease of the Industrial Confidence Index seen in 2019 was triggered by three indexes out of four used in its computing. The worsened dynamic of industrial products demand (balance changes in actual sales) that lost 3 points was the key factor of the economic outlook in Russian industry in 2019. The total loss over 2018–2019 of the Index stood at 10 points. Certainly, such decrease is far from a really crisis reduction by 32 points seen in 2008–2009. Reduction of the same balance during the allegedly crisis year of 2015 constituted solely 6 points.

The negative demand dynamic seen over last 2 years has logically triggered enterprises' disillusionment with the sales volumes. The balance of assessment of actual sales volumes of

<sup>&</sup>lt;sup>1</sup> The Index is computed as a simple arithmetic average (difference in responses) to four questions from the IEP's monthly business survey questionnaire:

<sup>1)</sup> Actual change of demand, balance = percent growth – percent decline;

Estimate of demand, difference of assessments = percent above normal + percent normal - percent below normal:

<sup>3)</sup> Estimate of finished goods inventory, balance = percent above normal – percent below normal, opposite sign;

<sup>4)</sup> Plans for output change, balance = percent growth – percent decline.

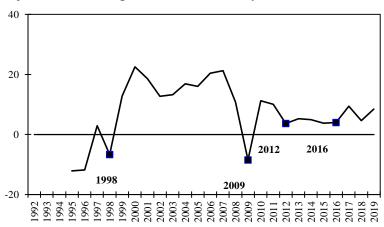
Balances of questions 1 and 4 are seasonally and calendar adjusted. The Index can range from -100 to +100 points. Positive index values imply the prevalence of positive assessments. Negative index values mean that adverse assessments prevail. Decline of index's values is the sign of deteriorating situation. Growth of index's values – the sing of ameliorating situation.

products achieved in 2019 fell by 5 points. In 2018, this indictor shed merely 1 point. Similar contraction (i.e. the scale of disillusionment of industry with actual demand volumes) in the crisis 2015 year also came to 1 point. The most sweeping after the crisis of 2008–2009 was the disillusionment of industry with sales achieved in 2012 – then the balance of assessments had literally plummeted by 15 points.

The balance of assessments of stocks of finished products, which is used in this case with the opposite sign decreased (deteriorated) by 2.5 points in 2019, i.e. stocks of finished products were a little be in excess than seen in 2018. The growth of average annual inventory excess in 2019 was due to two in general contrary factors. On the one hand, slowdown of demand and output reported at the year-end triggered "bad" growth of finished goods inventory. On the other hand, the higher level of confidence in projections of demand and sales plans in 2019 has brought about a "correct" manageable by industry of inventory excess accumulated by businesses in the face of hopes for demand and output growth. Industry registered more of such hopes in 2019 against 2018.

Really, balance of output plans (part of the Industrial Confidence Index) increased by 4 points in 2019 and was the only original indicator positively contributing to dynamic of the composite Index. As a result, this index has returned to the 2017 level but was below its values seen in crisis 2015. Following the full-fledged crisis of 2008–2009, the most optimistic for the Russian industry regarding this index remain 2010–2011 when the balance constituted +22 and +21 points, respectively. However, the advent of stagnation in the Russian industrial sector in 2012 triggered a reduction of this index to +12 points. But this reduction and such balance value are far from the crisis situation seen in 2008–2009 when the indicator plummeted from +35 to +1 point. In the 2015 crisis the balance of output plans declined to 16.5 points against 17.2 points obtained in the 2014 non-crisis year. The minimal optimism of the output plans after the recovery from the crisis of 2008–2009 was registered in 2016 and constituted +11.4 points.

In 2019, surveys registered not only optimism growth arisen from the output plans but of balance growth arisen from projections for demand and employment. As a result, the Industrial Prediction Index $^1$  – our second composite indicator – demonstrated growth in 2019 due to positive dynamic of all its projections (projections of certain indicators (*Fig. 15*). In 2018, all reviewed herein projections of enterprises on the contrary went down.



<sup>&</sup>lt;sup>1</sup> The Industrial Prediction Index is measured as the arithmetical mean of the balances of three questions included in a survey questionnaire: demand change forecasts, output changes plans, and expected occupational employment changes. The Index can vary from -100 to +100 points.

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Fig. 15. Industrial Prediction Index, 1992–2019, percentage points

Optimist growth based on the output plans was due to the optimism growth arisen from demand projections in 2019. Projected changes in demand were more optimistic by 3.5 points but failed to hit the 2017 level – the best year for this index for 2011–2019. 2015 remains the worst year for the mentioned period. However, in this officially recognized crises year the balance of demand projections fell by merely 4 points after the 2014 non-crisis year and barely got into "minus." In the 2008–2009 crisis, decreased of the index hit 27 points and the result was worse than that in 2018.

Occupational employment projections in 2019 went up by 4 points and hit the record high (very optimistic) values since 2017. High value of occupational employment balance was calculated not only on the basis with optimism growth generated by the output plans and demand projections but amid growth of staff shortage in industry. According to enterprises' estimates, the balance of supply of industrial workers in 2019 plummeted and was the lowest since 2011. That is why projections optimism regarding employment is largely forced – industry not for the fun of it demonstrated intention to hire workers. The same stance enterprises adhered in the officially registered crisis year of 2015. Then industry instead of the crisis-like growth of dismissals demonstrated decline of such intentions (by 3 points), which looked very strange for a normal crisis of 2008–2009. It should be noted that during that classical crisis the share of information on cutting the headcount increased from 16 to 29 percent. However, dismissals plan for 2019 did not avert a spike in excessive headcount in that crisis year. In seemingly crisis 2015 year plans for raising the headcount intertwined with constant estimates of excessive employment in the Russian industry at 11.5 percent.

The Industrial Projection Index is computed on the basis of balances. The latter is achieved by a deduction from responses "go up" responses "go down." Responses "remain unchanged" are unused. However, in the context of prolonged stagnation analysis of responses "remain unchanged" are of interest.

In 2019, propensity of the Russian industry towards stagnation increased across all indicators (expectations) of enterprises. In their projects (plans) for changes of demand, output, and employment proportion of responses "remain unchanged" increased (*Fig. 16*). Having said that, in all three cases an all-time high has been updated. The highest growth of stagnation expectation was registered regarding demand – this indicator went up by 3 points and hit 69%. All-time (monitoring period 1995–2019) low of expectations of demand changes happened to be in 2008 and amounted to 52 percent. From 2012 stagnation sales projections demonstrate annual growth except the crisis year 2015. Then the share of projections "remain unchanged" decreased symbolically by 2 percentage points<sup>1</sup>.

By 2 percentage points moved up propensity towards stagnation regarding output plans. In 2019, an all-time (1992–2019) minimum also happened to be in 2008. From 2011 the share of stagnation output plans demonstrate growth with the same small and highly symbolical exception (decline by 1 point) in 2015. In crisis 2009 propensity towards the output stagnation increased by 10 points.

Occupational employment projections are marked by the highest propensity towards stagnation. On average in 1993–2019 sixty-five percent of enterprises reported projections to retain the occupational employment. Such expectations averaged 60 percent regarding demand and 48 percent regarding output. In 2019, this index with respect to occupational employment

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<sup>&</sup>lt;sup>1</sup> It should be noted that in crisis 2009 the reviewed index went up by 5 points.

went up by 1 point hitting 77 percent. However, in the midst of industrial stagnation seen in 2012–2016, the share of responses "remain unchanged" regarding future headcount took a special turn. From 2011, the share of such responses commenced to decline and fell in 2014 to a local low (60 percent). The proportion of projections exhibiting occupational employment change is growing. However, among projections for change projections for decrease exceed projections for growth - the balance is negative. However, this aspect does not result from the goal-directed activity of enterprises. The negative balance of assessments of current occupational employment demonstrates the onset of personnel shortage in industry which was insurmountable at the onset of stagnation. And solely the onset of the officially recognized crisis years of 2015–2016 allowed enterprises to lower pessimism of their projections and get rid of the personnel shortage.

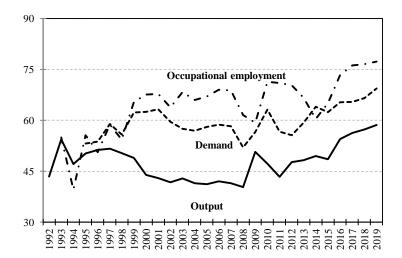


Fig. 16. Propensity of Russian industry towards stagnation (share of stagnation projections), 1992–2019, % of enterprises

Consequently, year to year the share of responses "will not change" in responses of enterprises regarding demand, output and occupational employment is increasing. The share of change projections (notably, in any direction) regarding mentioned indicators is leaving fewer and fewer hopes. In 2019, hopes for improvement in the situation in the Russian industry are few as never before. This, certainly, marks negatively the last year. This being said, enterprises that projected a change in the situation to happen in 2019 raised the number projects for improved situation over projections for deterioration of the situation year-on-year, which remains a positive outcome of 2019.

The growing share of projections "remain unchanged" has ensured the increase of certainty in industrial situation. The uncertainty index based on the calculation of concentration of projections in one of three categories (change strands) – "will increase", "remain unchanged", "will decrease" has ungraded an all-time low across all three projections under review. The highest reduction of uncertainty was obtained for demand projects (0.050), uncertainty for output projections fell a little less (by 0.035), and projections for occupational employment change have shed 0.009. It should be noted that uncertainty of demand and output plans projections demonstrated a crisis spike and hitting an all-time low in the classical crisis year of 2008. Growth of uncertainty of demand and output was also registered in 2012 – first year of stagnation, but practically was nonexistent in 2015. Uncertainty of occupational employment

also went up in crisis year of 2008 but failed to update a record of 1996. The next peak of uncertainty on projections for occupational employment was recorded in the non-crisis year of 2014.

However, non-crisis situation in the industrial sector seen in 2012–2019, prolonged stagnation and minimal hopes (plans) for recovery ensure a rather comfortable performance of industry, because do not require risky decisions on increasing investment, recruitment of the workforce, growth of output and replenishment of inventories. In 2019, the Industry Adaptability (normality) Index nearly returned to an all-time high registered in 2017 (*Fig. 18*).

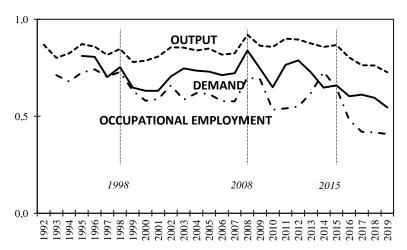


Fig. 17. Uncertainty on projections for demand, output and occupational employment, 1992–2019

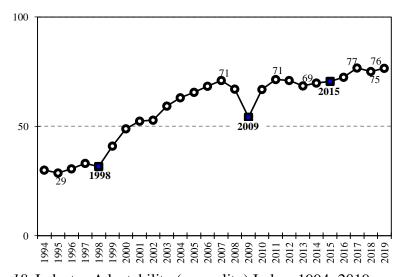


Fig. 18. Industry Adaptability (normality) Index, 1994–2019, percent

The Industry Adaptability (normality) Index – is the third consolidated indicator, measured according to the findings obtained in the course of business surveys conducted by us. Then, assessment of the situation by the Russian industrial sector at the onset of the official crisis year of 2015 made to turn attention to a business survey questionnaire asking industrial enterprises to measure their key performance figures using a grading scale: "higher than normal", "normal", "lower than normal" performance. The average share of answers like "normal" shows

the extent to which industrial enterprises consider their situation as acceptable, that is, the extent to which they are adapted to present economic conditions. The Industry Adaptability (Normality) Index is measured by industrial enterprises' assessments of demand, finished goods inventory, raw and other materials, number of workers, provision of capacities and financial and economic situation.

In 2019, used for the measure of the Industry Adaptability Index initial components demonstrated a variety of trends: three indexes went up and three moved down. The highest reduction was posted by assessments of current demand, which shed a little over 1 percentage point and dropped to 58 percent. Total reduction of the index since 2017 – first year of recovery from stagnation of 2012–2016 constituted 3 percentage points. Such small change in the share of normal assessments was registered not only in 2018–2019 but also was observed over 2012–2016. Then the index stood in the range of 50–52 perce4nt and did not exhibit any crisis-like drop in 2015. It should be noted that over the officially registered crisis of 2008–2009, this index shed more than 40 percentage points, however, during the recovery from that crisis in 2010–2011 managed to regain 30 points. Stagnation that lasted for 5 years denied this index its former dynamic.

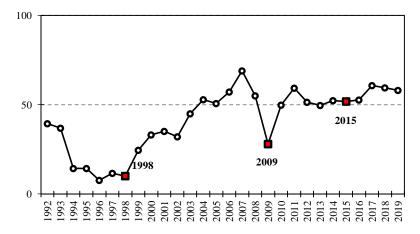


Fig. 19. Normal self-assessment of product demand, 1992–2019, percent

Second in amount but also symbolic was reduction in 2019 of the share of normal assessments of inventories of raw materials and supplies, which constituted less than 1 percentage point. Such insignificant change of this indicator in last year marks its retention at the maximum level, which has been registered for four years in a row – around 80 percent of enterprises boast of normal inventories of raw materials and supplies. Taking into account slack economic dynamic and good financial results of industrial performance, such assessments of supply of raw materials rather fit into a general picture of state of affairs in industry. Another hallmark of resolution of issues related to raw materials was a reduction to all-time (1993–2019) low of assessments of those inventories as insufficient. In 2019, there were solely 11 percent of such responses.

Decline of the share of "normal" assessments of finished goods inventory at 2019 year-end was still more symbolic and came to 0.2 percentage points, which provides more reasons for considering normal supply of stocks of finished products by Russian industry at the previous level of 73 percent. This is the best result seen throughout our surveys over 1992–2019. Industry, thus, continues confidently control its finished products inventory avoiding both

critical overstocking and their pessimistic depletion. Industry retained such confident control in 2015. Moreover, in that officially recognized crisis year industry reported non-crisis-like dynamic of its finished products inventory. Then the share of normal assessments against the generally accepted assessment of economic situation as a crisis-like one increased by 3 points and the balance decreased by 3 points. Over the really crisis-like for the industry 2019, dynamic of these indicators was polar opposite but logical for the crisis: first of them as is due in crisis dropped by 5 points and the second went up by 5 points.

2019 registered growth of normal assessments of occupational employment, provision of industrial capacities and financial and economic situation of enterprises. Growth of these indexes turned out to be more significant than the reduction of three mentioned before indicators, which ensured increase of the final Index of normality.

Normal provision of the Russian industrial sector with qualified personnel went up over the year by 5 points and hit 84 percent, which was next all-time high of this indicator. The previous record registered in 2017 was surpassed by 2 points. This is undoubtedly a positive result amid a complicated demographic situation in the country, which sits well with negative dynamic of other enterprises' assessments of their personnel issues. In 2019, our survey registered a plunge in the balance of responses "more than sufficient" minus "less than sufficient". After 4-year stay around zero and even achieving in 2018 a symbolic plus in the last year this indicator literally plummeted by 5 points. Such sharp reduction of the assessment balance has not registered since 2011. Then, assessment of the personnel shortage plummeted to -6.5 balance points, and now it comes to -4.5 points. Reduction of the balance seen in 2019 was due to a sharp reduction of the share of enterprises with excessive headcount. At present, the Russian industry registers solely 6 percent of such enterprises which is an absolute low. Even amid overheating seen in 2007–2008 only 8 percent of enterprises reported excessive headcount.

Growth in 2019 of "normal" provision of capacities in the Russian industrial sector came to 3.5 points and lifted this indicator to 75 percent, i.e. three quarters of industrial enterprises boasted of sufficient provision of machinery and equipment on the back of expected demand changes. This indicator posted maximum in 2017 and stood at 77 percent. However, the situation with capacities in the Russian industrial sector on the whole differs crucially from the headcount situation. If in 2019 enterprises experienced shortage of the latter, then capacities were in excess. Balance of their assessments remained positive and constituted +11 points over last three years. During the industrial stagnation 2012–2016 the balance was relatively stable staying over entire 5 years in the range of +16...+20 points. Having said that, there was no spike in excess of capacities in the officially registered crisis year of 2015. All those years the share of responses "more than sufficient" stayed in the range of +23...+26 percent. The crisis year 2009 reported a spike of excessive capacities from 15 to 37 percent. Only 7 percent of Russian enterprises reported shortage of capacities in 2019. This value is close to the minimum seen in recent years obtained in 2009 (then 5.5 percent of such assessments were rece3ived). Absolute minimum of capacities shortage was registered in 1996 and constituted 4.4 percent.

Enterprises' assessments of their financial and economic situation in 2019 went up to 91 percent and formally updated the previous record registered in 2017. Then there were 90 percent of such responses. Following industrial recovery from 2012–2016 stagnation period the reviewed indicator did not fell below 88 percent. In crisis 2015 year the sum of good and satisfactory self-assessments of economic and financial situation declined to 81 percent, which resulted from a gradual decline ongoing from 2013 and constituting 1–2 percentage points year-on-year. In other words, there was no crisis nosedive, which would even remotely remind of 2009 outcome with its abrupt 21 points of reduction, in 2015 industry did not report.

#### 4.3.2. Dynamics of key industrial indexes in 2019

In early 2019, Russian industry faced slowdown of demand accelerated in late 2018 on the back of the announced VAT rise. In January the sales dynamic after a local December spike triggered by an anticipatory response of the VAT and prices rise demonstrated an adverse adjusted balance of actual sales by 1 point. In February-March, the index shed another point. Such relatively small slowdown of the sales dynamic triggered similar small disappointment with the sales volumes. In Q1 2019, the average proportion of normal demand assessments declined to 57 percent, which was an 8-quarter low. In Q1 2019, demand projections made by Russian industry retained high (+4 points) optimism accumulated in late last year. Previously in Q2 and Q3 2018, the balance of expected changes of sales ranged -1...+1 point. Previously our surveys did not register such stable around-zero balance of sales projection.

However, businesses were unsure that upbeat sales projections of late 2018 – early 2019 will be fully realized and launch sustainable and statistically distinguishable industrial growth based on the effective demand growth. Around-zero balances of assessments of final goods inventories, which were registered by surveys even from early 2018 were in favor of such uncertainty. When Russian industry is confident in sustainable positive demand dynamic, it brings its inventories to a small surplus. Precisely that was seen in 2017 and this did not happen in 2018. In Q1 2019, balance of assessments of finished goods inventories constituted +2 points, meanwhile in Q1 2017, it hit +10 points.

In the context of positive demand dynamic recovery, the industry demonstrated in Q1 a rather high output growth against the disastrous H2 2018. And solely January was a weak month for the key index of the official statistics – industrial output volumes. However, difficulty in assessment of results when the whole country is on national holidays makes us to view with caution the January results regarding changes of any indexes.

Price estimates as of late 2018 in view of the VAT increase, customary January surge of prices and feasible ruble's depreciation demonstrated and upsurge comparable with the December 2014 results. Then balance of inflationary expectations surged to +37 points, in December 2018–to +34 points and exceeded all intermediary maximums. However, this spike of inflationary expectations was not realized by industrial enterprises in January 2019: actual price growth rate came to only +13 points. Such significant deviation of the actual price dynamic from expectations has not been registered by our surveys for a long time. The latter made enterprises to drastically adjust their price projections. In January, their balance literally plummeted to common +16 points.

In February, businesses were slowing down price growth: balance of their actual changes declined by 11 points. However, new price projections grew again and nearly hit December (2018) level. Inflationary wave maintained in the economy could have again push industry to raise the factory gate price. And rightly so, in March industry announced about the price increase. Balance added 7 points following February reduction by 11 points. Price policy of the Russian industry was ailing amid self-adjustment of the economy towards VAT increase. Nevertheless, the February projections of price changes envisaged precisely that development of affairs. And March projections demonstrated a reverse price movement – towards more moderate growth in April-May 2019.

In January 2019, enterprises reported about the biggest layoffs over recent years – balance (rate) of the headcount change declined to values, which already were not registered in January for four years. This resulted in shortage of industrial workers: balance of estimates of their number ("more than sufficient" minus "less than sufficient") in January was negative and

dropped to 10-quarters low. Having said that, headcount surplus contracted to an all-time low—merely 5 percent of enterprises estimated their actual headcount as "more than sufficient". Such value of this index previously was registered only in January 2008 – at the peak of the pre-crisis overheating of the Russian economy. However, the staff shortage in January 2019 also was relatively small – barely 10 percent of enterprises reported it. The vast majority (85 percent – then an all-time low) boasted for early 2019 of sufficient number of qualified staff. However, a difficult situation seen on the labor market, optimism of demand and output plans projections made the Russian industrial sector to bring (expected scale) recruitment plans to such extreme values that were registered for the last time in early 2008.

Following customary January dismissals seen in February-March, as was planned, industry proceeded to hire the required number of workers. Balance of headcount actual changes increased from the January 16 points first to +5 points and then to +7 points. Enterprises planned to continue hiring: balance of headcount change projections moved up by quarter-end to +16 points and hit levels that were not registered from early 2011.

In early 2019, Russian industry as usual demonstrated an impressive growth of investment plans optimism. Balance of these projections added another 12 points (after the December 2018 hike by 10 points) and hit 7-years high, i.e. the highest investment optimism the surveys registered only in 2011 – early 2012 – prior to the 2012–2016 stagnation. However, minimum capacities shortage was, probably, one of the reasons for negative adjustment of the investment plans. Balance of estimates of this resource has remained positive since 2008 (industry boasts of capacities surplus), and in Q1 2019 this index increased by 4 points and hit 9-quarters high. In early 2019, solely 5 percent of enterprises reported capacities shortage. That is why, already in February balance of investment projections began sliding and in March dropped to +3 points – customary investment hike of the turn of the year ran its course at Q1-end.

Thus, in Q1 2019 the Russian industry retained output growth amid recovery of the sales positive movement and zero balance of estimates of finished goods inventory. However, enterprises did not count on further (prolonged) demand strengthening, although retained high optimism in the output plans and recruitment schedules.

In early Q2, the demand dynamic according to enterprises deteriorated insignificantly. Balance (rate) of sales changes after seasonal and randomized adjustment shed 1 point. At Q2-end, the index regained the score. As a result, the achieved sales volumes in Q2 were estimated as "normal" by 60 percent of enterprises. Demand projections for the entire quarter constantly stayed "in positive territory" – not as large as it was in 2017, but clearly better than seen in 2018, industry retained optimism in sales growth.

However, actually enterprises still were not getting ready to a gradual positive scenario over next months. This way we can interpret the estimates of finished goods inventories. Balance of this indicator ("above norm" minus "below norm") from early 2018 stood around zero amid an absolute (no less than 70 percent) majority of responses "normal." Industry still avoided accumulation of small manageable surplus of finished products stocks, which were prevailing at the confidence periods regarding demand growth. Meanwhile, such balance of estimates of stocks of finished products demonstrated a firm control over their stockpiles.

Nevertheless, retention of optimism in demand growth maintained the industrial output. According to enterprises, in April industrial production retained a positive dynamic. May demonstrated the ongoing output but to a lesser extent – prolonged holidays hamper both industrial performance and adjustment of initial data from seasonal and calendar factors. According to enterprises, output growth rate remained in the black around zero. The output

plans, which gained in early 2019 high optimism level, later began falling but gradually and by merely 4 points for the first six months of the year.

Q2 saw a decisive slowdown of industrial price growth letting to understand the authorities that increased VAT rate pass-through was over. Over first two months of the quarter their growth rate slowed down from +13 to -4 points, and enterprises turned to absolute cut of their prices. In June, balance went up to +4 points amid planned tariffs increase onset from early H1. However, not for long as further surveys have demonstrated. Industrial prices projections had similar dynamic. By May they declined to 21-years low, i.e. such moderate (after seasonal and random movements) inflation expectations were not seen in industry from mid-1998. However, later they slightly increased: thus industry was getting ready to react to customary tariffs growth in H2, but hoped to continue slowing down production costs growth. Balance of its projections decreased compared to Q1 by another 8 points and total decline compared to the peak (due to VAT rate rise) November 2018 hit 22 points.

Large scale recruitment of workers following the customary January layoffs allowed enterprises to reduce staff shortage in Q2 2019 to 20-years low. In April only 7 percent of enterprises reported shortage of headcount "due to expected demand changes." Smaller shortage of headcount (4–6 percent) was registered in industry solely before the 1998 default. Normal provision of enterprises with workforce hit an all-time high. In Q2 2019, 86 percent of enterprises assessed it as "sufficient."

Against this backdrop, industrial sector commences to adjust actual recruitment and its plans towards slowing down, but in H2 2019 failed to increase headcount. Balance of changes of actual headcount remained around zero despite clear plans demonstrated by enterprises to achieve a positive occupational employment dynamic. However, by June optimism regarding these plans dropped from +10 to +5 points, which probably made them more realistic. But most likely, this will not resolve the issue of the headcount shortage in the industrial sector due to unwillingness of the management to raise paychecks. In H1 2019, solely 15 percent of enterprises estimated their level of paychecks as "below norm." This is the minimum (i.e. the best value) for the entire period (2007–2019) of this index monitoring. Maximum (i.e. the worst value) was registered over really crisis Q2 2009 and came to 59 percent. During the officially crisis 2015 the worst value of the index constituted by far not crisis-like 30 percent.

The investment plans of the industrial sector in early H2 2019 continued shedding optimism gained by early 2019. The balance of these plans hit maximum (+15 points) registered in 2017 and 2018. However, later it began losing positions shedding over February-April 17 points and went "negative": investment pessimism in the industrial sector exceeded the investment optimism. However, May reported termination of the index downward trend and even registered growth to +5 points, which signified an onset of customary around zero plateau, which was observed in the investment plans of 2017–2018 after a spike of optimism reported at the beginning of the calendar year. The June investment plans again went into the red. However, in 2019 this plateau was popping up in March whereas in 2018 the onset was registered in June and in 2017 – even in July. Thus, the investment optimism of the turn of the year could make it in 2019 only for two first months.

This being said, the industrial sector was rather satisfied with the volumes of its real investments in Q2: 69 percent of enterprises (maximum for the entire period of this index monitoring 2010–2019) estimated them as "normal" amid prolonged stagnation and highly unclear prospects of recovery.

Accessibility of credits for the Russian industrial sector following the April local failure recovered to customary 68 percent seen in 2017–2019. However, prolonged stagnation has affected borrowing plans of the Russian industry. In Q2 2019, balance of these plans fell to a minimum (+6 points for the entire period of our monitoring those plans. The ability of enterprises to service credits remained high and came in Q2 2019 to 90 percent (i.e. 90 percent of enterprises were able to pay for obtained credits). This is near the maximum for the entire monitoring of the index in 2009–2019. The highest value of the index came to 92 percent and was registered in late 2018.

Therefore, in Q2 favorable demand dynamic allowed Russian industry to demonstrate a rather large output growth for the given historic period. Furthermore, projections of demand and output plans retained a rather high and stable optimism seen since the turn of the year. The same could not be said about the borrowing plans, which plummeted to an all-time low despite a good accessibility of credits and high ability to service them.

The onset of H2 demonstrated the ongoing stagnation in the industrial sector. Moderate but relatively stable dynamic of demand over 2019 prevented businesses from achieving desirable sales volumes made them stem the output growth but still did not hamper to manage the finished products inventories. Businesses faced problems with hiring workers which has brought the headcount shortage to the 6-year low in the wake of sustainable excessive capacities overhang.

Pace of the demand change in July 2019 remained around best values of the index over the previous 12 months and was above the July 2018 index when surveys registered plunge of sales following a relatively good results sown over the first 6 months of the previous year. However, satisfaction with the obtained (or on the contrary unobtained) sales volumes in June-July 2019 was very low (or for unobtained – high). Solely 55% of enterprises considered these volumes "normal." This value was the index minimum seen from February 2018.

Enterprises' "normal" responses regarding the estimates of finished products inventories steadily prevailed. From the onset of 2019, their share did not go below 70%. Balance of remaining 24–30% of responses was in favor of "above normal" responses, but with a small pure symbolic predominance of 2–3 percentage points. Enterprises maintained a minimum surplus of inventories which signified a lack of real hopes for demand growth for the foreseeable future. Having said that the pace of the output growth remained in the positive territory around zero. In June the balance of real output change stood at +1 point.

Amid hopes to revive the weak demand and reach bigger sales volumes the industrial sector halted producers' price increase achieving a near zero balance in their change after the June balance of +4 points. Enterprises' price plans were subject to similar adjustments. This being said, the proportion of responses about a planned price growth declined to 6-7%, beating the record seen in the crisis 2009 when this index dropped to 8-9%. The industrial sector to the best of its power supported the government policy aimed at curbing inflation.

Companies have failed to overcome the negative (for industry) trend of reducing the headcount. Balance of real occupational employment changes in June was "in minus"—industry continued losing workers and dismally failed to increase hiring. Balances of planned occupational employment changes stayed net positive from the year onset although dropped to +3 points in June against March peak of +16 points. Enterprises have failed to implement even such modest plans. The latter has logically triggered the shortage of workers in the Russian industrial sector. The balance of estimates of available qualified personnel "more than sufficient" minus "less than sufficient" plummeted in early H2 2019 to -9 points. Such across the board shortage of personnel was not registered over 6 years.

That said, Russian industry boasts of capacities and even of their excess. The net balance of enterprises who report sufficient provision of industrial capacities remains positive over 11 years just from mid-2008. In this context, capacities shortage cannot be a valid factor for the Russian enterprises to increase fixed investment. And really, the investment optimism of the industry has already been waning for the third year following a surge in Q1. The investment plans of companies for July never managed to get rid of the pessimism accumulated in June. Then, the net balance of enterprises' investment projections plummeted by 10 points hitting -6 points. The Russian industrial sector did not register such investment pessimism since 2016. Although, the net balance went up to -2 points in July but remained in the black. The industrial sector none the less reported plans for the cutting the investments.

A symbolic deterioration of the sales dynamic seen in August did not change the general picture of the first 8 months of 2019: demand demonstrated strikingly stable against 2018 but obviously not as good rates of change compared to 2017. Sales projections were marked by stability in 2019. The net balance of this index seasonally adjusted and cleared of random factors stayed in the rage of +3...+4 points, which was definitely better expectations of H2 2018, but below the 2017 results.

Under the circumstances, it was hard for enterprises to monitor their inventories of finished products and demonstrate remote hopes for the feasibility of demand and output growth. The net balance of the enterprises' estimates of those inventories for over 20 months remained around zero which points to the lack of real hopes of demand growth.

Successful fight of the monetary authorities with inflation and enterprises' attempts to revive sales have again forced the industrial sector to cancel the factory gate price growth. In August, the net balance of the real price change dropped to zero. The same situation for the first time was registered in May 2019. Enterprises' price projections were also exceptionally frosted. In May, the net balance of price changes plummeted from +9 to -7 points. In July-August, the Index stabilized at the level of +2 points. That said, the share of price retention projections hit in August 2019 customary high of 86%.

In August, the Russian industry managed to overcome the negative trend of personnel reduction which took shape in April-July. The 4-months-long period of the headcount decline has led to an outbreak of the most widespread for the recent 6 years personnel shortage in industry and dissatisfaction of workers and specialists with the compensation rate. However, enterprises are unlikely to go on hiring personnel in industry. The balance of hiring plans lost in August both traditionally high optimism inherent to the year onset and moderate positive sentiment of O2.

Accessibility of credits for the Russian industry retained in 2019 as a whole a customary for the recent years level. In August, 68% of enterprises considered it normal. The net balance of enterprises' borrowing plans recovered and achieved a customary for the end of 2018-early 2019 moderate optimism against a collapse seen in Q2.

In September, enterprises notified about a symbolic improvement of demand dynamic against a symbolic deterioration in August. As a result, the seasonally adjusted and cleared of random fluctuations balance of industrial products sales still demonstrated exceptional stability. Enterprises' demand projections for September retained stability by remaining in the range of +3...+4 points after seasonal adjustment and cleared of random fluctuations. Thus, industry retained the very same stability which to date is called stagnation.

In this context (amid stagnation) it was rather easy to enterprises to manage their inventories of finished products. As a result, Russian industrial enterprises report a record high level of

"normal" estimates of inventories. In September 2019, such estimates hit 78% – an all-time high for 328 surveys. The average result over first 9 months constituted 73% – also a record high for entire 28 years of surveys on 9-months data. The balance (disparity) of remaining estimates stood around zero without exceeding the range -2...+3 points from early 2019. The industrial sector still did not have grounds for accumulating manageable excessive inventories inherent for the periods of confidence in demand growth.

The output growth rates (seasonally adjusted and cleared of random fluctuations) remained in the positive around zero for a second quarter in a row – from April this index constantly demonstrates values in the range of 0...+1. In Q1 2019, the balance (rate) of actual output changes stayed according to surveys in the range of +2...+3 points. Despite such sluggish output dynamic, the industrial sector retained optimism of its output plans at the high level over the current year. In Q3, the net balance of the output projections averaged +13 points a little bit less than +16 points registered in Q1 2019. It should be noted that in 2018 the enterprises' output plans demonstrated less optimism: all quarterly balances stayed in the range of +11...+12 points.

In September, industry tried to raise selling prices – the balance of their real changes went up to +5 points against 0 points in August. However, enterprises considered this step ill-conceived. Price projections, on the contrary, declined by 5 points – industry again was ready to back down from raising them. In September 10% of enterprises reported an intention to cut prices which was nearly a record for the last 7 years. More responses about price cut (13%) were received solely in May 2019.

In September, the balance of enterprises forecasting a change in the personnel number stood at zero. Consequently, the negative downward trend formed over May-July amid the need of hiring more personnel has been overcome. However, enterprises' personnel projections have lost their optimism seen at the onset of the year. The net balance of this index remained at zero for a second consecutive month, in other words enterprises already did not plan headcount growth. And the vast majority of enterprises (83%) directly reported in Q3 2019 about the intention to retain the headcount. Such across the board intention of the Russian industrial enterprises not to change the number of headcount has not been registered not in a single quarter from the launch of the index monitoring in 1993. A close value (82%) was obtained in Q2 2019. The previous "record" of the Russian industry to freeze creation of new work places was registered in 2018 and stood at 78%.

In view of this, enterprises' stable projections dynamic regarding demand let them in Q3 to confidently control stocks of finished products by demonstrating around zero output growth rate and confidence in impracticality of optimistic output plans. Having said that, enterprises' reluctance to create new jobs has hit an all-time high over 1993–2019.

According to enterprises estimates, in early Q4 2019 the demand dynamic continued demonstrating stability: both regarding the real changes and projection-wise. Both real sales growth rate and expected sales growth rate seasonally adjusted and cleared of random fluctuations deviated from the average annual level not more than by 1 percentage point. Such unique situation was never registered over the previous years. However, in October industry ran the risk to increase output growth rates. This measure in the wake of stable dynamic of real sales and stable projections has triggered increase of excessive inventories of finished products. In October, the balance of their estimates went up to +6 points, which was a 12-month high. This being said, the output plans so far remained at the minimum of the current year: the industrial sector is not ready, which makes sense, to continue ramping up production.

The Russian industry was unable to get rid of the headcount shortage in Q4. 14% of enterprises reported shortage of personnel for a second consecutive month, which was a 3-year maximum. Solely 6% of enterprises registered surplus of headcount, which was close to an all-time low. Typical balance was negative and the worst over the last 5 years. The industrial sector has not seen such massive shortage of headcount from mid-2014. Furthermore, enterprises personnel projections hitting in early 2019 a post-crisis high by October declined by nearly zero – and this was in the wake of the significant headcount shortage.

Personnel shortage reported over H2 triggered growth of dissatisfaction with paychecks level in the industrial sector. The share of responses "below normal" has gone up to 23%, which was a 3-year low for the index, although at the onset of the year dissatisfaction with wages stood at an all-time low. However, in early 2020, enterprises were not hoping to mend the wage situation. The net balance of enterprises' expectations of wage changes in late 2019 was negative – companies responded about a cut in wages.

By the end of Q4, the Russian Industry faced an obvious slowdown of demand growth on its products. According to the December survey findings with seasonal adjustment and clearance of random fluctuations the net balance (rate) of sales declined to 48-months low, in other words the worst value of the index was obtained in late crisis year of 2015. Logically, such result underwhelmed enterprises: December sales were considered "normal" by only 55% of enterprises. On average over 2019, this index came to 58% down against 2018 (59%) and 2017 (61%). However, demand projects at the year-end remained at the previous level +3...+4 points (where they stayed over entire 12 months of the year) by conclusively proving an exceptional stability of enterprises' expectations.

Negative demand dynamic seen at the year-end logically triggered excessive inventories growth. In December, the balance of their estimates hit +11 points. Such high overhang was not registered since March-May 2017. However, then industry really saw a chance to exit from protracted recession of 2012–2016 and purposefully brought its inventories up to indicated excessive level. In late 2019 the situation is reverse – industry had to estimate its inventories as excessive and went on to slowdown the output growth in order to avoid their further stockpile and/or reduce inventories volume down to acceptable level. And sure enough in November-December 2019 enterprises decisively commenced slowing down the output growth. Over the last quarter industry proceeded from a slight output growth to similar output cut.

Slowdown of demand and successful fight of the government with inflation made enterprises refuse to increase selling prices and proceed to their absolute cut. Over Q4 2019 the balance of actual price change dropped from +5 points to -9. Surveys did not register such rapid price drop (with the balance of -9 points) over 6 years – from 2013. However, in December 2008, this index plunged to -24 points. Industrial projects demonstrated readiness of enterprises to demonstrate in early 2019 a typical price growth, however seasonal adjustment and clearance of random fluctuations revealed an utmost modesty of those intentions in late 2019.