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The review provides a detailed analysis of main trends in Russia's economy in 2012. The paper contains 6 big sections that highlight single aspects of Russia's economic development: the socio-political context; the monetary and credit spheres; financial sphere; the real sector; social sphere; institutional challenges. The paper employs a huge mass of statistical data that forms the basis of original computation and numerous charts.

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Sergey Tsukhlo

Russian Industrial Enterprises (on the basis of the surveys) in 2012

The section has been prepared on the basis of business surveys (BS) of managers of industrial enterprises; the above surveys have been carried out by the Gaidar Institute for Economic Policy (IEP) in accordance with the European harmonized methods on a monthly basis since September 1992 and cover the entire territory of the Russian Federation. The size of the panel includes about 1,100 enterprises with workforce exceeding 15% of the workers employed in industry. The panel is shifted towards large enterprises by each sub-industry. The return of queries amounts to 70%–75%.

A BS questionnaire includes a small number of questions (maximum 15 to 20 questions). The questions are of a qualitative, rather than quantitative nature. The simple structure of questions and answers permits the respondents to fill in queries quickly and without any documentation. It is principally important that a respondent at each enterprise is a top level manager who has a comprehensive idea of the state of things at the enterprise and is directly engaged in management of the enterprise.

In analysis of business surveys, a specific derivative index – called the balance – is used. The balances are calculated as a difference between the percentage of those who answered "it increases" (or "above the norm") and the percentage of those who answered "it decreases" (or "below the norm"). The obtained difference permits to present the distribution of the answers to each question by a single figure with the «+» sign or the «-» sign.

The balance is interpreted as the first derivative or the speed of the process. If the balance of the answers to the question about the expected change in prices has the «+» sign, it means that the average prices will soon grow (that is, the number enterprises which reported about the expected growth in their prices prevailed). For example, growth in the balance within a month from +10% to +17% means that prices in industry in general will grow at a higher rate because the number of enterprises which forecasted their growth increased. The negative balance means a decrease in average prices (that is, a larger number of enterprises intends to lower their prices). A change in the balance from -5% to -12% is interpreted as growth in the price reduction rate.

Is the Russian Industry Getting Involved in the Second Wave of the Crisis?

In 2012, the prevailing unclarity and narrowness of the official industrial statistics remained a major problem for its consumers and gave rise to heated disputes on the issue whether the Russian industry was getting involved in the second wave of the crisis or switched over to the state of a "new normality" which was principally different from the dynamic development of the first decade of the 21^{st} century. The above circumstances preserved the relevancy of assessment of the general state of the Russian industry on the basis of the IEP Industrial Optimism Index (IEP IOI)¹.

¹ The index is based on the arithmetic average of balances (the difference of answers) of four questions of the IEP BS queries:

^{1.} The actual change in demand, balance = % growth - % reduction;

^{2.} Assessment of demand, difference of evaluations = % above the norm + % norm - % below the norm;

In a situation of the economic crisis, the above index permits to solve a few important tasks. First, it permits to receive almost on-line (as compared to frequency and efficiency of the official statistics) the idea about the state of the domestic industry. Second, enterprises which take part in the IEP's surveys are the "middle class" of the Russian industry. They are situated all over the country and related primarily to manufacturing industries. The information on the state of such enterprises is not always available on time and in the required volume to the authorities and analysts. Third, the Index is calculated on the basis of indices which have no equivalent in the state statistics system, but specify the important aspects of the actual situation in the Russian industry (the demand, reserves and output plans). They characterize accurately and comprehensively the situation of enterprises which fact is confirmed by the 20-year experience in carrying out and analyzing of over 240 business surveys. Longterm, personified and informal relations with respondents (90% of the respondents are mangers of enterprises) create conditions for receipt of the most objective data on the Russian industry. As a result, the IEP IOI gives an idea about the real state of things in the Russian industry.

As seen from calculations, the end of 2011 was highly unsuccessful to the Russian industry. Within the last quarter of 2011, the index fell to the year and a half minimum, though in the middle of 2011 it almost rose to the post-crisis record high level. In January 2012, negative trends consolidated: the index fell to the zero. The first few months of 2012 showed that the industry tried to keep back from the dangerous line beyond which it could get involved into the second wave of the crisis. However, in February-April growth in the index amounted to 3 points and was determined mainly by growth in satisfaction with the current sales volumes due to the effect of insignificant slowdown of the decline rates of demand. However, other components of the Index did not permit it to go up to the previous positive values registered in 2011.

In the 2^{nd} quarter of 2012, sentiments in the industry started to decline again: first to the zero level in May and then to the 28-month minimum. In May-June, the Index lost 7 points and, as a result, the remaining optimism which kept it in the positive zone in the first few months of 2012 vanished. The assessment of the demand was subjected to the most serious adjustment. The industry was becoming less and less prepared to be satisfied with decreasing sales volumes and it seemed to be getting involved in the 2^{nd} wave of the crisis.

There was not much hope in the industry that it would manage to get out of that situation. From the beginning of 2012, the index of forecasts lost 11 points and in July fell to the level of the 34-month minimum. The output plans were the worst hit. In the 2^{nd} quarter, the demand forecasts decreased by 9 points and ceased to be the positive for the first time in 35 months. The hiring plans were explicitly negative as they amounted to -8 points after being cleared of the seasonal factor; from the beginning of 2012 they lost 11 points.

However, in the 3rd quarter the situation in Russian industry started to improve. First, the optimism index recovered from its dip in June thanks to sudden improvement of industrial

^{3.} Assessment of the stocks of finished products, balance = % above the norm - % below the norm, the opposite sign;

^{4.} Plans of change in output plans, balance = % growth - % reduction.

Balances of the 1st question and the 4th question are cleared of the seasonal and calendar factors.

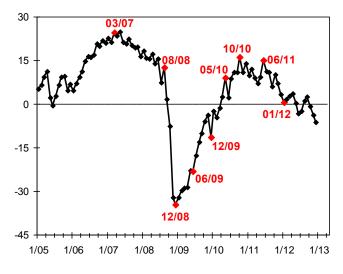
The Index may assume the value from -100 to +100. The positive values of the index mean that positive assessments prevail. The negative values of the index mean that the negative assessments of the situation prevail. A decrease in the value of the index means a deterioration of the situation. Growth in the value of the index means improvement of the situation.

forecasts and assessments of stocks of finished products. However, demand kept declining at a growing rate. But most enterprises regarded that dynamics as a normal one and that assessment did not change since June when the decline was less intense. It seems the industry expected a more dramatic drop in sales, so, a small worsening (not a recessionary one) of the index was sooner assessed positively, rather than negatively.

Optimism in industry kept growing until the end of the 3^{rd} quarter. In that period, the IEP index rose steadily by 6 points after a steady decrease in the 2^{nd} quarter, while by the end of the 3^{rd} quarter it attained one of the best values in 2012 due to growth in its three out of four components. Stocks of finished products accounted for the largest positive contribution. In September their balance was zero which fact was evidence of the most cautious behavior of manufacturers and their unwillingness to take risks when producing against probable growth in demand in future. However, that factor improved output plans. The industry was prepared to switch over from zero growth rates to the positive output dynamics. According to enterprises, the 4th quarter of 2012 could become the beginning of the exit from the protracted stagnation. All the industry's plans and forecasts for the last months of 2012 underwent positive changes. The IEP composite index of forecasts showed enterprises' readiness to draw the Russian economy out of stagnation late in 2012.

However, at the beginning of the 4^{th} quarter the optimism index underwent dramatic negative changes caused by worsening of its three out of four components. Formal preservation of the fourth component – assessment of stocks of finished products – at "the best" levels in the past year and a half points sooner to the minimal hopes for growth in sales, rather than infeasibility to meet the demand and utilize of warehouse stocks for those purposes. Calculation of the November value of the IEP optimism index showed further worsening of the situation in the Russian industry. The value of the index became explicitly negative and fell to the threeyear minimum. The demand kept depressing the sentiments in the Russian industry. It was only the output forecasts that kept the index from falling even further.

The Russian industry completed the year 2012 in a highly pessimistic mood (see *Fig. 8*). The optimism index fell to the three-year minimum and consolidated its position in the negative zone, while hopes for revival of industrial growth (the industry forecasts index) are too weak in 2013. The main factor behind a drop in the optimism index was the continued reduction of satisfaction with the current sales volumes.



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Fig. 8. The IEP Industrial Optimism Index in the 2005–2012 period

So, in 2012 the dynamics of the main indices of the Russian industry demonstrated the explicit worsening of the situation as compared to 2011. Within a year, the optimism index slightly exceeded the zero level, but fell down to significant negative values.

Dynamics of the Main Indices of the Russian Industry

The beginning of 2012 was problematic to the Russian industry. An explicit drop in demand made enterprises slow down (practically to a complete halt) the output growth rates, lay off workers and exceedingly cautiously raise prices. However, sudden growth in optimism of forecasts showed that the industry hoped for the exit from the protracted crisis.

In the beginning of the year, as usual in the period of national holidays a sudden drop in demand on industrial products took place. However, the January drop in sales became a continuation of negative trends in the dynamics of the demand which was formed as early as September 2011 when sales of products ceased to grow, then started to go down with a growing intensity (rate) and attained in January 2012 such a high rate of drop which was never registered after the 1998 default in any January, except for the recessionary January 2009. Clearing of the seasonal factor helped improve that result of the beginning of the year, but only to the worst growth rates since September 2009.

Despite the weak demand, in January the balance of assessments of stocks of finished products did not undergo principal changes and remained within the limits of the index since the beginning of the 2nd quarter of 2011. In January 2012, a resolute and negative adjustment of the output in accordance with the predicted dynamics of demand permitted enterprises to bring the coincidence of actual changes in those two indices to 72% which situation has not been observed in the industry since November 2008 - January 2009 when enterprises were left with no other option, but to follow the rapidly declining demand.

In January, on the contrary, enterprises' prices showed growth which is as typical of the beginning of the year as a drop in demand or output. However, disturbances in the dynamics of that index were observed, too. First, growth in prices was registered for the first time in the past 12 months. Throughout the entire 2011, growth rates of prices declined all the time making short stops and within a year lost 55 points. It is to be noted that in December 2011 the most intense drop in that index in the past two and a half years was registered. Second, early in 2012 the growth rates of prices were much lower than those which rose dramatically early in 2011 (it can be explained both by natural calamities of the hot summer 2010 and man-made factors). But growth in prices in January 2012 is lower than price surges in any January of the entire 1999–2008 pre-crises period. Third, throughout 2011 enterprises were well aware of the fact that there was a lack of prospect in switching over to more intense growth in prices and revised constantly downwards their price growth forecasts till October.

Recovery of the normal economic dynamics after the January national holidays was quite uncertain. Demand kept falling and its forecasts remained weak. Hiring of the personnel which just started was weak, too, and had little chances to continue in the following months.

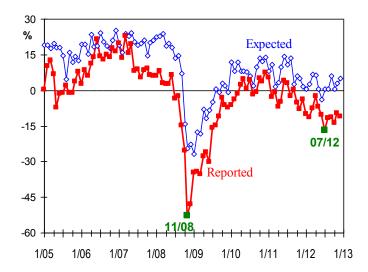


Fig. 9. Changes in the solvent demand cleared of the seasonal factor (balance = % growth - % decrease)

In February, the demand dynamics underwent principal – but traditionally positive – changes and small changes as compared to January (a holiday season) and the 4th quarter of 2011, respectively. (see *Fig. 9*). However, recovery of sales in February turned out to be weak: balance (the rate of change) rose after January 2012 – which can be regarded as a failure by the standards of both the mid-crisis 1999–2008 period and the 2009-2011 post-crisis period - to the values which were somewhat better than in the last quarter of 2011. But the most disappointing thing is that it was still in the negative zone. It means that demand in industrial produce kept shrinking. But the balance of assessments of stocks of finished products did not undergo serious changes in February and remained in industry as a whole at the level of a small surplus which situation already became quite an ordinary one. The industry was solving successfully in that mode the problem related to stocks of finished products; it sought to prevent both overstocking and depletion of its warehouses. The latter permitted enterprises to show positive dynamics of output: the initial growth rate improved after the failure in January by 61 points straight, while the one cleared of the seasonal factor, by 9 points.

The 1st quarter of 2012 showed weak results. According to enterprises' forecasts, growth in demand which emerged only at the end of the period and disappeared with the seasonal factor cleared had little chances to continue. That factor resulted in growth in excessive stocks of finished products, a drop in output growth rates and negative adjustment of production plans for the next quarter.

Though in March the dynamics of demand in industrial produce showed positive changes again, nevertheless, with the seasonal factor cleared the balance of the index still remained in the negative zone with meager growth registered, that is, there was only a slowdown of the rate of drop in demand. It is to be noted that further improvement in the sales dynamics appeared quite doubtful. However, even those changes in the sales dynamics were rated highly by enterprises. In February-March 2012, the difference between assessments of satisfaction with the demand improved by 21 points and turned around the industrial optimism index at a dangerous line to which it was descending to throughout the second half of 2011.

In March, the data on the dynamics of output (prior to clearing of the seasonal factor) showed at the first sight that growth rates increased by 10 points. However, the obtained result turned out to be worse than that of any March in the past ten years (except, certainly, for March 2009). Clearing of the seasonal factor showed that in March 2012 the output growth rates after a surge in February returned to the previous low values which were hardly discernable by the Rosstat. The industry was quite unprepared to increase output in a situation of weak growth in demand and low optimism of its forecasts.

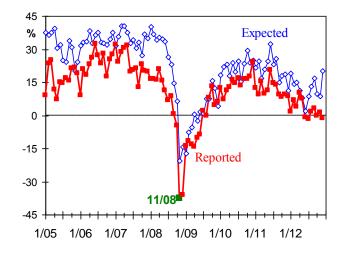


Fig. 10. Changes in output volumes cleared of a seasonal factor (balance = % growth – % decrease)

Enterprises' production plans confirmed that conclusion (see. *Fig. 10*). Such sluggish growth (as yet) the industry did not plan since the beginning of 2010. It is to be noted that the March survey showed principal changes in formation of enterprises' production plans. Early in the 1st quarter of 2012, enterprises showed high growth in optimism of output plans which were 26% (more properly, in 26% of cases) ahead of their own forecasts of the demand. Such a significant advance of the forecasts of demand over the output plans was not registered in the industry for four years. However, at the end of the quarter the industry switched over to intense slowdown of its output plans as compared to its own forecasts of the demand: the share of enterprises which planned a lag of changes in production from those in demand rose to 10%. Such a high (that is, pessimistic) value of that index was not registered for more than a year and a half.

Moderate positive changes in the dynamics of the demand and output early in the 2^{nd} quarter, as well as the certainty that followed after the elections were over did not add optimism to the industry. Insufficient demand, growth in excessive stocks of finished products, decrease in the optimism of the output and hiring plans, growth in excessive capacities and disappearance of personnel shortages – such were assessments of the situation by Russian industrial enterprises.

In April, growth rates of change in demand showed growth in sales at the previous positive rate (as in March) on the basis of the initial data. However, with a seasonal factor cleared the index fell to -2 points which situation can be interpreted as a lack of changes. But as compared to the results of the first months of the year when the rate of a drop in demand amounted to -9 –7 points, the value of -2 points appears quite positive. In March-April, the demand

forecasts rose to +8 points after a surprising stability at the level of +4 points in September 2011-February 2012, while satisfaction with sales stabilized at the level of 53%.

In April, dynamics of industrial production showed some positive changes. The initial data showed that growth rates remained at the March level, while those cleared of the seasonal factor pointed to improvement to the 11-month maximum.

However, enterprises' plans did not suggest that the achieved output growth rates would be preserved in May-June. Another "drawback" of the output plans was the fact that they lagged behind the forecast of the demand. If earlier, on average, only 6% of enterprises had output plans that lagged behind the forecasts of the demand, in March-April 2012 a lag was registered with 12% of enterprises.

In the 2nd quarter of 2012, principal changes occurred in the system of factors of disturbance which hindered output growth (according to the version of managers of industrial enterprises).

The most significant changes took place as regards the disturbance factor: "the unclear current economic situation and its prospects" (see. *Fig. 11*).Within a quarter (to be precise, from January 2012), the mention of that factor fell from 39% to 23% and returned to the average level of 2010 and early 2011. Sharp growth in that factor (from 23% to 36%) was registered in October 2011. January 2012 added another 3 p.p. So, a drop in uncertainty in April was sooner related to completion of the hectic period of the State Duma and presidential elections, as well as formation in the society of a perception of distribution of power both in the government and the economy.

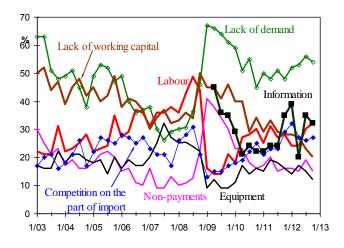


Fig. 11. Disturbances to growth in production, 2003–2012

A positive return to the previous level of certainty in the economy was flattened by the fact that enterprises did not have a good idea about the details of that certainty. First, the industry did not see, nor expected revival of the demand in its output. In April 2012, low demand accounted for 55% of the restraining influence in the real sector. Both sustained growth in excessive stocks of finished products and negative adjustment of output plans supported that thesis.

Second, the industry managed to get rid of personnel shortages, which means sooner that it gave up the illusions of a return to the previous output growth rates and the need to hire more workers.

Third, the restraining influence of the working capital shortages went down to the historic minimum of 26% in the entire 20-year history of monitoring. The pre-crisis minimum of that index amounted to 30%, while the historic maximum, to 83%. It appears that the erstwhile most deficit resource (until the end of 2008 as regards the rate of occurrence it used to compete with the insufficient demand) restrained output growth only with 25% of industrial enterprises, while the demand, with more than a half of enterprises. Enterprises had fewer resource limitations hindering the output growth, but more demand limitations. In addition to the above, a shortage of loans had virtually no effect on industrial growth. For five quarters running, only 3% (three!) of industrial enterprises stated that that factor was hindering growth.

Fourth, in industry excessive capacities increased. In April 2012, 21% of enterprises believed that they had "more than enough" machines and equipment due to the expected changes in demand against 5% of enterprises which thought that they lacked them. The above factor had a negative effect on enterprises' investment plans. In April, they decreased by 8 points to the 12-month minimum (if a dip in December 2011 is not taken into account).

In May 2012, the dynamics of demand, output and employment was sooner negative, rather than positive. Assessments of the demand and stocks of finished products pointed to the fact that the mood in industry was getting worse, while forecasts and plans of enterprises did not suggest any improvement of the situation in the months to come.

In May, actual changes in demand failed to retain the positive dynamics as regards both the initial data and that cleared of a seasonal factor. As a result, a small positive surge in March-April gave way to stagnation in sales. The initial forecasts of the demand after a surge of 43 points in the 1st quarter kept losing optimism. Though they decreased by 13 points and still remained in the positive zone (+9 points), but with a seasonal factor cleared they fell to +2 points, which value became the 12-month minimum. The negative dynamics of actual sales and a drop in the optimism of forecasts of the demand provoked further growth in excessive stocks of finished products.

In June, the dynamics of the main indices (demand, output, employment and prices) preserved negative trends and definitely brought the Russian industry closer to the second wave of the crisis. Enterprises' plans and forecasts did not promise any improvement of the situation in the following months. The initial dynamics of the demand in industrial produce underwent at first glance "positive" changes: a drop in demand was followed by stagnation in sales. However, with a seasonal factor cleared the June data lost that positive specifics: the demand kept decreasing and the rate of a drop increased by another two points. Such dynamics of sales was adequately assessed by manufacturers. Within a month, the balance of assessments of the demand got worse by 9 balance points and amounted only to +4 points, though in October 2011 its value amounted to +31. The industry was less prepared to be satisfied with declining sales volumes. Enterprises' forecasts did not promise any improvement of the situation with sales.

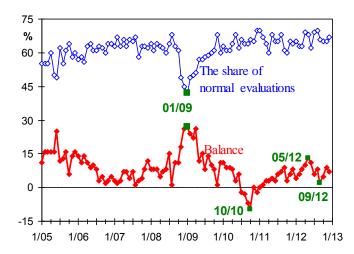


Fig. 12. Balance of evaluations of stocks of finished products (balance = % above - % below)

In the meantime, in June the balance of evaluations of stocks of finished products decreased for the first time in the past five months (that is, improved). In May, the index reached the 33-month maximum which meant that the largest excessive (for that situation!) warehouse reserves were formed since August 2009 (see *Fig. 12*). Further growth in excessive stocks of finished products in a situation of weak demand and diminishing hopes for its revival was regarded by industry as pointless and clearing of warehouses began.

In June, the initial output growth rates lost another 7 points, while the total losses of that index amounted to 24 points in the 2^{nd} quarter. As a result, at the end of the second half-year enterprises estimated the production growth rates at +3 points, while in June 2011 and June 2010, at +25 points and +19 points, respectively. Clearing of the seasonal factor diminished the value of losses of industrial growth within a quarter, but worsened the final result: the balance became equal to +1 point which means that output growth came to a halt in June.

In July, changes in demand continued the trend of the past three months, that is, growing slowdown of sales. However, that situation was assessed by most enterprises (54%) as normal and even somewhat better than in June (then, the normal demand was recognized by 52% of enterprises), when the decline was less intense. It seems the industry expected a more dramatic drop in sales, so, a modest worsening (not a recessionary one) of that index was assessed sooner positively, rather than negatively. Probably, that factor was behind a dramatic revision by the industry of its sales forecasts. After four months and three months of worsening of the initial data and the one cleared of the seasonal factor, respectively, in June expectations improved by 5 points and 9 points as regards the initial data and the one cleared of a seasonal factor, respectively.

In July, the dynamics of industrial production did not undergo principal changes as compared to June: output growth stopped, while a recessionary slump (and the one similar to that of late 2008) did not begin. It is to be noted that output plans like forecasts of demand changed the trend: after five-month growth in negative expectations that resulted in June in the three-year minimum, the data in July demonstrated a surge of positive forecasts by 9 points straight. Matching of the expected changes in demand and output was registered with 75% of enterprises and only 8% of enterprises believed that changes in output should be ahead of the dynamics of demand. At the first glance, the industry was carefully preparing its production plans in accordance with the forecasts of demand which were fairly positive in that period of time. However, enterprises were not certain that they would manage to realize them.

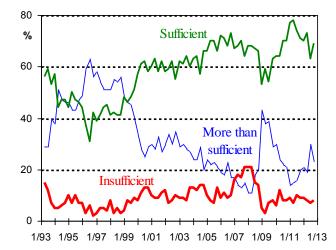


Fig. 13. The share of enterprises with excessive, sufficient and insufficient capacities

The above was pointed to by assessments of sufficiency of capacities due to the expected changes in the demand (see *Fig. 13*). In July 2012, the balance of those assessments rose sharply by 9 points and became the 9-quarter maximum. So, a quarter (26%) of industrial enterprises regarded their capacities as excessive against only 11% of enterprises early in 2011.

In August, the state of things in the Russian industry sooner improved, rather than got worse. Slowdown of the demand permitted enterprises to carry on without reducing the output, introduce positive adjustments in output plans and reduce the rate of lay-offs with stocks of finished products put under complete control. However, uncertainty about the future made enterprises minimize investment plans and go ahead with lay-offs.

In August, the dynamics of demand in industrial produce underwent relative positive changes. The initial data and that cleared of a seasonal factor showed growth of 6 points in the index though it still remained in the negative zone, which factor points to slowdown of a drop in sales. In other words, a decrease in demand in August continues, but not at that rate as in July. The second wave of the crisis which analysts predicted and the government started to get ready for beforehand did not materialize in summer 2012.

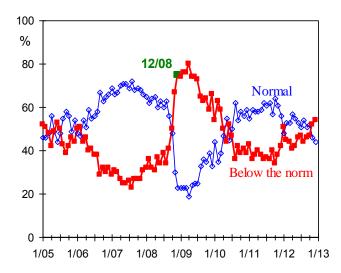


Fig. 14. Dynamics of the main assessments of the solvent demand

The above situation permitted the industry "to take breath" and improved satisfaction with the current sales volumes (see *Fig. 14*). Within a month, the difference of assessments of the demand increased by 8 points and "won back" all the loses of June and July. Only 42% of enterprises were unsatisfied with sales of their products. The above value became the 9-month minimum, that is, the best index value.

In a situation of the continued decline of the demand and uncertainty about changes in it, the industry minimized risks related to accumulation and maintenance of a reasonable surplus of stocks of finished products. Within summer, the balance of assessments lost 8 points after attaining in May the 33-month maximum. In August 2012, the share of the "normal" answers reached the historic maximum of all 243 surveys which had been carried out by that time – as never before the industry was so careful in its policy of management of stocks of finished products.

Following the dynamics of demand, in August the output dynamics underwent positive changes. As a result, the surveys showed that in summer months growth in industrial production stopped (the growth rates were in the range of from -2 points to +2 points, that is, a nil). The fact that the expected recessionary drop in output (or the one close to it) did not materialize added optimism to that data. However, the pessimism of the June-August data cleared of the seasonal factor consisted in absence of any evidence of growth. That evidence could be seen only in enterprises' plans. In the 3rd quarter, their optimism increased by 11 points after a dip in June to the 3-year minimum. Absence of a recessionary slump in output instilled hope to enterprises for revival of production.

However, in October a slowdown of the main indices of demand, output and prices started in industry again. The employment rate was falling, too, but, probably, for another reason: due to low wages and salaries workers started to quit enterprises and, as a result, the latter were no longer confident that with the remaining personnel they would manage to ensure even the stagnating output volumes.

The initial data on the dynamics of demand showed that it fell at a higher rate to -19 points. However, the data cleared of the seasonal factor smoothed the sharp drop and showed a decrease only to -15 points. Lack of positive changes in the dynamics of the demand increased dissatisfaction with its volumes again: 49% of "below the norm" assessments

was received; the year's best result (41%) was registered in April. The dynamics of forecasts of the demand did not suggest optimism, either. The initial data got worse by 11 points, while that cleared of a seasonal factor, by 7 points and became negative again. In industry (according to all the data), expectations of a drop in sales prevailed over forecasts of their growth.

Following the demand, the dynamics of output dipped in October, too. The initial rate of a change in the index fell to -7 points. In the past three years, a more intense rate of decrease was registered only in January 2010, January 2011 and January 2012. Clearing of a seasonal factor made the rate of decrease in output in October comparable with the results of June-July 2012 when the worst values of the index were received from the mid-2009.

Output plans underwent explicit negative changes, too: the initial data lost 17 points and became negative, while that cleared of a seasonal factor, 10 points, but remained in the positive zone. As a result, explosive growth in optimism in the 3rd quarter (then, the balance of plans rose by 15 points) was replaced by pessimism which was untypically low for October.

In November, the situation of enterprises kept getting worse. The demand was decreasing and its forecasts did not suggest any optimism. The prevailing stagnation of production resulted in a situation where the dynamics of output was more often in advance of that of sales. That situation contributed to accumulation of risks of failure of production and made enterprises subject their output plans to a serious negative adjustment and use a price reduction for promotion of demand.

The negative dynamics of demand and absence of hopes for its revival (particularly, before the national holidays in January) sent sharply downwards the level of satisfaction with current sales. Within a month, the index got worse by 18 points and hit the 32-month minimum.

In November, output growth rates did not change and remained at a zero level. Such situation was registered by surveys since June 2012 and was confirmed later by the official statistics data. Clearing of a seasonal factor did not introduce any particular changes into the initial data and demonstrated preservation of output growth rates for six months running in the range of from -2 points to +2 points. The stagnation of output in Russian industry continued. Unfortunately, that stagnation was fraught with more serious consequences which were difficult to spot on the basis of the official statistical data.

They included advanced growth in output changes as compared to the dynamics of demand in it. In November, the share of enterprises where changes in output were ahead of changes in demand amounted to 31%, though in 2012 that index was in the range of 12% to 29%. Thus, the apparent stagnation of output contributed to accumulation of risks of future failure of production when enterprises were required to bring their output in harmony with demand in their products.

The first evidence of such harmonization could be found in output plans in November. Within a month, the initial plans fell by 15 points straight and appeared to be the worst ones in the 2010–2012 period; they surpassed even traditionally bad forecasts of December. Clearing of a seasonal factor showed a decrease of only 4 points, but to the worst values since the mid-2009 (if a dip of June 2012 is not taken into account). As a result, in November 2012 correlation between output plans and forecasts of demand amounted to 80%, which is the record in the 2009–2012 period. In November 2008, that index rose to 83%, while in December, to 88%.

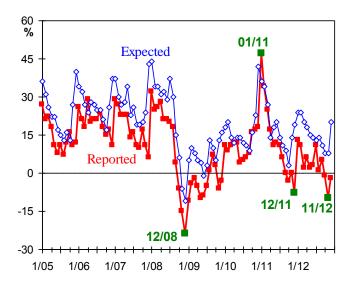


Fig. 15. Changes in selling prices (balance = % growth - % decrease)

Another measure which was aimed at ensuring the balanced demand and output was enterprises' prices. In November, the industry switched over from the minimal price rises (normally, in the range of from +2 points to +6 points) to a radical price reduction (see *Fig. 15*). Within a month, the balance fell to -10 points and hit the absolute minimum in the 2009–2012 period, that is, there was no such a dramatic drop in selling prices from December 2008 when the industry was in the midst of the current crisis.

The year 2012 ended up quite unsuccessfully for the industry. Weakening of the demand made enterprises review assessments of it and switch over to explicit reduction of output and prices, but retain control over stocks of finished products. However, workers kept quitting the industry due to low wages and salaries, while investment plans were getting worse.

The dynamics of demand on industrial produce remained negative till the end of 2012. The initial data showed that the rates of drop in sales in December 2012 attained the four-year maximum for that month. Clearing of a seasonal factor (as in July 2012) brought the value of the balance to the 42-month maximum (that is, the worst value in that case). According to all the data, the situation in the Russian industry as regards sales was getting worse. The above conclusion was confirmed by enterprises' assessments of current volumes of the demand. In December, the share of normal assessments fell to 40% and turned out to be the 33-month minimum. In the Russian industry, in November-December losses of satisfaction with sales amounted to 12 p.p.

As a consequence, in December the industry reported a dramatic drop in the rates of change in the output. The initial balance lost 15 points straight, fell to -18 points and became the worst value of the month in the 2009–2012 period. Clearing of a seasonal factor showed a decrease in the balance from the symbolic -2 points to the explicit -9 points. So, after remaining at the stagnation level ($-2 \dots +2$) in June-November, the rate of change in output showed a tangible drop in December. However, slowdown of the dynamics of output permitted the industry to retain under control the stocks of finished products and improve the balance of their assessments by 4 points by means of reduction of the share of the "above the norm" answers. In a situation of weak demand, the industry had to slow down not only output growth, but

switch over to price reduction. For two months running, the absolute and most dramatic price reduction for the end of the year in the 2009-2012 period was registered by surveys.

In December 2012, the balance of investment plans dropped by 10 points and hit the 3-year minimum. A similar drop in investment plans (by the value) was registered late in 2011, however, the balance was restored as early as January 2012. Recovery from the latest drop of last December is unlikely to be as fast as a year ago.

Lending to Russian Industry 2012

According to assessments of enterprises, in 2012 bank lending to the Russian industry underwent small negative changes. Though availability of loans to industry changed within narrow limits (from 68% to 72%), the average annual value of the index amounted to 69% as compared to 72% in 2011. The average minimum rate offered by banks increased in industry as a whole from 12.0% per annum in January to 12.8% and 12.9% in October 2012 and January 2013, respectively. Growth in interest rates was registered by all the industries, except for the light industry, and all the size groups of enterprises. However, lack of loans restrained output growth with only 3% (three!) of enterprises and was second to last in the rating of industrial growth limitations. It is to be noted that that the restraining effect of that factor on the industrial production was the minimum one from the 2nd quarter of 2011.

Early in 2012, the conditions of lending to industry were characterized by conflicting trends. On one side, reduction of the average minimum interest rate offered by banks on ruble loans definitely stopped. After amounting to 11.8% in October 2011, that index demonstrated symbolic growth having increased to 12.1% in the next three months. On the other side, general assessments by enterprises of lending conditions showed some easing in January. The aggregate assessment of availability (normal + above the norm) rose by 5 points to the 7-month maximum.

In February-April, conditions of lending to industry did not undergo any particular changes. The aggregate availability of loans ("above the norm" + "normal") remained at the level of 72% with the average minimum rate offered by banks being in the range of 12.1% to 12.3%. With the normal availability of loans, the rate amounted to 11.6%, while in October 2011 it was estimated by enterprises at 11.0%.

In the beginning of the year, enterprises' lending plans did not undergo any principal changes, either. The industry reported about plans of moderate growth in borrowings. In 1^{st} quarter of 2012, the balance of that index amounted to +14 points and did not change as compared to both the 4th quarter of 2011 and the 1st quarter of 2011.

Generally, in the 1st quarter of 2012 banks stopped tightening lending conditions which enterprises reported about in the 2nd quarter of 2011. In that period, after attaining of the postcrisis maximum of satisfaction (78%) in the 2nd quarter of 2011 the index fell to 70%, while the lowest level was registered in December and amounted to 68%. In the 1st quarter of 2012, the most reasonable lending terms were offered to the iron and steel industry (77% of satisfaction). Almost the same level of satisfaction (75%) was observed in engineering.

In the 2^{nd} quarter of 2012, the conditions of lending to the Russian industry did not undergo principal changes as compared to the previous three quarters (see *Fig. 16*). In that period, the aggregate availability of loans ("above the norm" + "the norm") was in the range of 70% to 72%. The most comfort terms of lending were offered to the food industry where the aggregate availability of loans returned to the level of 80%. The average minimum rate offered by banks in that industry amounted to 12% per annum.

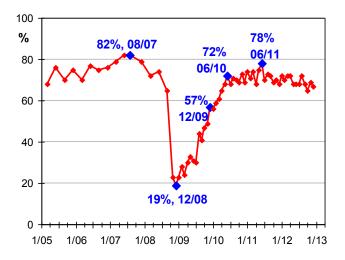


Fig. 16. The share of enterprises with the "above the norm" and 'norm availability of loans

The opposite situation was observed in the iron and steel industry. From the beginning of 2012, banks toughened conditions of lending to that industry by 18 points: if in the 4th quarter 2011, the aggregate availability of loans amounted to 83%, in the 2nd quarter of 2012 it fell to 65%. Within the previous four quarters, the rate in that industry rose from 9.0% to 10.3%. As a result, the iron and steel industry was rated the third as regards availability of loans, though from the mid 2009 till the end of 2011 it enjoyed banks' utmost confidence. Availability of loans to the light industry was the worst one; only 30% to 40% of enterprises had normal accessibility of borrowed funds in the previous seven quarters. However, in the 2nd quarter of 2012 banks made lending easier to that industry by reducing the average minimum rate to 13.4% after it was in the range of 13.9% to 14.2% in the previous five quarters.

However, availability of loans in that industry in general correlated well with the level of ability to service loans in the industry: in the light industry that index amounted to 35%. However, detailed calculations showed that in light industry availability of loans correlated with ability to service them only with 68% of enterprises, while 11% of enterprises believed that they had a reduced accessibility of borrowed funds as compared to the ability to service them. On the contrary, 21% of enterprises of the light industry assessed banks' policy as a risky one as the latter provided access to loans to such an extent that it exceeded enterprises' ability to pay for them.

Precision of banks' lending policy was the highest in the food industry, chemical industry, wood industry and nonferrous industry where it corresponded 80% or more to enterprises' ability to repay loans. The lowest correlation between the availability of loans and ability to service them was registered in the 2^{nd} quarter in building industry (53%). In that industry, banks more often (in 38% of instances) reduced availability of loans as compared to enterprises' actual creditworthiness.

In the 3^{rd} quarter of 2012, it was expected that the Russian industry's need in loans would decrease. In the 2^{nd} quarter of 2012, the balance of forecasts of that index amounted to +9 points after remaining in the range of +12 points to +14 points in the previous five quarters. The strongest demand in loans was possible in the nonferrous industry and building industry where the balance of forecasts amounted to +20 points. In other industries it amounted to +8 points to +9 points.

In the 3rd quarter, availability of loans to the Russian industry was getting worse. First, average availability of loans was preserved at the level of the 2nd quarter (69%), but only thanks to upturn of the index in August, otherwise, it would have lost 2 points. Second, the average minimum rate offered by banks rose to 12.5% points after 12.3% in the 2nd quarter. In September, loans were extended at the rate of 12.6% per annum in rubles. Third, growth in interest rates on loans took place for all the industries. (see Fig. 17). For the second quarter running, the highest rates on loans were offered to the building materials industry (14.2% and 14.3% per annum). As regards that index, the light industry moved to the second place (13.8%). Banks were prepared to provide loans to the food industry and engineering at the interest rate of 12.6% and 12.2%, respectively. Fourth, a similar situation was observed in respect of enterprises of different sizes, too. A decrease in interest rates was registered in none of the groups; only large enterprises (251,000-500,000 workers) reported about stabilization of a loan supply at the level of 13.1%. Interest rates set for small and mid-sized enterprises rose to 15.0%, while those for very large enterprises (501–1000 workers) and the largest enterprises (over 1,000 workers), to 12.1% and 10.6%, respectively. Thus, banks' priorities in lending to enterprises of different sizes did not change.

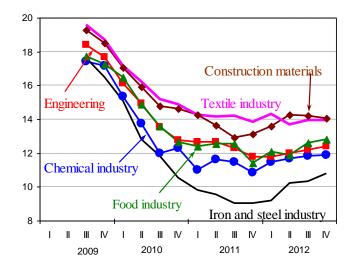


Fig. 17. Average minimum rate offered on loans in rubles in different sectors, quarterly average, % per annum

Early in the 4th quarter, the aggregate availability of loans decreased by 3 points and hit, as a result, the 30-month minimum. However, in November banks' confidence in industry returned to the level of 69% which is typical of the second half-year. In November, the average minimum interest rate offered to industry was equal to 12.6% and preserved the sectorial specifics which is typical of the Russian industry in general.

In the 4th quarter of 2012, the ability of enterprises to repay outstanding loans did not change and amounted to 87%. Within a year, that index demonstrated a surprising stability by remaining in the range of 86% to 88%. At the beginning of monitoring of that index in 2009, only 61% of enterprises believed they were able to service the outstanding loans, while during that year the share of such assessments rose from 52% to 68%.

Personnel Problems of the Russian Industry in 2012

In 2012, the Russian industry had to face new problems on the labor market. Early in 2012, hiring of personnel was short-lived and was less intense as compared to the same period of 2011, while the rate of lay-offs which continued throughout the second half-year surpassed the index of the previous post-crisis years. However, slowdown of industrial growth reduced the severity of personnel shortages to the zero balance. The main reason for which workers quitted enterprises was low wages and salaries.

The year 2012 traditionally began with continued reduction of the number of workers engaged in industry. The balance (rate) of changes in the number of personnel lost within a month another 8 points and fell to the two-year minimum. It is to be noted that explicit reductions began in industry from October 2011 and reached their peak level only in January. However, it was in accordance with enterprises' plans which showed as early as September the intention of enterprises to switch over from hiring of workers to reduction of their number. In December 2011, those plans were the most resolute ones and only 5 points short of the post-default record registered in January 2009. However in January 2012, hiring plans traditionally rose and the balance increased straight by 31 points which is the record change in that index in the entire period of monitoring from 1993.

However, hiring plans could encounter the assessments of personnel redundancy/shortages due to the expected changes in the demand. In January 2012, those assessments underwent serious changes. If within the previous six quarters the "less than sufficient" evaluations prevailed in industry, by the beginning of 2012 the share of those evaluations became equal to that of the "more than sufficient" ones and the balance of evaluations became zero, that is, by the beginning of 2012 enterprises got rid of personnel shortages. As those developments took place in a situation where the number of workers was reduced, it can be supposed that liquidation of the problem of personnel shortages was related not to a change in the number of workers, but revision (a negative one) of the prospects of exit from the phase of a sluggish crisis.

In February, the industry switched over from large-scale lay-offs of personnel to hiring of workers (see *Fig. 18*). However, the rate of hiring was rather low (the total +3 points) after (-11 points and -17 points in December 2011 and January 2012, respectively), but the very fact of a turning point in that negative trend which was formed in the second half of 2011 was important. In addition to the above, it was also important that lay-offs stopped and hiring of personnel began in a situation where enterprises were getting rid of the problem of personnel shortages which had prevailed for a year and a half.

In March-April, enterprises increased somewhat the rate of hiring of personnel. It is to be noted that expansion of hiring in industry took place in a situation where labor shortages disappeared. For two quarters running, the balance of assessments of personnel due to the expected changes in demand was zero (the share of "more than sufficient" answers was balanced by that of "less than sufficient" answers) with the share "sufficient" answers being equal to 75%, that is, the industry in general was quite supplied with personnel to meet the expected growth in demand and supply. For that reason, preservation of the rate of hiring of personnel attained in the first few months of the year appeared highly unlikely to enterprises: hiring plans started to lose optimism and in May they were successfully realized.

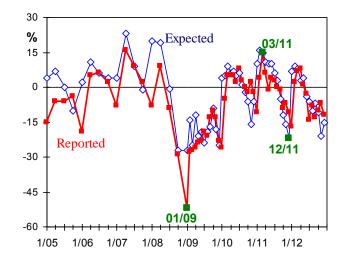


Fig. 18. Changes in employment (balance = % growth – % decrease)

In June, the industry as a whole almost maintained the approximate parity between hiring and lay-offs of workers. But the situation differed by sectors. Hiring at an intense rate took place only in building materials industry which fact can be explained by a seasonal revival of production, while other sectors laid off personnel at different rates (from -3 points to -15 points). Hiring plans in June lost small optimism of the first months of the 2nd quarter and pointed to enterprises' willingness to preserve the existing number of workers in the next few months.

However, in July the industry switched over to large-scale lay-offs. Within a month, the rate of lay-offs (the balance) increased by another 12 points and amounted to the values which were comparable to the worst values which are normally registered in January. Clearing of the seasonal factor showed that the rate of lay-offs in June 2012 was the highest one in the past three years. However, the number of workers thus achieved suited enterprises well; 78% of enterprises believed it was adequate to the expected volume of demand in output. Hiring plans did not suggest principal changes in enterprises' HR policy: enterprises had to go ahead with lay-offs.

In August, the industry actually kept losing workers but at a smaller rate than in July. It is to be noted that as before enterprises' plans did not suggest changes in the HR policy of the industry. In August, the initial balance of forecasts fell by another 6 points, while that cleared of the seasonal factor, by 4 points. Enterprises expected that reduction of the number of workers would continue and, more probably, at a higher rate.

The end of the 3rd quarter was characterized by growth in the rate of reduction of workers in industry. The growth rates increased by 3 points as compared to August and pointed to the fact that large-scale lay-offs in industry continued; according to the surveys they lasted during the entire 3rd quarter of 2012. However, it was exactly the situation which was forecasted by enterprises. In October, the Russian industry kept losing personnel, while the forecasts of changes in employment in October attained the level of November in the 2009–2011 period. Industrial enterprises believed that they would lose workers at the end of the year, as well.

Such a situation ceased to be acceptable to enterprises. First, in the second half of 2012 labor shortages became the factor behind slow-down of output with 30% of enterprises. Second, late in 2012 enterprises became less supplied with workers. In industry, the number of enter-

prises with labor shortage explicitly increased as compared to those with redundant workforce (see *Fig. 19*).

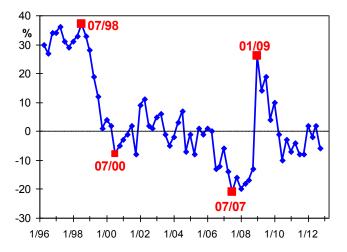


Fig. 19. Balance of assessments of personnel (balance = more than sufficient - less than sufficient)

The main factor is sooner related to raising of wages and salaries in other sectors of the economy, primarily, in the public sector. As a result, the level of remuneration in industry (with working conditions taken into account) ceased to be attractive to potential workers. In October 2012, managers of enterprises started to understand that: for the first time since April 2009 the share of unsatisfactory assessments of the level of remuneration of both workers and experts increased. Earlier, that index fell from 59% to 26%. In October, the share of the "below the norm" answers amounted to 33%.

In November, the industry managed to slow down reduction of the number of workers, but at the level which was critical even for stagnation. Forecasts in October showed that enterprises were less able to correct imbalances between employment and demand. The forecasts in November got worse by another 9 points. The industry did not expect principal changes in solution of their personnel-related problems.

In December, the situation with personnel in industry did not change, either. Reduction of employment continued at a stable rate from July 2012. During the second half-year, the balance of changes in the number of workers (the rate of change) was in the range of -13 points -8 points, while a year ago in the same period it decreased from +3 points to -17 points. In the 4th quarter of 2012, the highest rate of reduction of workforce took place in wood industry (the balance of -17 points), iron and steel industry (-15), light industry (-13) and engineering (-11). Hiring of personnel was registered only in power industry.

The main factor behind lay-offs in industry was low wages and salaries due to which workers had to quit enterprises on their own initiative. Such was the opinion of 46% of managers of enterprises. The second most important factor (39%) is lay-offs on the initiative of workers due to a pensionable age. It is to be noted that only in 7% of cases workers of pensionable age were laid off on the initiative of enterprises. The above factor is rated the last in the rating of the main reasons for lay-offs. Enterprises more often (in 23% of cases) fired workers who breached labor and production discipline, while redundant workers were laid off only by 15% of enterprises.

Consequences of Labor Shortages in the Russian Industry

In the 4th quarter of 2012, industrial enterprises surveyed by the IEP reported that they lacked workers due to expectations of changes in demand. For the first time in the past year, the balance of assessments became a negative one, that is, the number of the "less than sufficient" answers happened to be 10 p.p. higher than that of the "more than sufficient" answers. A similar situation took place in industry in the second half of 2010 and during 2011. At that time, within seven quarters the balance of assessments was in the range of -10 points -4 points, while in the 2007–2008 period the balance fell to -20 points..-17 points, which fact is the evidence of the largest labor shortages in industry in the past 17 years. At the first glance, the value of the index of the end of 2012 is not beyond the limits of the range which is typical of the post-crisis years. However, if the dynamics of demand and output is taken into account evaluation of the situation starts to change. Late in 2010 and early in 2011, the industry reported about the highest post-crisis growth rates of demand and output; the IEP optimism index amounted to the post-crisis maximum. It seemed that the eventual exit from the crisis was not far away. Late in 2012, the situation was quite the opposite: demand and output either stopped growing or decreased and the optimism index was close to the post-crisis minimum. Forecasts of change in indices were sooner pessimistic, rather than optimistic. The industry was definitely losing workers and confidence that it would be able to have sufficient workforce to ensure even stagnating volumes of output.

So, the Russian industry encountered again and in a new situation the problem of labor shortages, and due to the above it is worthwhile to make a comprehensive assessment of the consequences of a similar situation.

Our analysis will be based on the outputs of the IEP surveys of enterprises. Such surveys create conditions for receipt of first-hand and trustworthy evaluations of labor shortages as informal and long-standing relations between the IEP and respondents permit the former to ask them direct questions proceeding, primarily, from the common sense, while enterprises can answer those questions without reserve because they do not have to fear that they may provoke the authorities' discontent or cause damage to their business reputation with potential investors. The whole situation with the latest labor shortages in 2012 is supplemented with comparable results received in summer 2008 (that is, the industry's pre-crisis peak level) and summer 2011 (when expectations of a final exit from the 2008-2009 crisis were strong in the industry). The analysis is made comparable due to the fact that the questions asked in 2008, 2011 and 2012 were absolutely identical.

In 2012, the most large-scale consequence of labor shortages in the Russian industry was reduction of output quality: 42% of enterprises reported about that (see *Fig. 20*). In 2008, such consequences were more dramatic (46%), which situation can be explained, primarily, by the fact that the industry experienced severe labor shortages (the 2008 balance of assessments fell to -20 points against only -10 points in 2012), while the most moderate negative effect on the quality of the output was produced by labor shortages in 2011. But even then a third of industrial enterprises had to sacrifice the quality; due to that factor the above consequence of labor shortages remained on the top of the list.

Due to labor shortages, the quality of the domestic produce of the engineering industry declined more often and steadily. In 2012, 49% of enterprises in that industry reported about that against 54% in 2008, while in 2011 such consequences were specified by 43% of enterprises, thus yielding formally the first place in the industry to another consequence caused by labor shortages, that is, infeasibility to increase the output even with orders being available (45% of mentions). The aggregate result of the three-year monitoring showed that the quality of engineering products suffered more often than that of products of other industries: 49% (half of the industry!) against 31%–37% (one-third!) in other sectors. So, the industry which is to be the flagship of the real sector in an effort to "break with the oil needle" and promote Russian competitive products on the global market admits the fact of weakening of its positions for reasons which are mainly within the competence of the government (demographic policy and proprieties in the sphere of higher and specialized secondary education). In other sectors, reduction of the quality of output due to a lack of skilled workers was less dramatic and/or stable.

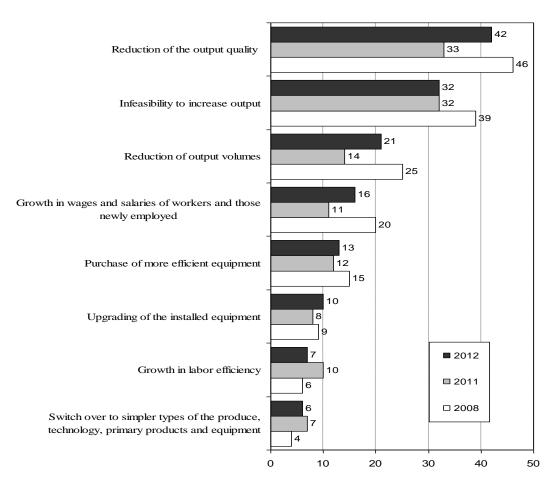


Fig. 20. Consequences of labor shortages in the Russian industry in 2008, 2011 and 2012, %

The intense dynamics of the effect of labor shortages on the quality of output was observed by the forms of ownership. During the monitoring, state-run enterprises managed to reduce the negative consequences of that factor: if in 2008 and 2011 reduction of the quality was mentioned by 55% and 48% of enterprises, respectively, in 2012 it was stated by only 9% of plants of that sector. Within a year, a fivefold reduction in the impact of labor shortages on the quality of products took place! During the past year, on the contrary, enterprises of other forms of ownership had to use more extensively the quality-reduction practice due to labor shortages: open joint-stock companies – an increase of 10 points in the above practice (to 43%), closed joint-stock companies – an increase of 5 points (to 37%) and limited liability companies – an increase of 24 points (up to 57%).

The second place in the general rating (and in each year of monitoring) of consequences of labor shortages in the industry was occupied by the factor of infeasibility to increase output even with availability of orders. The above consequence was widespread in the engineering and light industries where it was mentioned by over 50% and about 40% of enterprises in 2008 and 2012, respectively. Growth in output was hindered in other sectors less often due to the above factor: maximum 38% of enterprises in iron and steel industry in 2008 and 24% of plants in the building industry in 2012. Throughout the entire period, the most moderate effect of labor shortages on output was observed in food industry where it was mentioned by only 15% to 19% of enterprises.

More serious consequences of labor shortages for the output dynamics – not only slowdown of growth, but decline of production in absolute terms – were also widespread in the Russian industry. In the past three years, that effect of labor shortages was stated on average by 20% of enterprises, while in 2008 and 2012, by 25% and 21% of plants, respectively. Within the entire period of monitoring, the absolute leader as regards that factor was the light industry where half of enterprises in 2008 and 2012 and one-third of enterprises in 2011 reported about output reduction due to labor shortages. In other sectors, a similar reaction amounted at most to one-third of enterprises in 2008, while in 2012, on average, to only 19% (with the light industry not taken into account). Thus, in addition to the existing problems in the light industry a decline of output is a factor which is extremely widespread there due to labor shortages.

State-run enterprises had more rarely than others to reduce the output due to the above factor: in 2008 there was 15% of such reports, while in 2011 and 2012, there were 16% and 12%, respectively. In summer 2008, enterprises of other forms of ownership resorted to output reduction in absolute terms in 20%–25% of instances, reduced the pressure of labor shortages on output to 13%–18% in 2011 and reported about that factor's growth to 17%-50% in 2012.

Growth in labor remuneration as a consequence of labor shortages (and a measure to get rid of them) was rated the fourth by industrial enterprises despite the fact that such measures by employers are considered a widespread reaction to labor shortages.

A direct survey of managers of enterprises showed that in the Russian industry wages and salaries were increased only by 20% and 11% of enterprises before the 2008 crisis and at the stage of the exit from the crisis in the mid-2011, respectively, as well as by 16% of enterprises in the period of slowdown of the exit in conditions of new labor shortages that prevented to ensure even the stagnating output. Thus, the "remuneration" reaction to the labor shortages took place 2.3 times to 3 times more rarely in the Russian industry than the most popular and far less pleasant one – reduction of the quality of the output.

In an effort to liquidate labor shortages, the remuneration factor was utilized more often in the food industry; 28%, 14% and 36% of enterprises reported about that in 2008, 2011 and 2012, respectively. In 2012, over 30% of enterprises of the building materials industry and the iron and steel industry were prepared to utilize the factor of remuneration growth, as well.

Measures aimed at raising of labor efficiency were rated, on average, the fifth during the monitoring and actually ended up the list of measures which domestic manufacturers were prepared to take in order to cope with labor shortages. The most popular (widespread) measure in that area consisted in purchasing of more efficient equipment; 15%, 12% and 13% of enterprises reported about that in 2008, 2011 and 2012, respectively. The leader as regards

that reaction to labor shortages was the engineering industry (19% of enterprises which buy on average such equipment) and the light industry (over 17%). On the contrary, only 6% and 7% of enterprises were prepared to incur such expenses in the chemical industry and wood industry, respectively.

It is to be stated that only one-tenth of the industry dealt with upgrading of the installed equipment as a response to labor shortages. Almost in all the sectors, the level of that reaction in 2008, 2011 and 2012 was on average the same and within the range of 9% to 12%; only in the chemical industry and light industry it amounted to 4% and 7%, respectively.

But, in the final analysis, the number of Russian industrial enterprises which rely on growth in labor efficiency is even smaller: the average level of that reaction in the industry amounted only to 8% and rose maximum to 10% in 2011. The highest expectations of growth in labor efficiency as a response to labor shortages were registered in the iron and steel industry and light industry, but mainly in 2011 and 2012.

The outputs of the IEP surveys showed that in the Russian industry there was always a fairly large segment of enterprises which were able to cope with labor shortages without resorting to reduction of quality and output volumes and raising of wages and salaries. During the monitoring period, only one-third of enterprises assessed their abilities as such.

In 2008, the number of such enterprises was the smallest one (22%) which fact can be logically explained by overheating of the Russian economy and, as a consequence, acute labor shortages. Early at the stage of the exit from the crisis the industry rated above all its ability to meet the demand in additional workforce at the expense of its own reserves and on the labor market – the number of such enterprises amounted to 38% in 2011. In 2012, slowdown of the economy and industry reduced enterprises' readiness to solve its personnel-related problems to 29%.

Enterprises' ability to solve personnel issues is determined sooner by the level of remuneration and the potential to use that factor to attract new workers on the market. Industries which demonstrate the highest ability to use the remuneration factor in solution of their personnel issues showed that they were able to solve those problems by means of their own reserves or through attraction of workers from the market. In 2012, 35% of enterprises in the food industry, 25% of enterprises in the building industry and 24% of enterprises in iron and steel industry reported about that. However, the need to increase remuneration does not exist in all the sectors. So, in the chemical industry 53% of enterprises declared that they had sufficient workforce or were able to find more workers. In such a situation, the need to increase wages and salaries for solution of their personnel issues is the minimum one (11%) in that industry. It is to be noted that a similar situation (a high level of provision with the personnel and low intentions to increase wages and salaries) took place in the industry throughout all the years of monitoring.

Engineering demonstrates the rather modest potential (intensions) to use a pay rise factor in solution of personnel issues. In 2008, with a 10% ability to solve their personnel issues only 20% of engineering plants increased wages and salaries. In 2011, labor self-sufficiency rose to 26%, while the need to use the remuneration factor fell to 14%. In 2012, the situation got worse: only 21% of enterprises were sufficiently provided with personnel (or were able to find workers), while only 13% of plants were prepared to increase wages and salaries. As a result, as it was stated above, the engineering industry had to reduce the quality of its produce.

A unique dynamics of solution of personnel issues without harm to output (in quantitative and qualitative terms) and the need of investment was demonstrated by state-run enterprises. If in 2008 only 9% of plants of the state industrial sector had own personnel reserves or was able to hire new workers, in 2011 there was 32% of such enterprises which situation appears quite normal as compared to enterprises of other forms of ownership which assessed their potential in the range of 24% to 45% in 2011. However, the result of 2012 turned out to be absolutely unique: the potential to meet its requirements in personnel rose in the state sector to 73%! The need in additional (potential) utilization of the remuneration factor decreased from 23% in 2008 to 13% and 6% in 2011 and 2012, respectively. With wages and salaries in the state industrial sector becoming so high as compared to neighbor-enterprises and a work load being stable thanks to budget financing, personnel issues in that sector are solved better than anywhere else and require the minimum effort to maintain the status quo.

Thus, the long-term monitoring of personnel issues in the Russian industry shows that the most widespread reaction of enterprises to labor shortages is reduction of the quality of output, rather than growth in wages and salaries. It is to be noted that the quality reduction factor is the most widespread and stable one in domestic engineering – an industry whose degradation means the degradation of this country. Decrease in output volumes (or slowdown of its growth) turned out to be a fairly widespread reaction of the domestic industry to labor shortages. Particularly unpleasant is the fact that those developments took place in 2012 when the industry failed to get out of stagnation. Growth in wages and salaries which was much spoken about in connection with labor shortages took place at best at 20% of enterprises and was rated the fourth by the Russian industry in the rating of consequences of labor shortages, while growth in labor efficiency virtually ended up that gloomy rating.

However, there is a sector in the Russian industry which managed by the year 2012 to bring virtually to naught reduction of output quality due to labor shortages, reduce output volumes more seldom than others, do without upgrading of the equipment under the pressure of labor shortages, refrain from raising workers' wages and salaries and at the same time have a unique potential to solve its personnel-related problems. That sector is state-run enterprises which together with the state-financed sector deprive the rest of the industry of personnel and, thus prevent it from prospering.

Such a reaction of industrial enterprises to labor shortages makes one be cautious in approaching the data on reduction of the number of the unemployed in Russia and should contribute to adjustment of the government policy in the sphere of the higher and specialized secondary education so that correct priorities in training of personnel for the needs of the economy could be set.

Assessment of the Government Anti-Crisis Measures

The prevailing threat of the second wave of the crisis and the governments' efforts to prepare for it permitted in 2012 to evaluate thoroughly (not in a hasty way as it was done late in 2008) the efficiency of the government's anti-crisis package and, particularly, do it in terms of the Russian industry which the government supported in the first wave of the crisis and would not definitely let down if the second one occurred. For that purpose, in July 2012 the IEP asked managers of industrial enterprises to specify the most efficient measures of support of their enterprises. The survey in July became the fourth stage of monitoring of efficiency of the government's anti-crisis measures. The first similar survey was carried out late in 2009, the second one – late in 2010, while the third one – in September 2011 when fears of the second wave of the crisis became too high. As a result, a unique (as regards duration), reliable and, probably, useful to the authorities array of evaluations of efficiency of the government's measures and plans during the crisis which began in 2008 was accumulated.

It is to be noted that the 2012 survey differs fundamentally from the 2009 and 2010 stages of monitoring by the fact that it precedes the potential application (development) of the government's anti-crisis measures and, as a result, permits to take into account preferences of "the rescued" themselves as early as at the stage of development of those measures. Another important specifics of that survey (as well as all the previous surveys) consisted in the fact that it took into account opinions of hundreds of managers of enterprises of different sizes from all the sectors and locations and was not limited to the opinions of those who had an opportunity to uphold their interests at corridors of power. The IEP's respondents evaluated the state of things in the industry not by the Rosstat's bulletins, but more profoundly (at least at their enterprise and sector). It was those mangers, their deputies and heads of business divisions who experienced as early as November 2008 the power of the first strike of the crisis, witnessed how slowly and at the same time hastily the government was trying to smooth its consequences and as early as 2009 understood that the exit from the crisis - not aggravation of it - began. In 2012, in industry expectations of the second wave of the crisis arose again which situation definitely contributed to development of the plan of anti-crisis measures. So, coordination of actions by the government and enterprises may help them both to overcome the second wave of the crisis if it occurs.

According to the survey of 2012, the most welcome measure for the industry will be reduction of a tax burden (see *Fig. 21*). The above measure is expected by 73% of enterprises which figure is the absolute record: in the past four years none of the measures has been so popular in the industry. It is to be noted that in 2011 the preference of a tax reduction amounted only to 44%! Moreover, fiscal anti-crisis measures turned out to be the only ones whose popularity within the incomplete year of expectations and preparations rose. In the above period, all other possible government measures were regarded as less desirable by the industry.

What did happen to enterprises' approach to taxes which the government collects from the industry and uses at its own discretion? As no principal changes in taxation of the industry took place between the two surveys and enterprises were sooner adapting to the existing system of taxes, such a surge can be determined more likely by assessment by taxpayers of the lines and efficiency of the government's budget spendings. Actually, if before the second wave of the crisis the government set as priority a reduction of costs and, particularly, at the expense of labor remuneration, in the period from September 2011 to July 2012 the authorities actively increased budget expenditures for obvious reasons - it was an elections period on pay rises for law-enforcement officers and other public sector employees. More anger could have been provoked by ambitious state projects (building of bridges and stadiums, reconstruction of theatres and other) whose cost estimates steadily increased several times over in a situation of an ongoing public discussion of the percentage of kick-backs. It is to be noted that there were no hopes for real reduction of the tax burden and the authorities explicitly stated that at the end of 2011. So, the industry's overwhelming voting for adjustment of the fiscal policy should be sooner regarded as a call to the authorities to moderate their appetites, rather than a hope to see real steps in that area.

In 2012, limitation of growth in regulated tariffs on railway carriage, gas and heating was rated second by the industry; 60% of enterprises looked forward to see such measures (68% and the first place in 2011). During the first wave of the crisis, the efficiency of those measures was rated positively by 43% and 24% of enterprises in 2009 and 2010, respectively.

Higher popularity of the antitrust component of the anti-crisis package was probably related to unwillingness of natural monopolies to deal with the crisis and adjust their ambitions.

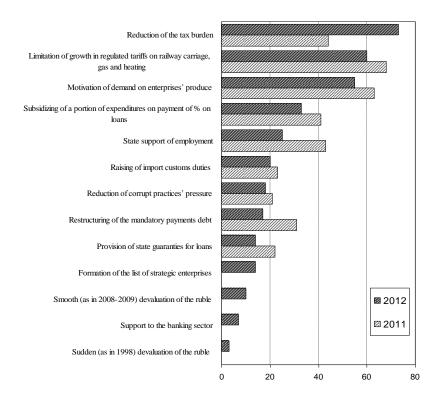


Fig. 21. Preference of the government's anti-crisis measures to the Russian industry in case of the second wave of the crisis, %

In 2012, demand motivation measures received almost the same support from the industry (55%). During the first wave of the crisis, evaluation of such government measures was more moderate: in 2009 and in 2010 those measures helped 19% and 17% of enterprises, respectively. A sudden (threefold!) surge of expediency to motivate demand at the expense of budget funds was related to a stable negative dynamics of industrial produce sales in 2012 and absence of actual hopes for their revival at the expense of private demand. In such a situation, the government could use more efficiently budget funds on support of at least individual sectors of industry.

According to enterprises, other possible government measures will be less efficient in case of the second wave of the crisis.

Only one-third of the industry would like to receive subsidizing of a portion of expenses related to payment of interests on loans (41% in 2011). As compared to the actual efficiency of that measure in the 2009–2010 period at the level of 20%, 1.5- 2 fold growth can be explained by a hope for priority utilization by the government of that particular method of support of lending to the industry and not by simple pumping of cash to the banking sector with calls not to scale down lending to the real sector. In 2012, the latter measure was supported only by 7% of enterprises (the second to last in the rating). However, in 2009 the government support to banks was rated by the industry as the second to last. At present, 14% of enterpris-

es expect state guarantees for loans which situation is comparable with the level of positive assessment of that measure in 2009 (11%).

In 2012, government measures related to support of employment were rated the fifth by the industry. In case of the second wave of the crisis they may be required by a quarter of enterprises. Though as early as 2011 the popularity of such measures amounted to 43%, the positive assessment of application of them gained 49% and 41% in 2009 and 2010, respectively. A two-fold decrease in demand in government anti-crisis measures in the labor market can be explained by a number of reasons. First, during the second wave of the crisis a possible drop in demand and output will sooner be of a smoother nature and require no large-scale lay-offs. Second, the continued stagnation of demand permits enterprises smoothly and less painfully to solve even now the employment issues and get better prepared for the second wave of the crisis. Third, achievement of the optimal number (in the current situation) of the employed at enterprises is ensured partially not by administrative measures, but through a natural way.

Protection of the domestic market with customs import duties may turn out to be advantageous only to 20% of enterprises and the above assessment coincides with evaluation of efficiency of the measure in question during the first wave of the crisis. It is to be noted that in 2012 import hindered output growth with 26% of enterprises. Another well-known measure of protection of domestic manufacturers – the devaluation of the ruble – is actually far less popular with the industry. In 2012, only 10% of enterprises believed that smooth depreciation of the ruble could help them go through the second wave of the crisis. The number of supporters of dramatic (as in 1998) devaluation is even smaller (only 3%). Within a year, the views on devaluation did not virtually change in the industry. But in 2009, the efficiency of the above measure was recognized by 20% of enterprises.

Reduction of pressure from corrupt practices in operations with supervising and tax authorities, as well as in state procurements will be more advantageous to the industry than devaluation of the currency. Such is the opinion of 18% of enterprises. In 2009, the government's anticorruption measures (but, probably, to a greater extent – reduction of flows of bribes and kickbacks due to dramatic slowdown of business activities in the most bribe-intense spheres of the economy) were positively rated by 9% of enterprises.

The favorite creation of the authorities – formation of the list of strategic enterprises – is supported by only 14% of enterprises. In 2009, similar target measures were approved by 11% of manufacturers.

Summing up the results of the four-year monitoring of the efficiency of anti-crisis measures of the Russian government, the following can be stated. First, the industry is in no way indifferent to the government's measures. If the most required measures at present are supported by 73% of enterprises, the most unpopular ones, by 3% to 7%. It would be highly unwise to ignore such a dispersion of values. Second, priorities and, consequently, expenses related to support of the industry during the first wave of the crisis need adjustment. There is no point to "get ready for the past war" as only bad generals do. Third, a long period of expectations of the second wave of the crisis permitted the industry to work out and even partially implement its own anti-crisis plan of actions which situation could not but effect evaluation of the expected government actions.

The Anti-Crisis Package of Russian Industrial Enterprises

Anti-Crisis Measures of the Russian Industry in Case of a New Wave of the Crisis

Expectation of the second wave of the crisis definitely rose in spring and summer 2012. Aggravation of the problems of the euro area and public statements by members of the government on development of the package of anti-crisis measures made the Russian industry get ready for a new wave of the crisis. The expected reaction of enterprises to declining demand in the mid-2012 was revealed by the regular stage of the crisis monitoring – carried out by the Gaidar Institute for Economic Policy – of the sentiments in the industry.

The survey in June 2012 became the seventh stage of the crisis monitoring carried out by the IEP. The first survey took place as early as December 2008 when questions were included in the December questionnaire and dispatched after the IEP industrial optimism index registered a collapse of the Russian industry on November 18, 2008. Later, questions about the actual reaction and expectations were asked in the 2^{nd} , 3^{rd} , and 4^{th} quarters of 2009 and the 1^{st} quarter of 2010. Explicit positive trends of the second half of 2010 and the beginning of 2011 made continuation of that monitoring irrelevant. However, aggravation of the economic situation in August 2011 triggered higher concerns over the second wave of the crisis and the question about the possible reaction of enterprises to crisis phenomena was included for the sixth time in the IEP questionnaire. As a result, at present a unique array of the data – as regards the content and the time period – on the expected and actual reaction of enterprises to the crisis which began in 2008 and is not over yet has been accumulated.

The main (the most large-scale) reaction of enterprises to the second wave of the crisis will be reduced wages and salaries and incomplete work week. In summer 2012, 63% of enterprises reported about that against 68% in autumn 2011 (other anti-crisis measures explicitly yielded in popularity to enterprises' possible economy on the workforce). It seems the industry evidently has an opportunity to carry out that strategy. According to the data of the IEP surveys, in mid-2012 two-thirds of enterprises paid their workers a "normal" – as believed by the management – remuneration. The above result exceeds by 30 p.p. the crisis minimum of the value registered in the 2nd quarter of 2009. The dramatic cuts in wages and salaries will take place in engineering (75% and 78% of enterprises in that industry reported about that in summer 2012 and autumn 2011, respectively). According to the outputs of the two surveys, the building materials industry is rated the second (62% and 86%, respectively); early in summer the above industry experienced revival and for that reason it adjusted its plans in that sphere due to the seasonal factor. The chemical industry is rated the third; in 2011 67% of enterprises in that industry planned cuts in wages and salaries and a switch-over to incomplete work week, against 62% in 2012. The chemical industry is followed by iron and steel industry and light industry with the average level of such plans at 61%–62%. If the second wave of the crisis occurs, cuts in wages in salaries will the least widespread in the wood industry (such plans were declared by 46% and 44% of enterprises, respectively) and food industry (48% and 39%, respectively). Generally, cuts in wages and salaries and incomplete work week will be the most popular reaction in most sectors of the Russian industry. Only in iron and steel industry and food industry the above measures yield the first place to output reduction and costs reduction, respectively.

Other measures of (anti)crisis policy in the sphere of employment are planned more rarely by enterprises.

According to the data of the survey in 2012, only one-fourth of industrial enterprises plan lay-offs. In the composite rating of anti-crisis measures, the above measure is rated the fifth and the sixth in the plans of 2012 and 2011, respectively. It seems fears of labor shortages still prevail in the Russian industry.

Such measure as sending of workers to unpaid leaves is possible at about one-fourth of industrial enterprises (in autumn 2011 nearly one-third of enterprises planned to use that measure). The above measure will be the most widespread in the light industry, where it is included at present in the anti-crisis package by 34% of enterprises as compared to 36% in autumn 2011. In most sectors, such unpaid leaves will be practiced at 21% to 27% of enterprises and only in the food industry and wood industry they will be used in 15% to 11% of cases.

The cost-reduction measure is rated the second in the composite rating of anti-crisis measures. In 2012, 51% of enterprises were prepared to resort to the above measure, against 46% in autumn 2011. It is to be noted that that measure turned out to be the only one whose mention was insignificant, but it increased in 2012 as compared to 2011. In iron and steel industry (69% of mentions), chemical industry (64%), food industry (54%) and wood industry (51%), the cost-reduction measure is rated the first on the basis of the outputs of the 2012 survey.

The output-reduction measure was rated the third by the Russian industry; it is the extent of reduction of output by which the government and experts judge about unfolding of the crisis. Only 43% of enterprises are ready to resort to that measure, though in autumn 2011 similar plans were approved by 54% of plants which situation ensured the second place for that anti-crisis measure. The most dramatic output reduction will take place in the iron and steel industry (56% and 89% of enterprises of that industry reported about that now and in autumn 2011, respectively), building industry (55% and 69%), chemical industry (51% and 56%) and engineering (47% and 63%).

More active marketing and search for new buyers and sales markets will be the fourth most popular measure in the industry. In 2012, 39% of enterprises were prepared to resort to that measure, against 44% in autumn 2011. The above 'classical' steps are likely to meet tough resistance on the part of other manufacturers whose markets become endangered as a result of such an intrusion. According to our latest survey of the sentiments and limitations in that sphere, such an impediment for access to new sales markets is expected by 45% of enterprises.

The pricing factor is rated the fifth – with 27% of mentions – in the composite rating of antiti-crisis measures in 2012. The same share of enterprises planned to resort to a price reduction in 2011, however, at that time the result in question could ensure the eighth place only. But as (according to evaluations of enterprises) the importance of a larger part of anti-crisis measures diminished during the past few months, the pricing factor moved three positions upward.

Only 23% of enterprises in the industry in general are prepared to agree on delayed receipt of payments from buyers of the produce. In 2011, such delays in payments were approved by 28% of plants, but work in conditions of tough demand limitations permitted enterprises to keep only reliable customers which factor probably reduced the likelihood of non-payments in case of new aggravation of the crisis.

Non-cash forms of settlements (whose renewal was so much feared about in 2008) have small chances to emerge in the Russian industry: only 10% of enterprises in 2012 (12% in 2011) approved them in case of the second wave of the crisis. The building materials industry

may become the absolute leader with at least 20% of enterprises prepared to approve such measures in order to support output.

Anti-Crisis Measures of the Russian Industry during the First Wave of the Crisis

For the sake of comparison, it is worthwhile to consider the plan of anti-crisis measures of the Russian industry during the first wave of the crisis. As was stated above, the analysis of those plans was prepared by the Institute for Economic Policy as early as November 2008 when the country was in the dark and the government only cautiously looked out of its "safe haven" on the storm of the global crisis. The above analysis permitted to receive the first-hand and trustworthy information on the initial (2008) anti-crisis package of the Russian industry.

In the beginning of the crisis, nearly all the enterprises (84%) planned to reduce the cost of production (see *Fig. 22*). Late in 2008, that measure was absolutely justified as in the precrisis period the most intense growth in costs was registered from 1999. Only 9% of enterprises declared that they were unlikely to resort to the above measure.

In 2008, the output reduction measure was rated the second both in the industry in general and all the sectors (except for the food industry), in particular. The widespread willingness in the industry to reduce output deserves positive assessment as it means that enterprises are ready to follow the recessionary decline of the solvent demand, rather than work for a warehouse or resort to non-cash forms of settlements. Only 21% of enterprises declared at that time about their open unwillingness to reduce the output even in a situation of the declining demand.

Utilization of survival measures typical of the 90s was planned rather rarely in the Russian industry in 2008. Non-cash forms of settlements were the last in the rating of the industry's anti-crisis measures. Only 38% of enterprises were ready to resort to them, while 56% answered straightforwardly that they would try to avoid them. The latter value turned out to be the maximum one in assessment of the unacceptability of anti-crisis measures. Work for a warehouse and accumulation of stocks of finished products from which the Russian industry suffered much in the 90s turned out to be an unpopular anti-crisis measure in 2008; only 42% of enterprises were prepared to resort to that measure with 54% of enterprises explicitly against it.

Search for new markets and buyers – which measure 69% of enterprises were ready to approve – was sooner a tribute to a book tradition, rather than a real anti-crisis measure in Russian conditions because the extent of a drop in the industrial production along with high protection of markets by traditional manufacturers did not contribute at all to accessibility of those markets by new manufacturers. However, active market position of the Russian industry does impress.

Reduction of wages and salaries, underemployment and unpaid leaves were rated the fourth most popular measure in December 2008 with 62% of enterprises being ready to resort to it. Lay-offs yielded much to other anti-crisis measures which were not related to reduction of personnel. Only 46% of enterprises were ready to use that measure. Large-scale labor shortages which the Russian industry encountered with in 2006 and degradation of the system of the vocational and technical education definitely prevented enterprises from planning more large-scale lay-offs. The industry preferred to maintain redundant personnel in order to have an opportunity to promptly increase output soon after the crisis was over, rather than search for new workers.

The pricing factor was expected to be used in overcoming of the crisis by nearly a half of enterprises in the industry as a whole. However, in the iron and steel industry which encountered with the crisis earlier than other sectors 93% of enterprises were ready to resort to that measure (if only they did not actually start to use it then) and only 7% of enterprises declared that they would try to avoid that. Quite the opposite plans were in the iron and steel industry where only 30% of plants were prepared to reduce prices, against 70% which planned to avoid that.

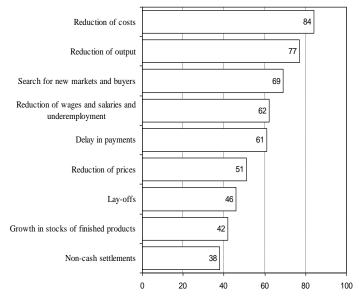


Fig. 22. The reaction planned in December 2008 to the crisis of the Russian industry, % enterprises

During the crisis of 2009–2010, enterprises' anti-crisis plans were subjected to adjustment; it is to be noted that all the measures lost their popularity, but to a different extent. Reduction of the extent of anti-crisis measures can be explained in our view by the specifics of the unfolding crisis. The main blow of the crisis fell into the end of 2008, while as early as the 1st quarter of 2009 the industry started its exit from the crisis. Such dynamics was explicit both in analysis and utilization of the outputs of the surveys which were received by the respondents. The latter factor permitted them not only to develop effectively anti-crisis plans, but also adjust them.

Output-reduction plans (that is the measures whose monitoring continued in the 2009–2010 period) were subjected to the most serious adjustment. By the 2^{nd} quarter of 2009, the popularity of the above measure in plans of the Russian industry decreased by nearly a half (from 77% to 40%), by the 3^{rd} quarter 31% of enterprises was prepared to further reduce output volumes and by the end of 2009 and early in 2010 such plans remained with 25% of plants. So, according to enterprises' estimates by the end of monitoring of the first wave of the crisis the need to reduce output decreased by 66.7 % in the Russian industry.

Reduction of wages and salaries, incomplete work week and unpaid leaves became the second most popular measure which was monitored all the time. Popularity of that measure declined considerably in the 2008–2010 period, too. As early as the 2nd quarter of 2009, the above measure lost 20 p.p. and remained in the plans of only 42% of enterprises, while early

in 2010 it was planned to be used by 28% of enterprises. However, even with that value the anti-crisis measure in question was rated the second most popular one in 2010.

Popularity of lay-off plans in response to a recessionary drop in demand underwent principal changes by the 2nd quarter of 2009 and stabilized after that in the range of 27%–32% until the end of the first wave of the crisis. There were two factors which could predetermine such a cautious utilization of that classical anti-crisis measure in the Russian industry. First, the abovementioned shortages in skilled workers in the pre-crisis period when a lack of personnel hindered growth in output with a half of industrial enterprises were replaced by a recessionary redundancy just for three quarters of 2009 to be followed by growth in the share of the "insufficient" answers in the industry in evaluation of the number of workers, which share exceeded by the mid-2010 the share of the "more than sufficient" answers. Second, the government's anti-crisis policy in that area restrained the rate of lay-offs at enterprises, too.

In the 2008-2010 period, popularity of a delay in payments as an anti-crisis measure decreased only by half, that is, from 61% to 32%. Utilization of non-cash forms of settlements as a means of support of output in a situation of a dramatic drop in demand was rated the fifth most popular measure by the Russian industry during the first wave of the crisis and could be accepted at 25% of enterprises. It is to be noted that in 2009-2010 period acceptability of such a measure fluctuated within a very narrow range which factor points to a stable attitude of the industry to that popular anti-crisis measure of the 90s, while the absolute values can serve as evidence of extremely low intentions of enterprises to use non-cash settlements. The only exception was the building materials industry where 36% of enterprises approved such settlements.

In the 2009–2010 period, in the anti-crisis plans of the industry reduction of prices was rated the sixth most popular measure and was planned by 20%–28% of enterprises in the industry in general.

The experience related to overcoming of the crisis phenomena in the 2008–2009 period permitted the Russian industry to select a new system of priorities in solution of the problems related to a possible outbreak of the second wave of the crisis. First, a smoother nature of the new spiral of the crisis and a long preparatory period (and, probably, a partial implementation of measures) reduced the rate of the expected application of most anti-crisis measures. Only such measures as reduction of wages and salaries and underemployment will be utilized by enterprises more often than in 2009–2010 and at the beginning of the first wave of the crisis. It seems that due to the fact that the problems related to training of personnel remained unsolved the above measure was rated the first in 2012. The situation is supplemented by the most moderate lay-offs plans in the entire period of monitoring. Second, a number of the most unpleasant measures (developments) may not be used (take place) at all during the second wave of the crisis. It concerns changes in the ownership structure, non-cash settlements and suspension of enterprises' operations. Though delays in payments are expected by enterprises, the extent of that measure is the most moderate in the entire period of monitoring. Third, according to the plans of enterprises a recessionary drop in output will not be as large-scale as late in 2008 which situation, probably, makes it easier for the industry to go through the second wave of the crisis, but at the same time it will be difficult to identify it on the basis of the official statistics data and due to that factor the government's anti-crisis measure may not be used timely. If in 2008 the official statistics failed to be timely, at present it may lack clarity.