Overview of Manufacturing Industry in Russia
External investments enable expansion into new markets
Deloitte CIS Research Centre
Moscow, 2017
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Deloitte CIS would like to thank all those who participated in the survey we conducted in April–May 2017 as part of our «Current State and Outlook of Manufacturing Sector in Russia — 2017” project. We do appreciate your time and your interest in our research. Your expert opinions allowed us to conduct an integrated analysis of the state of the manufacturing sector in Russia, as well as to study the sentiments and expectations of market participants about their companies’ development and the market overall. We are pleased to present you with the full version of the analytical report. The key findings of our research are to be published by the leading Russian media outlets.

We have been conducting this survey annually since 2015. It serves as the basis of our integrated research on the state of the manufacturing sector in Russia. We would be grateful if you could participate in our next survey.

Please feel free to contact us if you have any questions about our research.

Main topics:

• Current state of the manufacturing sector and companies in Russia
• Outlook for the manufacturing sector and companies in Russia
• Key problems manufacturing companies in Russia are facing
• Key incentives and development barriers of the manufacturing sector and companies in Russia
• Priority strategies for manufacturing companies in Russia
• Currency risk and its impact: how to manage
• Changes in working with suppliers
• Government support measures for manufacturing sector in Russia
• Innovation at manufacturing companies in Russia
• Relevant environmental and tax issues

Srbuhi Hakobyany
Partner,
Deloitte CIS
Key findings
Current state and outlook for the manufacturing sector

The Russian manufacturing sector saw signs of improvement and strengthening optimism in 2017.

Current state

For the first time in three years, the perception of the current state of the industry is dominated by positive estimates (the net balance grew from 0 to +8 percent).

Outlook

The share of respondents who are optimistic about the current situation in their business retains the leading position (+82 percent), however their outlooks appear to be rather tempered compared to the previous year (the net balance decreased from 76 percent to 65 percent).

The share of pessimistic views on the outlook for the industry decreased by 10 percentage points (the net balance grew from +13 to +26 percent).

The optimism of manufacturers with respect to the prospects for their businesses has an almost triple increase (the net balance grew from 16 to 44 percent).
Current state and outlook for the manufacturing sector

Trend

As in 2016 the views of the manufacturing sector players remain diverse, however the last year’s trend is accompanied by a seismic shift in the sentiments of certain subgroups of companies.

Highlights

The last year saw a deterioration of the sentiment in the chemicals industry (the share of negative assessments of the industry’s current conditions 16 percentage points above the average).

The steel, automotive, aircraft and ship manufacturers are more optimistic about the overall situation (the share of negative assessments of the industry’s current conditions is 17 percentage points above the average).

For the second consecutive year industrial equipment producers retain the negative views on the overall situation and in the outlook for the industry.

Over the past year, the share of optimistically disposed foreign companies and large businesses has doubled (up to 58 and 60 percent, respectively).
Current state and outlook for the manufacturing sector

Trend

Over the past year, the industry and the businesses were influenced mainly by external factors: currency fluctuations, production capacities of other countries, availability of external investments, etc.

Highlights

Top factors impacting businesses:

Ruble appreciation:
- 31 percent of chemicals producers noted negative impact of the Ruble appreciation on their businesses;
- 86 percent of automotive, aircraft and ship manufacturers, as well as
- 83 percent of foreign companies mentioned positive impact of the Ruble appreciation.

The surge in global metal prices:
The period from Q1 2016 to Q1 2017, saw boosting prices across many of the base metals for the Russian economy, in particular (in U.S. dollar terms):
- steel: + 65 percent;
- aluminum: + 15 percent;
- copper: + 12 percent;
- zinc: + 35 percent.

Ferrous metals production slowdown in China: 31 percent of metallurgical companies speak of the competition from the Chinese companies and the negative impact of the Chinese production development on their businesses.

Investment programs shutdown: Industrial equipment manufacturers suffer the overall reduction in investment allocated to the purchase of machinery and equipment (over the past two years, the share of investment has decreased by 25 percent*).

Interest for public funding: 79 percent of the respondents show their interest for this source of capital.

* Adjusted for inflation
Drivers of competitiveness in 2017

Trend

In 2017 the industry and the businesses are becoming more independent of macroeconomic environment. The analysis of the companies’ expectations shows that the market participants see a greater stimuli for development directly in enhancing the efficiency of internal business processes.

Highlights

Top-5 factors stimulating market development in 2017:

- Lower administrative barriers
  - change in the importance + 14 pp for the year
- Lower geopolitical risks
  - change in the importance + 4 pp for the year
- Lower currency risks
  - change in the importance – 12 pp for the year
- Government support
- Transparency and stability of regulatory, tax and economic policies

Top-5 drivers of company development in 2017:

- Reduced production costs
  - change in the importance + 8 pp for the year
- Increased demand in Russia
  - change in the importance – 11 pp for the year
- Extended production and technological capacities
  - change in the importance + 4 pp for the year
- Lower administrative barriers
- Product line extension
The concern of the manufacturers is shifting towards the efficiency of the government regulation and the purchasing power of the population, which reaffirms the general trend for market recovery.

**Trend**

The concern of the manufacturers is shifting towards the efficiency of the government regulation and the purchasing power of the population, which reaffirms the general trend for market recovery.

**Highlights**

**Increased importance (top-3 issues):**
- Shortcomings of government regulation: + 9 pp
- Corruption: + 16 pp
- Insufficient purchasing power of households: + 18 pp

**Decreased importance:**
- Geopolitical risks: - 10 pp
- Currency risks: - 21 pp

Despite the reduced concern over the exchange rate volatility, the currency risks continue to influence businesses: 40 percent of the respondents cited that the Ruble devaluation triggered an increase in the cost of their products, and only 14–15 percent of the respondents indicated that the weakening of the domestic currency increased their competitiveness in domestic or foreign markets (mainly chemical companies and industrial equipment manufacturers; 31 and 33 percent, respectively).
Other issues

Trend
An increased concern of the manufacturers in 2017 is with the following aspects of their businesses:
- supplier relationship
- talent
- energy efficiency

Highlights

Key supplier relationship issues:
- established price level
- pricing flexibility
- delivery terms
- quality of delivered components and raw materials
- lack of qualified staff:
  - 35 percent of the respondents are indicated a lack of quality talent in optimization and automation staff.

Key staffing issues:
- lack of staff:
  - 17 percent of the replies indicated a lack of production staff.
  - 26 percent of the replies indicated a lack of automation staff.

Notably, the identified issue hinders the production intensification and advanced technology implementation.

The key energy efficiency issues:
- high energy tariff rates in Russia (79 percent)
- The chemical industry displays certain characteristics: 31 percent of the respondents indicated a lack of the energy infrastructure quality in Russia (lack of production capacities).
Priority business strategies in 2017

The priority business strategies in 2017 reaffirm the general trend for the manufacturing sector recovery:

- entry onto new markets (81 percent)
- bringing new products to the market (77 percent)

However, the so-called anti-crisis campaigns (e.g., on cost reduction in Russia) have decreased in relevance (by 11 percentage points).

Top-5 priority growth strategies for companies in 2017:

- Entry onto new markets
- Bringing new products to the market
- Enhancing the production and technology potential
- Business development through organic growth
- Replacement of imported products in the local market

The effect of import substitution policies:

Since 2016, manufacturers are actively implementing a strategy to reduce the imports share (59 percent), with 41 percent of companies having similar plans for the next year.

The key reason for a decreased share of imports in the procurement structure stems from the increase in prices for foreign products as a result of the weaker Ruble. However, the results of our survey revealed that 20–24 percent of the respondents eliminated import products from their structures indicating higher quality and lower prices for Russian products.
Other business strategies in 2017

The manufacturers have noted an increased interest for the following strategic plans in 2017:

- Changes in strategies for working with suppliers
- Changes in personnel policy
- Energy efficiency strategies

Strategies for working with suppliers:
While in the last year the most common strategy was to change suppliers without increasing their number, this year the manufacturers have announced strategies for their suppliers’ networks expansion (with 41 percent of the respondents in the process of the strategy implementation and 47 percent planning the implementation in 2017).

Changes in personnel policy:
The respondents plan to introduce changes to their personnel policies in 2017. It should be noted that the absolute majority of the respondents intend to increase the pay level, while half of the companies surveyed plan to reduce headcount.

On average, the planned changes in the pay level and headcount do not exceed 5%.

Notably, foreign companies expect to increase both their headcount and average pay for all employee categories mentioned, particularly for optimization professionals (+7 and +7 percentage points, respectively). 74 percent of the respondents note the need for automating HR management processes, however only half of those companies have estimated the respective costs.

Over the past year, the share of companies concerned about the energy efficiency has increased by 9 percentage points. 77 percent of the companies surveyed have planned the relevant measures. The highest priority is placed on such measures as the intensification of technological processes, the introduction of advanced energy-saving technologies and the prevention of direct energy losses.
In 2017 the respondents pointed to the attractiveness of financing through government investment. In 2016, the business was focused on a single source of capital (own resources). Today, however, the companies are more disposed to external investments.

69 percent of the companies surveyed stated their intention to attract external investment. Such plans quite often include several sources of capital:
- Government investment (57 percent of the respondents)
- Russian private investment (50 percent of the respondents)
- Foreign private investment (38 percent of the respondents)

Most respondents (58 percent) have experience in raising foreign investment. Notably, the majority of them (63 percent) indicate positive non-financial results from such cooperation.

65 percent of companies surveyed, have recognized the importance loan refinancing for their businesses.

“Despite the fact that attracting government investments is associated with a whole range of difficulties, they are often provided on more favorable conditions than those available on the market.”

Srbuhi Hakobyan
Partner, Deloitte CIS
Efficiency of the government regulation

Trend

2016 is characterized by a stronger loyalty of the business to government efforts. It is noteworthy that positive impact of the state support of innovation is rated the highest.

Highlights

The integrated assessment of the government support for business and development of the Russian manufacturing industry has increased by 0.2 points from 2016 and scored 1.7 at the three-point scale, indicating an average satisfaction of the business with government efforts.

Top-3 forms of government support for manufacturing companies in Russia:
- Public procurement orders
- Tax and other financial incentives
- Investment in physical infrastructure

Notably, in 2017 two times as many businesses expressed their interest for public procurement orders on their products (by 17 percentage points).

Among other government measures, the state support of innovation receives the most positive views: +26 percent.

At the same time, the energy policy, energy tariffs in particular, is seen as negative: -25 percent.

“In the face of unfavorable market environment, the manufacturers are not willing to adopt transformative measures to increase efficiency, but rather rely on the government support.”

Srbuhi Hakobyan
Partner, Deloitte CIS
Overview of Manufacturing Industry in Russia — 2017 | Key findings

Innovations and digitalization of today

Trend

94 percent* of the surveyed CFOs of leading manufacturing companies in Russia stated the need enhancing the economic efficiency of business functions through automation of the key business processes.

72 percent* of the surveyed CFOs of leading manufacturing companies in Russia stated that they take part in the evaluation of new technology solutions and launch of innovative projects in their companies.

Highlights

Over the past year, the average revenues spent on innovation and digital solutions grew by 0.5 percent to 9 percent, which in turn confirms the global trend of growing interest of manufacturers for technological innovation and new digital solutions.

Notably, foreign companies spend on innovation almost 1.5 times the share of innovation spending in Russian companies (12 versus 8 percent).

The top requested innovations: introduction of advanced production technologies (43 percent) and launch of technically new or advanced products (31 percent).

Top-5 technologies that are implemented/ planned for implementation in the near future:

- Electronic document management (EDM) (83 percent)
- Energy saving technology (72 percent)
- Full automation of selected business processes (69 percent)
- Full automation of business process chain (63 percent)
- Advanced ERP systems (57 percent)

Key reasons for non-use/ limited use of EDM:

- Impracticality of paper flow dismissal
- Lack of resources (human, financial, qualification)
- Risks and concerns regarding the loss of documents translated into electronic form

* Based on the results of the CFO Survey (first half of 2017)
Innovations and digitalization of tomorrow

Trend

Increased manufacturing innovation activity across a variety of operations

A shift in attitude towards innovation activities

A greater automation in the manufacturing industry by 2018

Highlights

51 percent of the respondents plan to acquire advanced equipment

44 percent are focused on R&D activities

37 percent indicate the relevance of marketing research

A growth in demand for marketing research and digital solutions (by 7–9 percentage points)

Almost half of the companies surveyed plan to introduce the full automation of some business processes and business process chains (47 and 44 percent, respectively).

“Despite the fact that the business understands and is willing to adopt innovation and digital technology, the existing task distribution framework, including internal and external management, is deemed outdated and ill-prepared for the new market conditions.”

Srbuhi Hakobyan
Partner, Deloitte CIS
Innovations and digitalization of tomorrow

Trend
Potential leadership of the manufacturing sector in terms of sophistication of implemented technologies (compared to other Russian economy sectors)

Highlights
Manufacturers plan to introduce more sophisticated technological solutions in the near future.

At present, the technology, media and telecommunications (TMT) sector is leading in terms of sophistication of implemented technologies.

In 2017 (and roughly in the next two years) the main constraints for the digital strategy implementation in manufacturing companies will be the organizational structure and staffing (as indicated by 82 and 76 percent of the respondents, respectively), while only a year ago the manufacturers spoke about the greater importance of the overall economic situation in Russia and in the world.

At the same time, the key drivers for digital strategy implementation in manufacturing companies are the market and the competition, which reaffirms the recovery processes in the economy (both in Russia and globally) and the natural demand for innovations and digital developments.
Russian manufacturing sector in figures
Russian manufacturing sector in figures

Global industrial production

Global Industrial Production Index (base: 2010)

- Chinese economy is showing the best dynamics, but industrial output growth there slowed from 14 percent in 2011 to 6 percent in 2016.
- In 2011–2016, Russian industrial production was adding 1.74 percent per annum on average, which is roughly in line with growth in North America. However, it should be noted that industrial sector in the United States is about 6.5 times bigger.

Source: The World Bank — Global Economic Monitor
The manufacturing production in Russia differs significantly by segments:

- Thus, food and chemical industries showed sustainable growth;
- Production of coke, oil products and transportation means increased incrementally in 2010–2014 but show signs of stagnation currently;
- Metals, machinery and equipment production are back to the 2010 levels.

An expert’s view

The chemical industry is one of only a few manufacturing industries ensuring sustainable growth in 2017, with production of mineral fertilizers, rubber, and resin seeing the highest growth. The development of the chemical industry is owed to significant investments in the construction of new production facilities, modernized production techniques, more energy-efficient fixed assets, the implementation of the best available technology practices contributing to increased environmental responsibility, as well as the expansion import substitution programs.

Yulia Orlova
Partner, Deloitte CIS
In our survey, we focus on four key manufacturing industries:

- Metals and metal products;
- Auto, aircraft and ship manufacturing;
- Machinery;
- Chemicals.

The place of the manufacturing sector in the Russian economy

• In 2016, the manufacturing sector accounted for 12.4 percent of Russian GDP.
State of the manufacturing sector in Russia
State of the manufacturing sector in Russia

Current state of the manufacturing sector in Russia

What is your view of the current state of the Russian manufacturing industry?

Trends

• For the first time in three years, the perception of the current state of the industry is dominated by positive estimates (the net balance grew from 0 to +8 percent).

• While 46 percent of respondents view the current market conditions as negative. This indicates that the conditions for conducting business have noticeably diverged in various segments of the manufacturing sector in Russia.

Highlights

• The last year saw a deterioration in sentiment in the chemicals industry (the share of negative assessments of the industry's current conditions is 16 pp above the average). However, the steel, automotive, aircraft and ship manufacturers are more optimistic about the overall situation.

• Over the past year, the share of optimistically disposed foreign companies and large businesses has doubled (up to 58 and 60 percent, respectively).

• A greater level of optimism can be seen among representatives of companies with export share over 25 percent and companies with more than 5,000 employees — 64 and 74 percent have a positive view on the state of the industry.

An expert’s view

The automotive industry, in particular LCV and HCV producers, has improved its results.

Tatiana Kofanova
Director, Deloitte CIS
Overview of Manufacturing Industry in Russia — 2017 | Results of the research

State of the manufacturing sector in Russia

Outlook for the manufacturing sector in Russia in 2017

What is your view of development prospects for the Russian manufacturing sector in 2017?

Trends

- The respondents have a divided view on the outlook for manufacturing companies, with 41 percent expecting improvement and 44 percent believing that the situation will remain unchanged.

- Overall, the situation in the industry is seen as stable, with positive sentiment prevailing (the net balance grew from +13 to +26 percent), albeit negative drivers continue to affect some segments.

Highlights

- For the second consecutive year machinery producers retain the negative views on the overall situation and in the outlook for the industry, as 24 percent of them expect the situation to deteriorate. This results from upgrade capex cuts by Russian companies. Over the 2015–2016 years, the share of investment has decreased by 25 percent (appendix on the page 91).

- The representatives of chemical companies are much more pessimistic on development of the manufacturing sector (11 percentage points below the average).

- Smaller companies with annual revenue below RUB 10 billion and less than 1,000 employees tend to negatively view the situation (every fourth respondent expects the situation to worsen in 2017).

An expert’s view

Lowering of fixed investment is a significant constraint for new plant upgrades and maintenance projects, supply of new parts for technology lines, servicing, etc. Many projects were idled or delayed for an indefinite time due to numerous uncertainties and inevitable re-assessment of development priorities by manufacturing companies.

Oleg Kuznetsov
OOO FLSmidth
State of the manufacturing sector in Russia

Rating of competitive factors affecting market development (incentives for market development)

Select the top three drivers (in descending order) to increase the competitive position of the Russian manufacturing sector on the global market.

- Removal of administrative barriers (including trade barriers)
- Geopolitical risk reduction
- Currency risk reduction

<table>
<thead>
<tr>
<th>Factor</th>
<th>2016</th>
<th>2017</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Removal of administrative barriers</td>
<td>30%</td>
<td>16%</td>
<td>-14 pp</td>
</tr>
<tr>
<td>Geopolitical risk reduction</td>
<td>27%</td>
<td>23%</td>
<td>-4 pp</td>
</tr>
<tr>
<td>Currency risk reduction</td>
<td>25%</td>
<td>38%</td>
<td>+13 pp</td>
</tr>
<tr>
<td>Government support (financing, subsidizing, and investing in manufacturing and innovations)</td>
<td>23%</td>
<td>23%</td>
<td>0 pp</td>
</tr>
<tr>
<td>Transparency and stability of regulatory, tax and economic policies</td>
<td>22%</td>
<td>22%</td>
<td>0 pp</td>
</tr>
<tr>
<td>Availability of financing options</td>
<td>20%</td>
<td>38%</td>
<td>+18 pp</td>
</tr>
<tr>
<td>Cost of raw materials (including energy resources)</td>
<td>19%</td>
<td>11%</td>
<td>-8 pp</td>
</tr>
</tbody>
</table>

Trends

- The survey participants saw removal of administrative barriers as the most significant driver for increasing the competitiveness of Russian manufacturing companies. The significance of this driver increased almost twofold in the past year.
- While such factors as currency risks and availability of financing partially lost their relevance (by 13 and 18 percentage points, respectively).

Highlights

- Russian companies cite the government support as a significant competitiveness driver more often than foreign companies (by 16 percentage point).
- Representatives of foreign companies are most likely to speak of the need to mitigate currency and geopolitical risks (47 and 38 percent, respectively). Transparency and stability of regulatory, tax and economic policies have a significantly higher priority for foreign companies (38 percent).
- Metals companies are most likely to mention the need for lower administrative barriers and availability of financing among the most significant factors (39 and 30 percent, respectively).
- Automotive, aircraft and shipbuilding companies are most sensitive to currency risks (42 percent).
- Representatives of chemical companies significantly more often mention the importance of raw material costs for domestic market competitiveness (26 percent).
State of the manufacturing sector in Russia

Export markets of manufacturing companies

Specify the current structure of your trade relations.

Select your company’s key exporter.

Export relationships established

Core export market

Trends

Of the respondents surveyed, 78 percent indicated that their companies export products abroad.

• Most survey participants stated that their companies export products to Kazakhstan (69 percent) and Belarus (61 percent) which are core markets for 23 percent and 15 percent of the companies, respectively. This data confirms the significance of economic cooperation between the Eurasian Customs Union countries.

• The top export markets for Russian manufacturing companies include China and Ukraine (15 and 13 percent, respectively).

Highlights

• The companies which specified the Customs Union as their main market describe their current position positively more often (9 percentage points more than the average).

• On the contrary, the companies which export their products mainly to BRICS tend to be less optimistic about the current state of their businesses (9 percentage points below the average). This may signal stronger competition in those markets with local producers.
Overview of Manufacturing Industry in Russia — 2017 | Results of the research

State of the manufacturing sector in Russia

Current state of manufacturing companies in Russia

Trends

• Overall, the state of manufacturing companies in Russia may be described as positive: the total positive response rate is 65 percent, which is albeit below the previous year's level by 11 percentage points.

Highlights

• A high share of negative assessments is common for small companies with annual revenue below RUB 10 billion (29 percent) and less than 1,000 employees (25 percent), while the representatives of larger companies with annual revenues over RUB 50 billion and more than 5,000 employees tend to be more optimistic (by 5 and 6 percentage points, respectively).

• The high share of negative assessments of the current condition is common for machinery producers and chemical companies (exceeding the average by 6 and 5 percentage points, respectively).
Overview of Manufacturing Industry in Russia — 2017 | Results of the research

State of the manufacturing sector in Russia

Outlook for manufacturing companies in 2017

What is your view of development prospects for your company in 2017?

Trends

• The level of optimism significantly increased in the past year: the positive assessments exceed the negative ones by 28 percentage points.

• Forty four percent of the respondents expect no significant changes in the situation, with the majority of them (80 percent) viewing the current conditions as positive.

Highlights

• Specialists from foreign companies that localized their production in Russia are most positive about the outlook for their businesses (75 percent expect the situation to improve).

• The share of positive expectations is significantly higher among experts from the companies with a high export revenue share (25 percent) and companies with more than 5,000 employees (net balance: 73 and 74 percent, respectively).

• Less optimistic assessments of the business outlook is common for chemical companies and machinery producers (11–13 percentage points below the average).

An expert’s view

Car manufacturers need to comply with certain localization requirements in order to receive government support. Production in Russia may be more profitable due to the devaluation of the rouble. Therefore, we expect an increase in the share of manufacturers localized in Russia.

Tatiana Kofanova
Director, Deloitte CIS
State of the manufacturing sector in Russia

The effect of Chinese production on Russian manufacturing companies

Does the development of Chinese manufacturing impact your company’s position on the Russian market and globally?

<table>
<thead>
<tr>
<th>Industry</th>
<th>Export share</th>
<th>Employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>14%</td>
<td>10%</td>
</tr>
<tr>
<td>Metal products</td>
<td>19%</td>
<td>10%</td>
</tr>
<tr>
<td>Auto, aircraft and ship building</td>
<td>15%</td>
<td>15%</td>
</tr>
<tr>
<td>Chemical production</td>
<td>15%</td>
<td>21%</td>
</tr>
<tr>
<td>Machinery</td>
<td>21%</td>
<td>27%</td>
</tr>
<tr>
<td>Russian companies</td>
<td>15%</td>
<td>15%</td>
</tr>
<tr>
<td>Foreign companies</td>
<td>21%</td>
<td>15%</td>
</tr>
<tr>
<td>Less than RUB 10bn</td>
<td>21%</td>
<td>15%</td>
</tr>
<tr>
<td>RUB 11–50bn</td>
<td>21%</td>
<td>15%</td>
</tr>
<tr>
<td>Over RUB 50bn</td>
<td>21%</td>
<td>15%</td>
</tr>
<tr>
<td>Less than 1,000 employees</td>
<td>21%</td>
<td>15%</td>
</tr>
<tr>
<td>1,001–5,000 employees</td>
<td>21%</td>
<td>15%</td>
</tr>
<tr>
<td>Over 5,000 employees</td>
<td>21%</td>
<td>15%</td>
</tr>
</tbody>
</table>

- Yes, the impact is positive
- Yes, the impact is negative
- No, there is no impact (neutral)
- Net balance

Trends

- Slightly more than a half of the respondents (55 percent) believe that the Chinese production development will impact their companies.
- The experts were divided on the nature of the expected impact: two thirds of the companies with ties to their Chinese manufacturing counterparts expect the effect to be positive, while the rest believe it will be negative.

Highlights

- The representatives of companies supplying products to Chinese manufacturing companies indicate that the impact is positive: these respondents consist of companies with a high export revenue share (over 25 percent), accounting for 27 percent, large companies with revenue exceeding RUB 50 billion (42 percent).
- Companies that compete with Chinese producers report a negative impact: metals companies (-4 percent).
- The domestically oriented Russian companies are less affected by this factor (74 percent), which implies the lack of strong competition with Chinese companies in the reviewed segments on the domestic market.
- Also, most machinery producers (58 percent) state that the development of the Chinese industry does not affect the business of their companies.
Overview of Manufacturing Industry in Russia — 2017 | Results of the research

State of the manufacturing sector in Russia

Factors needed to increase company competitiveness

1. Select the top three drivers (in descending order) to increase your company’s competitiveness on the Russian market.

<table>
<thead>
<tr>
<th>Factor</th>
<th>2016 (%)</th>
<th>2017 (%)</th>
<th>Change (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduction of production costs (including energy costs)</td>
<td>43%</td>
<td>39%</td>
<td>-4 pp</td>
</tr>
<tr>
<td>Local demand growth</td>
<td>27%</td>
<td>25%</td>
<td>-2 pp</td>
</tr>
<tr>
<td>Increase in production and technology potential (launch of new capacities)</td>
<td>16%</td>
<td>18%</td>
<td>2 pp</td>
</tr>
<tr>
<td>Removal of administrative barriers (including trade barriers)</td>
<td>18%</td>
<td>20%</td>
<td>2 pp</td>
</tr>
<tr>
<td>Product line extension</td>
<td>15%</td>
<td>17%</td>
<td>2 pp</td>
</tr>
<tr>
<td>Government support</td>
<td>16%</td>
<td>15%</td>
<td>-1 pp</td>
</tr>
<tr>
<td>Availability of financing sources</td>
<td>24%</td>
<td>26%</td>
<td>2 pp</td>
</tr>
<tr>
<td>Import restrictions (including on «grey» imports)</td>
<td>3%</td>
<td>4%</td>
<td>1 pp</td>
</tr>
</tbody>
</table>

Trends

In the past year, attention of our respondents moved from macroeconomic factors to the companies’ business objectives:

- Highlighting the importance of production cost cutting (+8 percentage points over the year), increasing production potential (+4 percentage points), extending product lines (+7 percentage points);
- On the other hand, domestic demand, capital raising, and import reduction were mentioned a lot less frequently (–11, –12, and –10 percentage points, respectively).

Highlights

- Reduction of production costs (41 percent)
  Reduction of production costs is most pressing for metals companies (46 percent). This factor is critical for major companies with annual revenue of more than RUB 50 billion (53 percent).
- Local demand growth (32 percent)
  The need to increase the domestic demand as a factor of higher competitiveness is more often cited by representatives of foreign companies with localized production (44 percent), as well as by the domestically oriented companies with the export revenue share less than 5 percent (40 percent).
- Increase in production and technology potential (27 percent)
  Specialists from companies with the high export revenue share (over 25 percent) tend to mention the need to increase the production and technology potential (by 7 percentage points).
- Local demand growth (32 percent)
  The need to increase the domestic demand as a factor of higher competitiveness is more often cited by representatives of foreign companies with localized production (44 percent), as well as by the domestically oriented companies with the export revenue share less than 5 percent (40 percent).
- Increase in production and technology potential (27 percent)
  Specialists from companies with the high export revenue share (over 25 percent) tend to mention the need to increase the production and technology potential (by 7 percentage points).
- Representatives of smaller companies with revenue of less than RUB 10 billion tend to cite the importance of the product line extension significantly more often (by 9 percentage points below the average).
- Representatives of chemical companies mention the need to lower the administrative barriers (46 percent) and government support (28 percent).
Main issues for the Russian manufacturing sector in 2017
Main issues for the Russian manufacturing sector in 2017

Most important issues facing manufacturing companies

Select the top three issues (in descending order) that manufacturing companies in Russia face today.

Trends

- Over the year there has been growing concern among manufacturing representatives about such issues as shortcomings of government regulation (+9 pp), insufficient purchasing power of households (+18 pp) and corruption (+16 pp). At the same time, geopolitical and currency risks have decreased in importance (–10 pp and –21 pp, respectively).
- Insufficient support and financing from the government remains one of the top issues for the manufacturing sector.

Highlights

- Shortcomings of government regulation (44 percent)
  Shortcomings of government regulation is the most important issue for large companies with a revenue above RUB 50 billion (+9 pp above the average).
- Insufficient purchasing power of households (35 percent)
  Insufficient purchasing power of households is of utmost concern for automotive and chemical companies (51 percent and 43 percent, respectively) as they have a stronger focus on the retail market.
- Corruption (34 percent)
  Corruption is a much more important issue for large companies with a revenue above RUB 50 billion (+9 pp above the average).
- Insufficient support and financing from the government (25 percent)
  The need for more support and financing from the government is more often named by representatives from automotive companies, aircraft makers and ship builders (+12 pp), as well as by representatives of metallurgical companies (+11 pp).
- Geopolitical risks (19 percent)
  Geopolitical risks are the most important concern for foreign companies (36 percent) and manufacturers of machinery (28 percent).
- Currency risks (18 percent)
  As with geopolitical risks, currency risks represent the most important concern for foreign companies (35 percent). Manufacturers with significant exports (above 25 percent) also place a higher importance on currency risk (+6 pp above the average).
Main issues for the Russian manufacturing sector in 2017

Currency risks

How did the fluctuating ruble exchange rate affect your company’s operations in 2016?

<table>
<thead>
<tr>
<th></th>
<th>2017</th>
<th>2016</th>
<th>+/− pp</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product cost increase as a result of higher prices for products, work and services from suppliers abroad</td>
<td>40%</td>
<td>48%</td>
<td>−8 pp</td>
</tr>
<tr>
<td>No impact</td>
<td>24%</td>
<td>17%</td>
<td>+7 pp</td>
</tr>
<tr>
<td>Increased competitiveness amid higher prices for imported products</td>
<td>15%</td>
<td>23%</td>
<td>−8 pp</td>
</tr>
<tr>
<td>Product cost reduction</td>
<td>14%</td>
<td>25%</td>
<td>−11 pp</td>
</tr>
<tr>
<td>Increased international competitiveness due to international sales in a foreign currency</td>
<td>14%</td>
<td>33%</td>
<td>−19 pp</td>
</tr>
<tr>
<td>Increased interest of foreign investors in the company</td>
<td>9%</td>
<td>7%</td>
<td>+2 pp</td>
</tr>
</tbody>
</table>

The relatively stable ruble has reduced the urgency of currency risks among other issues facing manufacturers. However the situation remains complicated. The average weighted ruble exchange rate was down by 10 percent over 2016. At the same time, there emerged a stable trend for the appreciation of the rouble, which has continued into 2017. Therefore, exchange rate fluctuations continue to affect manufacturers in a notable way.

Trends

- As in 2016, increased production costs are seen as the main result of a weaker ruble (40 percent).
- Significant decrease of share demonstrate companies who mention lowering costs (by 11 percentage points over one year), as well as growing competitive level abroad (decrease by 19 percentage points).
- Of the companies surveyed, 24 percent did not note any impact from exchange rate fluctuations in 2016.
- Only 9 percent of the companies saw a stronger interest from foreign investors.
Main issues for the Russian manufacturing sector in 2017

Currency risks

How did the fluctuating rouble exchange rate affect your company’s operations in 2016?

| Product cost increase as a result of higher prices for products, work and services from suppliers abroad | 40% | 46% | 36% | 31% | 38% | 35% | 75% |
| No impact                                                                                       | 24% | 21% | 43% | 15% | 24% | 26% | 8%  |
| Increased domestic competitiveness amid higher prices for imported products                    | 15% | 17% | 0%  | 8%  | 33% | 17% | 8%  |
| Product cost reduction                                                                          | 14% | 13% | 21% | 0%  | 14% | 14% | 8%  |
| Increased international competitiveness due to international sales in a foreign currency        | 14% | 13% | 0%  | 31% | 10% | 17% | 0%  |
| Increased interest of foreign investors in the company                                          | 9%  | 4%  | 0%  | 2.3%| 10% | 11% | 0%  |

Highlights

• Increased production costs have been specified as the most notable problem by almost all the categories of manufacturers except for auto, aircraft and ship makers who more often tended to indicate that the depreciated Russian rouble had no effect on their operations. This may be due to the fact that the depreciated rouble resulted in major growth in prices in the automotive market in 2015.  
  • The growth in production costs had the strongest impact on foreign companies (75 percent).

• Machinery manufacturers more often tended to note (+18 pps) that their products enjoyed stronger competitive advantage in the domestic market amid more expensive imports.  
  • Chemical manufacturers more often tended to specify increased competitiveness of their foreign operations (+17 pps above the average). Almost every fourth respondent (23 percent) noted an increase in the interest from foreign investors.
Overview of Manufacturing Industry in Russia — 2017 | Results of the research

Main issues for the Russian manufacturing sector in 2017

Currency risks

How would potential ruble appreciation in 2017 affect your company’s operations?

Trends

- Most respondents (66 percent) noted that a stronger ruble would have a positive impact on their companies.
- Of the companies surveyed, 17 percent do not expect any effect from it in 2017.
- Almost the same number of respondents (18 percent) expect a negative effect from the stronger ruble.

Highlights

- Car and plane makers, as well as ship builders are expecting to benefit most from the ruble rally (net balance of +79 percent).
- Producers of manufacturing equipment and foreign companies localized in Russia are also noting the increasingly positive effects the ruble’s appreciation (+14 and +19 pp above average, respectively).
- At the same time, the impact the ruble’s appreciation has on metal product manufacturers is significantly less evident but still positive (net balance of +33 percent).
- According to almost one third of chemical manufacturers (31 percent), continued ruble appreciation will have a negative impact.

An expert’s view

When we are talking about an export-oriented chemical industry an increase in the ruble exchange rate causes a decrease in export profitability. This fact has naturally affected the opinion of some manufacturers on the current situation.
Trends
Manufacturers have a much stronger reliance on imports of machinery and equipment, rather than on imports of raw materials:
- most manufacturers (58 percent) reported a significant share of imports in their procurements (at least a half of their total procurements).
- for most manufacturers (85 percent), imported machinery and equipment account for a significant portion of their production assets.

For our production, we use:
- imported raw materials only
- imported raw materials to a large extent
- both imported and local raw materials
- local raw materials to a large extent
- local raw materials only

For our production, we use:
- imported equipment only
- imported equipment to a large extent
- both imported and local equipment
- local equipment to a large extent
Main issues for the Russian manufacturing sector in 2017

Share of imports in procurements

### Raw materials and components

- **Predominant reliance on local raw materials**
- **Relatively equal reliance on imported and local raw materials**
- **Predominant reliance on imported raw materials**

### Machinery and equipment

- **Predominant reliance on local equipment**
- **Relatively equal reliance on imported and local equipment**
- **Predominant reliance on imported equipment**

### Highlights

- **Even though chemicals manufacturers reported much more active use of local raw materials (+12 pp), 38 percent predominantly rely on foreign equipment and the remaining respondents operate foreign equipment that makes about half of their production assets.**

- **It is quite different with machinery manufacturers. More than a half of them reported a predominant use of imported components (+9 pp) while having a predominant reliance on local equipment (+12 pp).**

- **Foreign companies prefer imported raw materials and equipment. The number of foreign companies with a predominant reliance on imported materials and equipment is +33 pp and +19 pp above the average, respectively.**
Main issues for the Russian manufacturing sector in 2017

Geography of imported products

Specify the current structure of your trade relations.

Select your company’s key importer.

<table>
<thead>
<tr>
<th>Sources of imports</th>
<th>Main sources of imports</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>China</td>
</tr>
<tr>
<td>Germany</td>
<td>Germany</td>
</tr>
<tr>
<td>Belarus</td>
<td>Kazakhstan</td>
</tr>
<tr>
<td>Japan</td>
<td>Japan</td>
</tr>
<tr>
<td>Italy</td>
<td>Belarus</td>
</tr>
<tr>
<td>South Korea</td>
<td></td>
</tr>
<tr>
<td>France</td>
<td></td>
</tr>
</tbody>
</table>

49%  40%  35%  26%  23%  21%  19%  18%  27%  13%  10%  10%  8%  10%

Trends

- The EU and BRICS are main sources of imports.
- Almost half of the respondents (49 percent) purchase products from China and another 40 percent rely on imports from Germany. China and Germany also act as main markets for 27 percent and 13 percent of the companies surveyed, respectively.
- Germany and Japan are the main importers of machinery and equipment. China acts as an exporter of components and raw materials, as well as of machinery and equipment.
Main issues for the Russian manufacturing sector in 2017

Relationships with suppliers

We asked the respondents to rate the importance and satisfaction from working with suppliers, based on several criteria. We ranked the responses on a 100-percent scale, with importance on the X-axis and satisfaction on the Y-axis. Indices were tested for sensitivity to changes in weights.

Trends

Product quality and delivery timing were noted as the most important supplier criteria (84 percent and 77 percent, respectively), with price level and price flexibility coming second in importance (63 percent and 61 percent, respectively). Product mix and additional services (46 percent and 36 percent, respectively) have the least importance for manufacturers, which is typical for the B2B sector. Other criteria are more characteristic for administrative personnel efficiency and have medium importance.

Based on the criterion where importance exceeds satisfaction by more than 30 pps, manufacturers demonstrate dissatisfaction with suppliers when it comes to product quality, delivery timing and price flexibility. All of these are part of the Top-5 criteria for the manufacturing sector.

Highlights

- Companies that generally rely on imported components and raw materials reported a notably higher satisfaction with suppliers (+20 to +28 pps above the average) across the most important criteria — product quality, delivery timing, reputation and price level. (See dark points on chart). This may be one of the reasons why manufacturers are still cooperating with foreign companies, with a sharp increase in imports caused by ruble’s devaluation in 2014.
- Almost half of chemicals producers reported the strongest dissatisfaction with the current prices (2 percent).
Main issues for the Russian manufacturing sector in 2017

### Talent availability

1. Using a five point scale rate the current full-time personnel at your company based on two criteria: employee number and qualification.

#### Trends

- In general, manufacturers report a fairly high level of satisfaction with executive and administrative staff headcount, demonstrating a net positive response of 65 and 55 percent, respectively. However, they are significantly less satisfied with talent quality, with satisfaction at just 32 and 26 percent, respectively.
- Of the respondents surveyed, 17 percent of the replies indicated a lack of production staff and 26 percent — lack of automation staff.
- Of the respondents surveyed, 35 percent of the respondents are indicated a lack of quality talent in optimization and automation staff. Notably, the identified issue hinders the production intensification and advanced technology implementation.

#### Highlights

- The lowest satisfaction with talent was reported in the chemical, automotive, aircraft and ship manufacturing industries.

#### Table: Target executive and administrative staff

<table>
<thead>
<tr>
<th>Top executives</th>
<th>Administrative staff</th>
<th>Production staff</th>
<th>Optimisation professionals</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Headcount</strong></td>
<td><strong>Talent quality</strong></td>
<td><strong>Talent quality</strong></td>
<td><strong>Talent quality</strong></td>
</tr>
<tr>
<td>60%</td>
<td>55%</td>
<td>40%</td>
<td>26%</td>
</tr>
<tr>
<td>55%</td>
<td>36%</td>
<td>27%</td>
<td>9%</td>
</tr>
<tr>
<td>52%</td>
<td>32%</td>
<td>28%</td>
<td>8%</td>
</tr>
<tr>
<td>40%</td>
<td>20%</td>
<td>23%</td>
<td>9%</td>
</tr>
<tr>
<td>31%</td>
<td>19%</td>
<td>26%</td>
<td>9%</td>
</tr>
<tr>
<td>26%</td>
<td>15%</td>
<td>19%</td>
<td>8%</td>
</tr>
<tr>
<td>21%</td>
<td>11%</td>
<td>16%</td>
<td>9%</td>
</tr>
<tr>
<td>15%</td>
<td>9%</td>
<td>12%</td>
<td>15%</td>
</tr>
<tr>
<td>10%</td>
<td>6%</td>
<td>7%</td>
<td>19%</td>
</tr>
<tr>
<td>5%</td>
<td>3%</td>
<td>9%</td>
<td>21%</td>
</tr>
<tr>
<td>4%</td>
<td>2%</td>
<td>9%</td>
<td>15%</td>
</tr>
<tr>
<td>3%</td>
<td>1%</td>
<td>5%</td>
<td>15%</td>
</tr>
</tbody>
</table>

**Note:**
- **Sufficient**
- **Rather sufficient**
- **Satisfactory**
- **Rather insufficient**
- **Insufficient**
- **Net balance**
Main issues for the Russian manufacturing sector in 2017

Trends

- For top executives, most manufacturers (52 percent) indicated average age of 41–50 years. A significant number of manufacturers (20 percent) reported average age above 50 years; only 3 percent said that average age was below 30 years.

- For other functions, most manufacturers indicated an average age of 31 to 40 years.

- We note that with respect to optimisation and automation professionals, almost one fourth of manufacturers (24 percent) indicated an average age above 40 years and another 5 percent did not report any.

Highlights

- The average age of production professionals in the chemical segment is five years higher than the industry average.
Main issues for the Russian manufacturing sector in 2017

Energy efficiency

Which of the below listed issues related to energy resources are the most urgent for your company in 2017?

Energy resources issues

<table>
<thead>
<tr>
<th>Issue</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>High energy costs in Russia</td>
<td>79%</td>
</tr>
<tr>
<td>Environmental threats</td>
<td>16%</td>
</tr>
<tr>
<td>Energy infrastructure quality in Russia (insufficient energy capacities for production)</td>
<td>15%</td>
</tr>
<tr>
<td>Limited access to energy resources in Russia (no access to energy resources)</td>
<td>14%</td>
</tr>
</tbody>
</table>

Trends

International ratings* reports a fairly low energy efficiency for the Russian economy, which is one of the barriers to development.

Most respondents (79 percent) indicated challenges related to high energy tariffs.

Highlights

- High energy costs are most acute for steel makers and metal product manufacturers (83%).
- The chemical industry displays certain characteristics: 31 percent of the respondents indicated a lack of the energy infrastructure quality in Russia (lack of production capacities).
- Lack of access to energy resources is most important for smaller manufacturers with a revenue below RUB 10 billion (19 percent).

* The UN's Global Innovation Index 2016
Managing companies in the current market conditions
Managing companies in the current market conditions

Company strategy in 2017

Prioritize the suggested strategies in terms of your business development in 2017.

<table>
<thead>
<tr>
<th>Strategy</th>
<th>2016</th>
<th>2017</th>
<th>+/– pp</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expansion into new markets</td>
<td>70%</td>
<td>81%</td>
<td>+11 pp</td>
</tr>
<tr>
<td>New product launches</td>
<td>65%</td>
<td>66%</td>
<td>+1 pp</td>
</tr>
<tr>
<td>Extension of production and technological capacities (bringing in new capacities; increasing output)</td>
<td>69%</td>
<td>72%</td>
<td>+3 pp</td>
</tr>
<tr>
<td>Organic growth</td>
<td>69%</td>
<td>68%</td>
<td>–1 pp</td>
</tr>
<tr>
<td>Import substitution in the Russian market</td>
<td>66%</td>
<td>66%</td>
<td>0 pp</td>
</tr>
<tr>
<td>Raising external financing</td>
<td>53%</td>
<td>53%</td>
<td>0 pp</td>
</tr>
<tr>
<td>Cost reduction in Russia</td>
<td>64%</td>
<td>53%</td>
<td>–11 pp</td>
</tr>
<tr>
<td>Investments in personnel development</td>
<td>48%</td>
<td>53%</td>
<td>+6 pp</td>
</tr>
</tbody>
</table>

Trends

Expansion into new markets and new product launches are priority development strategies for manufacturers in 2017. It proves the identified trend for manufacturing industry recovery.

In the meantime, the so called “anti-crisis plans”, e.g. cost cutting in Russia, are becoming less urgent (–11 pp).

Highlights

- While foreign companies indicated new product launches as their top priority strategy (85 percent), Russian companies named expansion into new markets (79 percent).
- Despite a decrease in the importance of the cost cutting strategy in Russia, foreign companies still consider it one of the most important ones (65 percent).
- Metal product manufacturers more often reported plans for import substitution in the Russian market (+15 pps above the average).
- BRICS and North America were indicated as the most important markets for global expansion of chemical manufacturers (63 percent and 63 percent, respectively).
- Larger manufactures more often tend to consider plans for extending production and technological capacities, with 87 percent of companies with a headcount above 5,000 employees. These companies also more often make plans for reducing procurement of raw materials and equipment from foreign producers (61 percent).

Priority international markets:

- More exports to the Customs Union (53 percent);
- More exports to BRICS (45 percent);
- More exports to North America (40 percent).
Managing companies in the current market conditions

Economic expectations: HR strategies in the manufacturing industry

How do you think your company’s headcount and the average salary of each personnel category will change?

Headcount adjustment

<table>
<thead>
<tr>
<th>Personnel Category</th>
<th>≤−0,75%</th>
<th>−0,75%−0,50%</th>
<th>0,50%−1,00%</th>
<th>1,00%−1,75%</th>
<th>1,75%−3,00%</th>
<th>&gt;3,00%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Executive</td>
<td>21%</td>
<td>17%</td>
<td>16%</td>
<td>15%</td>
<td>11%</td>
<td>9%</td>
</tr>
<tr>
<td>Administrative staff</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>Production staff</td>
<td>3%</td>
<td>4%</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>Optimisation professionals</td>
<td>2%</td>
<td>2%</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
</tr>
</tbody>
</table>

Pay adjustment

<table>
<thead>
<tr>
<th>Personnel Category</th>
<th>≤0,75%</th>
<th>0,75%−1,00%</th>
<th>1,00%−1,75%</th>
<th>1,75%−3,50%</th>
<th>≥3,50%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Executive</td>
<td>47%</td>
<td>47%</td>
<td>41%</td>
<td>44%</td>
<td>47%</td>
</tr>
<tr>
<td>Administrative staff</td>
<td>47%</td>
<td>32%</td>
<td>50%</td>
<td>41%</td>
<td>44%</td>
</tr>
<tr>
<td>Production staff</td>
<td>16%</td>
<td>16%</td>
<td>23%</td>
<td>11%</td>
<td>13%</td>
</tr>
<tr>
<td>Optimisation professionals</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
</tr>
</tbody>
</table>

Trends

A significant number of companies (35–50 percent) do not consider wage or salary adjustments. Given an inflation forecast of 4 percent, this indicates a decrease in real income of employees. However, those companies who expect to adjust wages and salaries are planning adjustments that are relatively in line with inflation level.

About 50 percent of companies do not plan any headcount adjustments. Companies that are planning adjustments are equally divided on their expectations, with 24 percent expecting their headcount to increase within a 5-percent range while another 24 percent expect the opposite within the same range.

Highlights

- In general, auto, aircraft and ship manufacturers are planning a 4-percent reduction for administrative staff on average.
- Foreign companies expect to increase both their headcount and average pay for all employee categories mentioned, particularly for optimisation professionals (+7 pp and +7 pp, respectively).
- Manufacturers with a share of exports above 25 percent reported the highest expected average pay increase by about 6.3 percent.
Managing companies in the current market conditions

Strategies for working with suppliers

Has your company made any changes in its work with suppliers or does it plan to?

- Yes, we have made changes in suppliers
- No changes in suppliers
- Yes, we plan changes
- No, we do not plan any changes

Trends

Only 16 percent note no changes in suppliers in the last 12 months and no plans to make changes in the near future.

In 2016, the most popular supplier strategies were the expansion of the supplier network (41 percent) and the adjustment of the supplier structure without increasing the total number of suppliers (36 percent).

In 2017, expanding the supplier network is the top strategy (47 percent).

Highlights

- In 2016, foreign companies were more focused on the expansion of the supplier network (+16 pp above the average).
- Auto, aircraft and ship manufacturers relied on this strategy less often (-11 pp) and have less plans to do so in the future (-10 pp).
- Even though, compared to other companies, machinery producers more often make plans to change the supplier structure without increasing the total number of suppliers (+10 pp), the expansion of the supplier network remains their top strategy (41 percent).
Managing companies in the current market conditions

Strategies for working with suppliers

Specify whether any changes in the share of imported raw materials and components/machinery and equipment occurred in 2016 or will be introduced in 2017. Why?

Components and raw materials

- 19% (4%) more in 2016
- 40% (13%) less in 2016
- 6% (6%) in 2016
- 12% (11%) in 2017
- 5% (11%) in 2017
- 17% (17%) in 2016
- 41% (43%) in 2017

Machinery and equipment

- 33% (4%) more in 2016
- 19% (24%) less in 2016
- 4% (7%) in 2016
- 12% (13%) in 2017
- 5% (11%) in 2017
- 16% (16%) in 2017
- 40% (43%) in 2017

- In 2016, most companies (59 percent) reduced imports in their raw materials procurement structure and another 41 percent plan to implement this strategy in 2017. Only 8 percent increased imports as part of the procurement of raw materials and 15 percent have plans to do so. One third (33 percent) of companies continue with the same procurement structure and 44 percent do not plan changes in the future.

- In 2016, a significant number of companies (53 percent) reduced a share of imported equipment and 41 percent plan to do so in the future. At the same time, every sixth company (17 percent) increased a share of imported equipment and has the same plans for the future.
Managing companies in the current market conditions

Strategies for working with suppliers

- Specifying whether any changes in the share of imported raw materials and components/machinery and equipment occurred in 2016 or will be introduced in 2017.

### Reasons for lower use of imports*
- Higher prices for imports: 50% 10%
- Lower prices for local products: 25% 10%
- Lower quality of imports: 9% 7%
- Higher quality of local products: 55% 10%
- Lower quality of related services offered by foreign suppliers: 4% 9%
- Higher quality of related services offered by Russian suppliers: 11% 16%
- Lower efficiency of foreign suppliers: 3% 9%
- Higher efficiency of Russian suppliers: 15% 14%
- Not possible to use imported products/there are political risks: 15% 9%
- Other: 4% 16%

### Reasons for higher use of imports*
- Lower prices for imports: 55% 25%
- Higher prices for local products: 25% 17%
- Higher quality of imports: 5% 17%
- Lower quality of local products: 15% 10%
- Higher quality of related services offered by foreign suppliers: 25% 26%
- Lower quality of related services offered by Russian suppliers: 25% 33%
- Higher efficiency of foreign suppliers: 14% 57%
- Lower efficiency of Russian suppliers: 17% 11%
- Exit from the market for Russian products: 0% 9%
- Other: 5% 9%

- The key reason for a decreased share of imports in the procurement structure stems from the increase in prices for foreign products as a result the weaker ruble (59–70 percent). However, it should also be noted that Russian suppliers have become more efficient, with 20 percent of the respondents reporting lower prices for Russian products and 20–24 percent indicating higher quality.

- As mentioned earlier, the strategy for higher use of imports is implemented by a significantly lower number of companies participating in the survey. However, the reasons causing them to do so are of particular interest. For example, respondents cited better quality of related services and the effectiveness of foreign suppliers as the main reason, followed by improvements in the quality and price of products. These responses highlight the existing issues with suppliers, meaning that Russian suppliers have quality as a potential area for improvement.

* Responses from the companies that have implemented this strategy
Managing companies in the current market conditions

Energy efficiency strategies

Does your company plan to reduce energy costs and costs for purchasing energy resources? If yes, please specify the priority methods.

Measures to Boost Energy Efficiency

<table>
<thead>
<tr>
<th>Measures to Boost Energy Efficiency</th>
<th>2016</th>
<th>2017</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enhancement of technological processes and implementation of cutting-edge energy-saving technology</td>
<td>35%</td>
<td>58%</td>
<td>+23 pp</td>
</tr>
<tr>
<td>Prevention of direct energy losses through equipment and networks</td>
<td>33%</td>
<td>35%</td>
<td>+2 pp</td>
</tr>
<tr>
<td>Reduction in the acceptable rate of defective products</td>
<td>20%</td>
<td>15%</td>
<td>-5 pp</td>
</tr>
<tr>
<td>Reduction in the acceptable loss rates in production processes across the enterprise</td>
<td>16%</td>
<td>30%</td>
<td>-14 pp</td>
</tr>
<tr>
<td>Installation of in-house power generator</td>
<td>8%</td>
<td>18%</td>
<td>+10 pp</td>
</tr>
<tr>
<td>No, we have no plans for reducing energy waste and energy costs</td>
<td>3%</td>
<td>9%</td>
<td>-6 pp</td>
</tr>
</tbody>
</table>

Trends

- Over the past year, the share of companies concerned about the energy efficiency has increased by 9 percentage points. 77 percent of the companies surveyed have planned the relevant measures.
- However, the companies have become focused on using one or two approaches that resulted in a decrease in the number of companies planned to take specific measures.

Highlights

- Enhancement of technological processes and implementation of cutting-edge energy-saving technology (35 percent)
  Chemical producers (+11 pp above the average) and foreign manufacturers (+10 pp) more often point to the need for enhancing technological processes and implementing cutting-edge energy-saving solutions.
- Prevention of direct energy losses through equipment and networks (33 percent)
  Industrial equipment manufacturers see this strategy as the most appropriate option.
- Reduction in the acceptable rate of defective products (20 percent)
  This strategy was more often named by auto, aircraft and ship producers (+11 pp) and metal product manufacturers (+15 pp).
Sources of capital
Sources of capital

The attractiveness of external financing sources for supporting and growing the business

Are you planning to use external sources of financing in the near future to support and develop your business?

- Yes, we have
- No, we do not have

Do you have experience in attracting foreign investment? If yes, how would you assess the non-financial effect of such cooperation?

- Yes, with positive effect
- Yes, but with ambiguous effect
- Yes, but with negative effect

Trends

- Of the companies surveyed, 69 percent have plans to raise external investment.
- Such plans quite often include several sources of capital.
- More than half of the companies (57 percent) indicate the attractiveness of government investment while only 38 percent state the same for foreign investment.
- Most respondents (58 percent) have experience in raising foreign investment and the majority of companies using foreign investment also report a positive non-financial impact from the cooperation with investors (63 percent).

Highlights

- While opting for foreign investment less frequently (46 percent), chemical producers more often note a positive non-financial impact from the cooperation with foreign investors (83 percent).
- Foreign companies use foreign investments more often than Russian companies (90 percent vs 54 percent, respectively), and they also more often see a positive non-financial effect of their use (89 percent vs 56 percent, respectively).

Net balance

- Russian private investment
- Russian government investment
- Foreign investment

- Yes, we have
- No, we do not have

50% 57% 38% 56% 43% 62% 0% 14% 36%
The attractiveness of external financing sources for supporting and growing the business

1. Are you planning to use external sources of financing in the near future to support and develop your business?

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>All</td>
<td>14%</td>
<td>16%</td>
<td>18%</td>
</tr>
<tr>
<td>Metal products and ship manufacturing</td>
<td>15%</td>
<td>17%</td>
<td>19%</td>
</tr>
<tr>
<td>Chemicals</td>
<td>16%</td>
<td>18%</td>
<td>20%</td>
</tr>
<tr>
<td>Motor vehicles</td>
<td>17%</td>
<td>19%</td>
<td>21%</td>
</tr>
<tr>
<td>Foreign companies</td>
<td>17%</td>
<td>19%</td>
<td>21%</td>
</tr>
<tr>
<td>Below RUB 100b</td>
<td>18%</td>
<td>20%</td>
<td>22%</td>
</tr>
<tr>
<td>From RUB 100b to RUB 500b</td>
<td>19%</td>
<td>21%</td>
<td>23%</td>
</tr>
<tr>
<td>Over RUB 500b</td>
<td>20%</td>
<td>22%</td>
<td>24%</td>
</tr>
<tr>
<td>Less than 5%</td>
<td>21%</td>
<td>23%</td>
<td>25%</td>
</tr>
<tr>
<td>From 5% to 25%</td>
<td>22%</td>
<td>24%</td>
<td>26%</td>
</tr>
<tr>
<td>Above 25%</td>
<td>23%</td>
<td>25%</td>
<td>27%</td>
</tr>
<tr>
<td>Below 1,000 employees</td>
<td>24%</td>
<td>26%</td>
<td>28%</td>
</tr>
<tr>
<td>From 1,001 to 5,000 employees</td>
<td>25%</td>
<td>27%</td>
<td>29%</td>
</tr>
<tr>
<td>Over 5,000 employees</td>
<td>26%</td>
<td>28%</td>
<td>30%</td>
</tr>
<tr>
<td>1–2 years</td>
<td>27%</td>
<td>29%</td>
<td>31%</td>
</tr>
<tr>
<td>3–5 years</td>
<td>28%</td>
<td>30%</td>
<td>32%</td>
</tr>
<tr>
<td>Over 5 years</td>
<td>29%</td>
<td>31%</td>
<td>33%</td>
</tr>
</tbody>
</table>

Highlights

- Businesses with larger revenue, headcount and a higher share of income from exports more often tend to make plans for attracting external financing. Companies with revenue above RUB 50 billion demonstrate the highest rate of responses, with 70 percent planning to obtain government and private finance and 57 percent making plans for foreign investment.

- Industrial equipment producers clearly more often indicated that they have plans for attracting external investment (72 percent).

- Compared to Russian companies (60 percent), foreign companies obtain government funding less often (40 percent).

- Government investment primarily flow to large companies with a headcount of 5,000 people (a net balance of +58 percent), a revenue above RUB 50 billion (a net balance of +39 percent), a share of exports above 25 percent in revenue (a net balance of +37 percent) and a long-term strategy with at least a 5-year horizon (a net balance of +35 percent).
Sources of capital

Debt refinancing

How important is loan refinancing to your business now?

Trends

- Of the respondents surveyed, 65 percent have recognized the importance of loan refinancing for their businesses. However, the aggregate level of importance remains unchanged from the previous year (18 percent).

- This year a decrease is observed in the importance of debt refinancing for metal product manufacturers (-21 pp) and for car and plane makers, as well as shipbuilders (-29 pp). At the same time, this issue has become more important for chemical manufacturers (+23 pp).

Highlights

- Businesses with larger revenue and higher headcount more often note the need for debt refinancing. Thus, companies with a headcount above 5,000 people place the highest importance on debt refinancing (42 percent).

- Foreign manufacturers report a much lower need for debt refinancing, with only 40 percent indicating it. At the same time, 68 percent of Russian companies say that this need is high on their agenda.
Sources of capital

### The attractiveness of various forms of financing

<table>
<thead>
<tr>
<th>Source</th>
<th>Attractiveness Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal funding sources</td>
<td>62%</td>
</tr>
<tr>
<td>Government funding</td>
<td>47%</td>
</tr>
<tr>
<td>Strategic partnership</td>
<td>31%</td>
</tr>
<tr>
<td>Russian bank loans</td>
<td>19%</td>
</tr>
<tr>
<td>Foreign bank loans</td>
<td>-8%</td>
</tr>
<tr>
<td>Shares</td>
<td>-13%</td>
</tr>
<tr>
<td>Loans from investment funds</td>
<td>-15%</td>
</tr>
<tr>
<td>Bonds</td>
<td>-22%</td>
</tr>
</tbody>
</table>

(The specified numbers indicate a net balance between those who consider the source attractive and those who do not)

### Trends

- **Internal funding** continues as the most attractive source for manufacturers (a net balance of +62 percent), with an absolute majority (89 percent) indicating so.
- **Government financing** falls somewhat behind (a net balance of +47 percent), with 79 percent responding positively.
- An interesting finding is the differing perception of loans from Russian (+19 percent) and foreign banks (-8 percent).
- **Public debt financing** in the form of bonds and shares (a net balance of -22 percent and -13 percent, respectively), as well as loans from investment funds (-15 percent) has the lowest appeal.

**Note:** The specified numbers indicate a net balance between those who consider the source attractive and those who do not.
Highlights

- Auto, aircraft and ship producers are more inclined to look for funding in the form of foreign bank loans and securities (+19 pp and +24 pp above the average, respectively).
- With a net balance of -46 percent, chemical producers demonstrate the most negative view on loans from investment funds. At the same time, metal product manufacturers are generally neutral on this form of funding (a net balance of 0 percent).
- Government funding has the highest appeal for machinery manufacturers.

Strategic partnership and internal resources are not shown on the chart since there are no significant characteristics for the areas analysed.

(The specified numbers indicate a net balance)
Sources of capital

The attractiveness of various forms of financing

<table>
<thead>
<tr>
<th>Sources of capital</th>
<th>All</th>
<th>Russian company</th>
<th>Foreign company</th>
<th>Less than RUB 10bn</th>
<th>From RUB 10bn to RUB 50bn</th>
<th>More than RUB 50bn</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal funding sources</td>
<td>-15%</td>
<td>-12%</td>
<td>-22%</td>
<td>-55%</td>
<td>-22%</td>
<td>-10%</td>
</tr>
<tr>
<td>Government funding</td>
<td>62%</td>
<td>58%</td>
<td>82%</td>
<td>43%</td>
<td>60%</td>
<td>82%</td>
</tr>
<tr>
<td>Strategic partnership</td>
<td>-19%</td>
<td>-14%</td>
<td>-11%</td>
<td>-11%</td>
<td>-10%</td>
<td>-14%</td>
</tr>
<tr>
<td>Russian bank loans</td>
<td>-47%</td>
<td>-23%</td>
<td>6%</td>
<td>14%</td>
<td>14%</td>
<td>14%</td>
</tr>
<tr>
<td>Foreign bank loans</td>
<td>31%</td>
<td>38%</td>
<td>22%</td>
<td>18%</td>
<td>5%</td>
<td>5%</td>
</tr>
<tr>
<td>Shares</td>
<td>-8%</td>
<td>-15%</td>
<td>53%</td>
<td>27%</td>
<td>6%</td>
<td>6%</td>
</tr>
<tr>
<td>Bonds</td>
<td>-22%</td>
<td>-11%</td>
<td>6%</td>
<td>9%</td>
<td>3%</td>
<td>3%</td>
</tr>
<tr>
<td>Loans from investment funds</td>
<td>-20%</td>
<td>-11%</td>
<td>83%</td>
<td>-11%</td>
<td>-12%</td>
<td>-12%</td>
</tr>
</tbody>
</table>

(The specified numbers indicate a net balance)

Highlights

- Larger companies with a revenue above RUB 50 billion are positive on almost all of the sources analysed.
- Companies with a revenue below RUB 10 billion cannot use public debt financing because debt placement costs are too high for smaller issues. Such companies are also negative on loans from investment funds and foreign banks (a net balance of –55 percent and –23 percent, respectively). Small businesses can only count on internal finance sources and government investments.
Government support for the Russian manufacturing sector
Government support to the Russian manufacturing sector

Effectiveness of government support for the development of the Russian manufacturing sector

How would you assess the efficiency of the government’s efforts to support and develop the manufacturing industry in Russia?

Trends

• The integrated assessment of the government support for business and development of the Russian manufacturing industry has increased by 0.2 points from 2016 and scored 1.7 at the three-point scale, indicating an average satisfaction of the business with government efforts.

• However, almost half of the respondents (45 percent) rated the efficiency of government support lower than the average. Only 11 percent of the respondents surveyed consider state support to be high.

Highlights

• Companies with a headcount above 5,000 employees assigned the highest rates to state support for business (2.1 points out of 3). As noted previously, 79 percent of these companies indicated plans for attracting government investment.

• Manufacturers with larger headcount and revenue and companies with a higher share of exports in revenue are inclined to rate the efficiency of state support higher. This is due to the fact that government support programmes are mainly focused on larger manufacturers.

• Auto, aircraft and ship producers rated the state support for business higher, at 1.8 points, while with chemical producers, it was by 0.2 points lower below the average.

An expert’s view

Government support for 2017 has been approved. Total government support for the car manufacturing industry is RUB 62 billion.

Tatiana Kofanova
Director, Deloitte CIS
Government support to the Russian manufacturing sector

Influence of state measures on the manufacturing sector in Russia

What impact do the following government measures of support to the Russian manufacturing sector have on your business?

<table>
<thead>
<tr>
<th>Top-5 state measures positively affecting the Russian manufacturing sector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Innovation support (26 percent)</td>
</tr>
<tr>
<td>Labor safety regulations (18 percent)</td>
</tr>
<tr>
<td>Public procurement participation terms (17 percent)</td>
</tr>
<tr>
<td>Intellectual property protection regulations (16 percent)</td>
</tr>
<tr>
<td>Policy of incentives for direct investment (15 percent)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Top-3 state measures negatively affecting the Russian manufacturing sector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy policy (energy tariffs) (-25 percent)</td>
</tr>
<tr>
<td>Industry taxation (-21 percent)</td>
</tr>
<tr>
<td>Taxation of foreign income (-8 percent)</td>
</tr>
</tbody>
</table>

Trends

- Among government regulation initiatives, innovation support is rated the highest by manufacturers (+26 percent).
- At the same time, the effect of the energy policy, in particular the energy tariffs, is regarded by manufacturers as negative (-25%).

Highlights

- Companies with a headcount above 5,000 employees most often tended to respond positively when asked about labour safety regulations (+22 pps above the average).
- Companies with smaller revenue and headcount are more skeptical about public procurement participation terms. Specifically, manufacturers with a revenue below RUB 10 billion and companies with a headcount below 1,000 employees expressed an integrated assessment of -12 and -19 percentage points below the average.
- Companies with a revenue above RUB 50 billion were more positive on policy of incentives for direct investment (+20 pps above the average).
- Metal product manufacturers note the highest negative impact from energy tariffs (-34 percent)
Government support to the Russian manufacturing sector

Priority types of state support for business

1 What kind of government incentive would be best for your company?

<table>
<thead>
<tr>
<th>Priority types of state support</th>
<th>2017</th>
<th>2016</th>
<th>+/–pp</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public procurement orders</td>
<td>32%</td>
<td>15%</td>
<td>+17 pp</td>
</tr>
<tr>
<td>Tax and other financial benefits</td>
<td>26%</td>
<td>25%</td>
<td>–8 pp</td>
</tr>
<tr>
<td>Investment in physical infrastructure</td>
<td>12%</td>
<td>20%</td>
<td>–9 pp</td>
</tr>
<tr>
<td>Investment in vocational education</td>
<td>10%</td>
<td>10%</td>
<td></td>
</tr>
<tr>
<td>Training blue collar workers</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Innovation support</td>
<td>8%</td>
<td>17%</td>
<td>–9 pp</td>
</tr>
<tr>
<td>Investment in higher education</td>
<td>1%</td>
<td>5%</td>
<td></td>
</tr>
<tr>
<td>Training managers</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Trends

• This year a number of companies which regard the placement of orders for their products as the most preferable form of government support saw an increase (+17 pp).

• At the same time, forms of support such as investments in infrastructure and innovation development slightly decreased in terms of significance (–8 pp and –9 pp, respectively).

• It should be noted that investing in specialized secondary education is more important (+9 pp) than in higher education, according to industry experts. Once again, this highlights the identified shortage in the number of qualified blue-collar specialists.

Highlights

• Companies with a focus on the domestic market are most interested in public procurement orders (50 percent).

• Auto, aircraft and ship manufacturers show a significantly higher interest in grants and subsidies (+20 pps).

• Industry equipment producers and metal product manufacturers have the highest interest in tax and other financial incentives (39 percent and 36 percent, respectively).

• Foreign companies are notably more interested in innovation support (+12 pps above the average).

Top-3 forms of government support for manufacturing companies in Russia

• Public procurement orders (32 percent)

• Tax and other financial benefits (26 percent)

• Investment in physical infrastructure (12 percent)
Innovative activity of the Russian manufacturing sector
Innovative activity of the manufacturing companies in Russia

Innovations at manufacturing companies

According to the Russian Federal Statistics Service, 13.3 percent of Russian manufacturing companies were engaged in innovative activities, with expenditures on innovations totaling RUB 576.9 billion in 2015. Technological innovations account for the bulk of expenditures.

The structure of innovation expenditures

Technological innovation expenditures by segment, RUB million

<table>
<thead>
<tr>
<th>Technology</th>
<th>Expenditure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acquisition of advanced equipment and machines</td>
<td>246,685</td>
</tr>
<tr>
<td>R&amp;D</td>
<td>132,509</td>
</tr>
<tr>
<td>Engineering</td>
<td>83,027</td>
</tr>
<tr>
<td>Design</td>
<td>13,600</td>
</tr>
<tr>
<td>Acquisition of new technologies</td>
<td>9,660</td>
</tr>
<tr>
<td>Acquisition of software</td>
<td>5,345</td>
</tr>
<tr>
<td>Marketing research</td>
<td>1,840</td>
</tr>
<tr>
<td>Personnel training</td>
<td>727</td>
</tr>
<tr>
<td>Other</td>
<td>70,096</td>
</tr>
</tbody>
</table>

Source: Russian Federal Statistics Service

Types of innovations*

• Technological innovations:
  - Product innovations — the launch of new or significantly enhanced products and services (including the improvement of technical specifications, components and materials, built-in software, usability, etc.);
  - Process innovations — the launch of new or significantly enhanced production or product delivery methods (including significant changes in technologies, production equipment and/or software);
• Organizational innovations — the launch of new organizational methods in the corporate business practices, workplace organization or external ties;
• Marketing innovations — the implementation of new marketing methods including significant changes in the product design or packaging, market placement, promotion or price setting.

The biggest innovation expense for manufacturing companies is acquisition of advanced equipment and machines (44 percent), while 24 percent of expenditures goes to research and development.

In-house research and development represents a higher-level innovation process, which provides access to the latest products and technologies, as well as allows the company to benefit from them for a longer period of time. From a macroeconomic standpoint, this increases the competitiveness of Russian companies, as well as the research and technical potential of the manufacturing sector.

According to the Russian Federal Statistics Service, 13.3 percent of Russian manufacturing companies were engaged in innovative activities, with expenditures on innovations totaling RUB 576.9 billion in 2015. Technological innovations account for the bulk of expenditures.

*Terminology corresponds to the Oslo Manual (the Guidelines for Collecting and Interpreting Innovation Data developed by the Organisation for Economic Cooperation and Development (OECD) and the Statistical Office of the European Communities).
Innovative activity of the manufacturing companies in Russia

Innovative activity types

Please, specify how your company defines innovation.

Trends

• The top requested innovations: introduction of advanced production technologies (43 percent) and launch of technically new or advanced products (32 percent).
• Organizational innovations, i.e., new business methods, organization of working places, external ties, are top innovation priority for 17 percent of the companies, while the remaining eight percent focused on marketing innovations (drastic changes in design and packaging, new sales and promotion methods, new pricing strategies).

Highlights

• Process innovations are most important for metals companies which in most cases use them to cut production costs (64 percent).
• Chemical companies often aim to implement product innovations at their plants (33 percent).
• Russian companies mostly focus on process innovations (48 percent), while foreign companies are keen to implement product innovations (56 percent).
• Companies with short-term strategies (1–2 years) attach more importance to organizational innovations (43 percent) and marketing innovations (29 percent).
Innovative activity of the manufacturing companies in Russia

Innovative activity expenditures

Please specify, how much of the revenue (in percentage terms) was spent on innovation in 2016 and is planned to be spent in 2017–2018.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>More than 20%</td>
<td>11%</td>
<td>4%</td>
</tr>
<tr>
<td>16%–20%</td>
<td>38%</td>
<td>21%</td>
</tr>
<tr>
<td>11%–15%</td>
<td>38%</td>
<td>36%</td>
</tr>
<tr>
<td>5%–10%</td>
<td>27%</td>
<td>33%</td>
</tr>
<tr>
<td>Less than 5%</td>
<td>1%</td>
<td>6%</td>
</tr>
</tbody>
</table>

94%* of the surveyed CFOs of leading manufacturing companies in Russia stated the need enhancing the economic efficiency of business functions through automation of the key business processes.

72%* of the surveyed CFOs of leading manufacturing companies in Russia stated that they take part in the evaluation of new technology solutions and launch of innovative projects in their companies.

Trends

According to our latest research on the financial climate in Russia (CFO Survey of the Leading Companies in Russia), a growing trend in interest by manufacturers for technological innovation and new digital solutions has been identified.

Over the past year, the average revenues spent on innovation and digital solutions grew by 0.5 percent to 9 percent, which in turn confirms the mentioned trend.

Highlights

- Foreign companies spend on innovation almost 1.5 times the share of innovation spending in Russian companies (12 versus 8 percent).
- Companies with high revenues invest in innovations more than the rest (by 2.5–3 percentage points).

* According to CFO Survey (first half of 2017)
Innovative activity of the manufacturing companies in Russia

Overview of innovation in manufacturing companies

Please, specify which activities your company performed in 2016 or plan to implement/continue in 2017–2018

<table>
<thead>
<tr>
<th>Activity</th>
<th>2017-2018</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acquisition of advanced equipment and machines</td>
<td>44%</td>
<td>51%</td>
</tr>
<tr>
<td>R&amp;D</td>
<td>37%</td>
<td>29%</td>
</tr>
<tr>
<td>Marketing research</td>
<td>32%</td>
<td>25%</td>
</tr>
<tr>
<td>Acquisition of technologies</td>
<td>32%</td>
<td>28%</td>
</tr>
<tr>
<td>Digitalization of business processes</td>
<td>14%</td>
<td>22%</td>
</tr>
</tbody>
</table>

Trends

In 2017–2018, manufacturers are planning to invest more than in 2016. In particular, every second company (51 percent) is planning to purchase advanced equipment; 44 percent of respondents are planning R&D, and 37 percent indicated the urgent need for market research.

Remarkably, demand for market research and digital solutions is notably higher compared with the previous year.

Highlights

- In 2016, foreign companies more often engaged in all above-mentioned types of innovative activities compared to Russian companies (up to 37 percentage points).
- The respondents expecting improvement in the positions of their companies more often state that their companies acquired advanced equipment in 2016 (80 percent), engaged in R&D (53 percent) and implemented digitalization of the business processes (47 percent).
Innovative activity of the manufacturing companies in Russia

Format of Research & Development

1. Please, specify the format of R&D in your company

- Dedicated division of the company: 80%
- Outsourcing: independent private company: 14%
- Government-owned higher education institutions and research centers: 6%

Trends
The absolute majority of the companies (80 percent) perform R&D in dedicated divisions.

Interestingly, manufacturers very rarely cooperate with technology parks, venture funds, and accelerators (less than 1 percent*) when there is a need for innovation.

Highlights
- Companies with revenue exceeding RUB 50 billion more often than others perform R&D in state-owned higher education institutions and research centers (25 percent); as a rule, they are institutions which have ties with the industry since the Soviet times.
- Manufacturers of machinery and chemical companies use R&D outsourcing more often than others (by 11 and 7 percentage points above the average).

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* According to CFO Survey (first half of 2017)
### Overview of Manufacturing Industry in Russia — 2017 | Results of the research

#### Innovative activity of the manufacturing companies in Russia

**Launch of innovative technologies**

Specify advanced technologies you have launched or plan to launch in 2017.

<table>
<thead>
<tr>
<th>Technology</th>
<th>Implemented</th>
<th>Planned</th>
<th>Neither implemented nor to be implemented</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDF</td>
<td>46%</td>
<td>38%</td>
<td>17%</td>
</tr>
<tr>
<td>Energy saving technologies</td>
<td>30%</td>
<td>42%</td>
<td>28%</td>
</tr>
<tr>
<td>Advanced ERP systems (CRM, SAP, etc.)</td>
<td>24%</td>
<td>33%</td>
<td>49%</td>
</tr>
<tr>
<td>Full automation of some business processes</td>
<td>22%</td>
<td>47%</td>
<td>31%</td>
</tr>
<tr>
<td>Full automation of business process chains</td>
<td>18%</td>
<td>44%</td>
<td>38%</td>
</tr>
<tr>
<td>Artificial intelligence, predictive analysis</td>
<td>16%</td>
<td>28%</td>
<td>56%</td>
</tr>
<tr>
<td>IoT (M2M, IoT technologies)</td>
<td>17%</td>
<td>29%</td>
<td>54%</td>
</tr>
<tr>
<td>Business process automation</td>
<td>14%</td>
<td>33%</td>
<td>53%</td>
</tr>
<tr>
<td>SSC</td>
<td>14%</td>
<td>33%</td>
<td>53%</td>
</tr>
<tr>
<td>Alternative energy sources</td>
<td>13%</td>
<td>22%</td>
<td>65%</td>
</tr>
<tr>
<td>Big data</td>
<td>10%</td>
<td>36%</td>
<td>54%</td>
</tr>
<tr>
<td>Enhanced or virtual reality</td>
<td>9%</td>
<td>15%</td>
<td>70%</td>
</tr>
<tr>
<td>Agile PMO</td>
<td>6%</td>
<td>26%</td>
<td>68%</td>
</tr>
<tr>
<td>Blockchain</td>
<td>4%</td>
<td>35%</td>
<td>65%</td>
</tr>
</tbody>
</table>

* According to CFO Survey (first half of 2017)

### Industry development by sophistication of technology (both implemented/being implemented) (on a scale of 0 to 1)*:

<table>
<thead>
<tr>
<th>Industry</th>
<th>Implemented</th>
<th>Planned</th>
<th>Neither implemented nor to be implemented</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technology, media, and telecommunications</td>
<td>0.20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manufacturing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consumer business</td>
<td>0.12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Financial service and insurance</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Energy and resources</td>
<td>0.08</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Financial service and insurance</td>
<td>0.06</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Technology, media, and telecommunications</td>
<td>0.09</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manufacturing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consumer business</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Financial service and insurance</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* According to CFO Survey (first half of 2017)

- **The key area for launching the advanced technology is full automation of some business processes and business process chains: almost a half of the companies (47 and 44 percent, respectively) plan to introduce them in the near future.**
- **Based on our research of the financial climate in Russia* (first half of 2017) and the information provided by the respondents, we have ranked industries by their technology level. Thus, the Technology, Media, and Telecommunications (TMT) industry tops the ranking in terms of the sophistication of implemented technology, while the manufacturing sector leads in terms of implementation plans.**
- **Interestingly, the priority technology development areas belong to the process innovation category favored by Russian manufacturing companies and aimed at cost reduction.**
- **The least in-demand technologies include virtual reality (-53 percent on the balance), agile PMOs (-36 percent), alternative energy sources (-31 percent) and blockchain (-25 percent).**

### Net balance between the companies which have already implemented the technology, are planning to implement it, and those which refused.

- **Implement**
- **Planned**
- **Neither implemented nor to be implemented**

---

* According to CFO Survey (first half of 2017)
Innovative activity
of the manufacturing companies in Russia

Electronic Document Flow

We asked the respondents whose companies have already implemented the electronic document flow (EDF) to specify how widely they use it; we also asked the representatives of the companies where EDF is not implemented or is used on a limited scale, to specify the reasons for not using it or using it on a limited scale.

1. Specify the frequency that the EDM system is used in your company:

- The EDM system is used frequently*
- The EDM system is used from time to time**

* At least three types of documents are in electronic format and certified by an enhanced encrypted signature, over 70% of all documents are sent and accepted electronically.

** The documents are accepted and kept in hard copy format while being scanned for processing purposes. Electronic documents certified by an enhanced encrypted signature are used rarely.

What is the main reason for rejecting the use/limiting the use of the EDM system in your company?

- Low commercial appeal of EDF and lack of incentives for allocating financing for implementation: 45%
- Lack of internal project resources: 23%
- Lack of knowledge about EDF (professional skills): 23%
- Financial constraints: 23%
- Lack of confidence in EDF, leadership's conservatism (paper flow appears more reliable): 18%

Trends

- EDF is the most wide-spread technology implemented by slightly less than half of manufacturing companies (46 percent). More than a half of them (70 percent) use EDF on a large scale.
- However, 17 percent of companies refused to use EDF.

Highlights

- The most widespread reason for non-use/limited use of EDF is low commercial appeal: 45 percent of the respondents believe it is not practical to stop using paper documents.
- Those who mention the insufficiency of personnel, financial and qualification resources as a constraint for EDF account for 23 percent in each category.
- Conservative approach to and lack of confidence in EDF stem from the fear of a hypothetical loss of electronic documents and remains quite widespread, too.
Innovative activity of the manufacturing companies in Russia

Trends

• In 2017 (and roughly in the next two years), the main constraints for the digital strategy implementation in manufacturing companies will be the organizational structure and staffing (82 and 76 percent of the companies surveyed as part of the CFO Survey of the Leading Companies in Russia, respectively, indicate these factors as ones preventing the development and implementation of digital technology and processes). Remarkably, this indicator is significantly higher than in other industries.

• Despite the fact that the business understands and is willing to adopt innovation and digital technology, the existing task distribution framework, including internal and external management, is deemed outdated and ill-prepared for the new market conditions.

• At the same time, the key drivers for digital strategy implementation in manufacturing companies are the market and the competition, which re-affirms the recovery processes in the economy (both in Russia and globally) and the natural demand for innovations and digital developments.

Drivers and barriers for the implementation of the digitalization strategy*

Which of the categories listed below are drivers or barriers in terms of digitalization strategy implementation in your company?

<table>
<thead>
<tr>
<th>Category</th>
<th>Drivers</th>
<th>Barriers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organizational structure</td>
<td>24%</td>
<td>81%</td>
</tr>
<tr>
<td>Management strategy</td>
<td>12%</td>
<td>88%</td>
</tr>
<tr>
<td>Accessibility of the infrastructure</td>
<td>35%</td>
<td>65%</td>
</tr>
<tr>
<td>Sources of financing</td>
<td>-65%</td>
<td>35%</td>
</tr>
<tr>
<td>Market and competition</td>
<td>-82%</td>
<td>18%</td>
</tr>
<tr>
<td>HR support</td>
<td>53%</td>
<td>47%</td>
</tr>
</tbody>
</table>

* According to CFO Survey (first half of 2017)
Urgent issues of doing business in Russia
Urgent issues of doing business in Russia

Automation of HR management process

How do you assess the need to automatize the HR management processes in your company and does your company plan to make any investments in technological solutions in this area?

- Yes, there is a need; we have budgeted the costs: 26%
- There is a need but we have not budgeted costs: 38%
- No, there is no need: 36%

The need for automation in the HR management process was indicated by 74 percent of manufacturers, yet half of them have not planned for such expenses for 2017.
Urgent issues of doing business in Russia

Allocation of tax functions to Shared Services Centers (SSC)

We asked the respondents whose companies have already launched or plan to launch Shared Services Centers whether they plan to allocate tax functions to SSC and to what extent.

Trends

Almost a half of the companies have already launched or plan to launch SSC. One third of them (47 percent) have already allocated or plan to allocate the operating and strategic tax processes to SSC, 35 percent allocate only the operating component to SSC and only 18 percent want to keep the tax processes at the level of the management company.

- Yes, but only the operating component of tax processes*
- Yes, both the operating* and strategic** components of tax processes
- No, we do not plan to implement tax processes via SSC

* the operating component of tax processes include tax accounting, preparation of tax reporting for some companies
** the strategic component of tax processes include tax policy development, overall control over tax processes at the company level
Urgent issues of doing business in Russia

Transition to Tax Monitoring

In 1 January 2015, a new type of tax control — tax monitoring — was introduced in Russia*. We asked the survey participants to specify the relevance of transition to tax monitoring for their companies, as well as transition plans, if any.

In the table below, the respondents who believe that tax monitoring transition is relevant to their company's operations:

- The majority of the respondents (62 percent) stated that the transition to tax monitoring would be practical for their companies.
- Meanwhile, 22 percent of the respondents were undecided and stated that their companies do not possess full information about tax monitoring in order to make such analysis.

Below are the respondents who believe that tax monitoring transition is relevant to their company’s operations:

- The majority of companies thinking that transition to tax monitoring is relevant for them (54 percent) have already completed the transition or plan to complete it in the foreseeable future;
- However, 36 percent of the respondents stated that their companies do not have the appropriate internal controls and business processes, which prevents the companies from implementing tax monitoring in the near future;
- Another 11 percent of the companies will not be able to implement tax monitoring for other reasons.

---

*Tax Monitoring is a method of expanded information exchange which allows a company to grant a tax authority direct online access to its financial and tax accounting data and in return becomes entitled, if in doubt, to request a reasoned opinion of a tax authority to clarify tax consequences of transactions.*

Source: the Federal Tax Service website
Urgent issues of doing business in Russia

Use of green technologies by manufacturing companies

Please select the statement that best describes the status of the green technologies applied by your company in order protect the environment and prevent pollution.

Trends
- Most companies (60 percent) apply green technologies on a large scale.
- Eighteen percent of the companies do not use them, while in 22 percent of cases the application is not very widespread.

* we make donations to environmental funds, regularly use environmentally friendly transportation and/or products, regularly inform our employees about respective news and scientific publications, apply waste separation, etc.

** we support the respective programs at the corporate level, use environmentally friendly transportation and/or products from time to time, inform our employees about respective news and scientific publications from time to time, apply waste separation from time to time, etc.

*** we support the respective programs as individual employee initiatives, rather seldom use environmentally friendly transportation and/or products, rather seldom inform our employees about respective news and scientific publications, rather seldom apply waste separation, etc.

- Use on a large scale*
- Use on a medium scale**
- Use on a low scale***
- Not used

15%
45%
22%
18%
Urgent issues of doing business in Russia

Trends

- Most companies of the manufacturing industry (61–65 percent) are prepared, or getting ready for the coming changes in the environmental regulation.
- However, a significant number of the companies (8–15 percent) have not started preparations yet due to lack of financing.
- Some respondents (9–13 percent) postponed preparation, believing that the changes will only have consequences in the distant future.

Approval of the Federal Law "On chemical safety"
Mandatory registration with Federal Supervisory Natural Resources Management Service (Rosprirodnadzor) for facilities causing negative environmental impact
Launch of the best available environmentally friendly technologies

Preparation for changes in the environmental legislation

We asked the respondents about how their companies prepare for the upcoming changes in the environmental regulation.

Ready to implement changes: 38% 40% 25%
Getting prepared to implement changes: 35% 23% 40%
No preparation, as changes are distant: 26% 35% 38%
No preparation due to lack of financing: 9% 13% 9%
No preparation due to lack of staff: 15% 8% 11%
No preparation due to lack of knowledge and skills: 2% 3% 4%
No preparation for other reasons: 4% 5% 5%
No preparation, as the changes will not apply to the company: 2% 3% 0%
No preparation, as the changes are distant: 7% 5% 7%

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03 State of the manufacturing sector in Russia
04 Main issues for the manufacturing sector
05 Managing companies in the current market conditions
06 Sources of capital
07 Government support to the manufacturing sector
08 Innovative activity of the manufacturing companies
09 Urgent issues of doing business in Russia
10 Our respondents
11 Appendix
Contacts
Our respondents
Our respondents

Companies by type
- Russian companies: 83%
- Foreign companies without localized production: 2%
- Foreign companies with localized production: 15%

Companies by core business
- Metal products: 30%
- Auto, aircraft and ship manufacturing: 16%
- Chemical production: 18%
- Machinery: 16%
- Other: 10%

Current development strategy
- 1-2 years: 25%
- 3-5 years: 26%
- 6-10 years: 16%
- over 10 years: 11%

Similarly to the previous year, most of the respondents represent Russian companies (83 percent).

The rest of the participants are foreign companies with localized production (15 percent), or without localized production (3 percent).

The majority of the respondents represent key reviewed industries:
- Metal products (30 percent);
- Auto, aircraft and ship building (26 percent);
- Chemical industry (18 percent);
- Industrial equipment (16 percent).

Almost a half of the companies which participated in the Survey (48 percent) have medium-term (3-5 year) strategies.

The planning horizon for 25 percent of companies exceeds ten years while only 11 percent of the respondents use short-term strategies (1-2 years).
Our respondents

One in five companies (19 percent) which took part in the Survey earns over RUB 100 billion in revenue. Almost one in four respondents represent companies with revenue of RUB 10–25 billion or less than RUB 10 billion.

Exports account for 5–25 percent in the revenue structure of nearly half of the respondents (48 percent). One in four companies are domestically oriented, while 12 percent of the Survey participants export over half of their output.

The majority of the respondents are specialists from major companies with a headcount exceeding 1,000 employees (60 percent). The rest represent smaller companies employing less than 100 employees (8 percent) and medium-sized companies (31 percent).
Appendix
Import volume significantly exceeds exports in all reviewed segments, except for metals and metal products. Therefore, import substitution remains one of the priority development areas.

Ruble devaluation and economic stagnation continue to depress domestic demand, leading to a drop in imports since 2014:

- metal products (–41 percent)
- chemical products (–27 percent)
- transportation means (–56 percent)
- machines and industrial equipment (–34 percent)

At the same time, a significant share of domestic production is exported, which significantly impacts the position of domestic manufacturing companies.

**Top-5 suppliers for the Russian manufacturing industry:**

- China (21 percent)
- Germany (11 percent)
- USA (6 percent)
- Belarus (5 percent)
- France (5 percent)

Large import volumes show that the capacity of Russian manufacturing companies and their product range do not meet domestic demand in the reviewed industries.

Import in the reviewed industries accounts for 66 percent of the total product range supplied from abroad, with the latter amounting to USD 182 billion.

At the same time, a significant share of domestic production is exported, which significantly impacts the position of domestic manufacturing companies.
Russian manufacturing sector in figures

External economic ties across industrial sectors. Export, 2016

Top-7 importers of manufacturing products
- Kazakhstan (7 percent)
- Belarus (7 percent)
- USA (7 percent)
- The Netherlands (6 percent)
- Turkey (6 percent)
- Ukraine (5 percent)
- China (5 percent)

Metals and metal products
- EU: USD 28,770 million (35%)
- EACU: USD 10,316 million (32%)
- BRICS: USD 10,448 million (22%)
- Asia, ex. other groups: USD 8,209 million (12%)

Chemical products
- EU: USD 20,776 million (31%)
- EACU: USD 10,316 million (17%)
- BRICS: USD 10,448 million (15%)
- Asia, ex. other groups: USD 10,316 million (13%)

Vehicles and ships
- EU: USD 5,968 million (22%)
- EACU: USD 1,177 million (4%)
- BRICS: USD 1,938 million (7%)
- Asia, ex. other groups: USD 8,209 million (32%)

Machinery and equipment
- EU: USD 10,934 million (21%)
- EACU: USD 1,938 million (4%)
- BRICS: USD 1,938 million (4%)
- Asia, ex. other groups: USD 8,209 million (17%)

Source: Federal Customs Service
Russian manufacturing sector in figures

Financing of manufacturing companies

<table>
<thead>
<tr>
<th>Lending volume, RUB billion</th>
<th>Loan book (RUB billion)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010 2,041 880</td>
<td>2010 662</td>
</tr>
<tr>
<td>2011 2,018 980</td>
<td>2011 740</td>
</tr>
<tr>
<td>2012 2,048 887</td>
<td>2012 1,622</td>
</tr>
<tr>
<td>2013 3,817 887</td>
<td>2013 1,133</td>
</tr>
<tr>
<td>2014 4,657 872</td>
<td>2014 1,097</td>
</tr>
<tr>
<td>2015 5,625 920</td>
<td>2015 1,313</td>
</tr>
<tr>
<td>2016 7,439 1,222</td>
<td>2016 2,003</td>
</tr>
<tr>
<td>1H 2017 7,033 947</td>
<td>1H 2017 621</td>
</tr>
</tbody>
</table>

- Currency lending volume is significantly down after 2014, even as demand for loans increased dramatically — lending volumes were up 26 percent in 2015 and stabilized at this level in 2016 (up 2 percent).
- The share of currency loans in loan books shrank in 2016–2017, partially due to the revaluation at a higher ruble rate and the companies’ willingness to repay FX loans, using the opportunity relating to the stronger ruble.
- The share of overdue loans remained relatively low (4.8 percent in 1H 2017), albeit above the 2014 levels (4.0 percent), which shows that manufacturing companies generally meet their debt servicing requirements.
Russian manufacturing sector in figures

Exchange rates and loan interest

Currency exchange rates

- Exchange rate trends were mixed: on the one hand, in 2016 the ruble average-weighted FX rate was 10 percent weaker than in 2015; on the other hand, starting from February 2016, the ruble steadily strengthened.

Interest rates on loans to non-FSI companies (over 12M)

- Average interest rates for non-financial companies gradually fell after May 2015;
- Still, in January 2017, the ruble loan rates were 2 percentage points higher than in January 2014;
- Interest rates on FX loans are back to their 2014 levels, but the share of foreign currency lending in total loan book dropped significantly (from 12.35 percent in 2014 to 9.51 percent in 2016).
Russian manufacturing sector in figures

**Employment in the manufacturing sector**

### The share in the employment structure

- **2010:** 15.4%
- **2011:** 15.2%
- **2012:** 15.0%
- **2013:** 14.8%
- **2014:** 14.6%
- **2015:** 14.4%
- **2016:** 14.2%

### Total employed

- **1,702** Other
- **140** Chemical products
- **834** Metal products
- **910** Auto, aircraft and ship manufacturing
- **1,098** Food industry (including tobacco)
- **1,337** Machines and equipment

**Trends**

- In 2016, manufacturing companies employed 14.4 percent of the working population in Russia, on average.
- In 2016, 6.5 million people worked at manufacturing companies.
- Industry wages averaged RUB 36,700 in 2016, which is 5 percent below Russian average wage.
- As at 1 January 2017, the total arrears of wages in Russia amounted to RUB 2.7 billion including RUB 1.6 billion (59 percent) in manufacturing companies.
Russian manufacturing sector in figures

Manufacturing production in Russia by industry. Transportation manufacturing

Production of transportation means in Russia

<table>
<thead>
<tr>
<th>Year</th>
<th>Production</th>
<th>Sales</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>300,000</td>
<td></td>
</tr>
<tr>
<td>2011</td>
<td>377,554</td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td>355,000</td>
<td></td>
</tr>
<tr>
<td>2013</td>
<td>363,932</td>
<td></td>
</tr>
<tr>
<td>2014</td>
<td>447,000</td>
<td></td>
</tr>
<tr>
<td>2015</td>
<td>389,000</td>
<td></td>
</tr>
<tr>
<td>2016</td>
<td>391,233</td>
<td></td>
</tr>
</tbody>
</table>

Source: Russian Federal Statistics Service

- The stagnation in the production of transportation means was largely driven by auto production decline.
- The automotive industry showed signs of recovery in 4Q 2016 and 1H 2017 after a slump which lasted four years.

An expert’s view

“Double-digit growth on the Russian car market continues for the third month in a row, unabated by the arrival of the peak holiday season. It appears that, finally, the middle-class buyer has woken up, encouraged by a brighter outlook on the economy and embracing the package of purchase incentives put together by the government. The recent sales trend is great news and feeding the optimism that 2017 will indeed become a turn-around year for the industry.”

Joerg Schreiber, Chairman of the AEB Automobile Manufacturers Committee
Russian manufacturing sector in figures

Manufacturing production in Russia by industry. Metals and metal products

Structure of the metals industry, 2015, RUB billion

- 4,359 (85%)
- 746 (15%)

Structure of the metals production, 2015, RUB billion

- 1,726 (40%)
- 1,831 (42%)
- 51 (1%)
- 596 (14%)
- 158 (3%)

Ferrous metals and ferrous metal products

- 100%
- 105%
- 110%
- 115%
- 120%
- 125%

Source: Russian Federal Statistics Service

Continued on the page 87
Russian manufacturing sector in figures

Manufacturing production in Russia by industry. Metals and metal products

- Manufacturing grew slowly, at 5.6 percent, in the metals segment (a 1.1 percent CAGR in five years). In cash terms, the market contracted by 37 percent.

- In 2016, the industry showed signs of stabilization: production grew slightly in key areas, while metal prices recovered

Non-ferrous metals

Source: Russian Federal Statistics Service
The period from Q1 2016 to Q1 2017 saw boosting prices across many of the base metals for the Russian economy, in particular (in U.S. dollar terms):

- Steel +65 percent;
- Aluminum + 15 percent;
- Copper +12 percent;
- Zinc +35%.

Metal price growth in 2016 and outlook for 2017

"2016 was a breakthrough year for the metals market. Zinc, steel, nickel, and iron ore prices led the gains. Next year, the rally is set to continue, analysts say."

Source: Elena Platonova, Gazeta.ru
Chemical production shows sustainable growth with a 5.3 percent CAGR.

Plastic and rubber products account for 13 percent of chemical output, making this segment the key contributor to its overall performance.

The slump in automotive production did not affect tire output: international producers continue to localize production in Russia, exporting the surplus.
In 2016, production of machinery stabilized, growing 1 percent year-on-year. The sharpest fall in the vehicles and equipment category was seen in the agricultural tractors segment (–8 percent vs. 2010), gas turbines (–31 percent) and overhead cranes (–33 percent).
Russian manufacturing sector in figures

**Investments in fixed assets**

Investments in the acquisition of machinery and equipment in the Russian Federation (in 2010 prices)

<table>
<thead>
<tr>
<th>Year</th>
<th>Investments, bln RUB</th>
<th>Growth rate, %</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>1473</td>
<td>0%</td>
</tr>
<tr>
<td>2011</td>
<td>3737</td>
<td>8%</td>
</tr>
<tr>
<td>2012</td>
<td>4018</td>
<td>8%</td>
</tr>
<tr>
<td>2013</td>
<td>4209</td>
<td>-5%</td>
</tr>
<tr>
<td>2014</td>
<td>3909</td>
<td>-5%</td>
</tr>
<tr>
<td>2015</td>
<td>2916</td>
<td>-22%</td>
</tr>
<tr>
<td>2016</td>
<td>3059</td>
<td>-8%</td>
</tr>
</tbody>
</table>

Investments in the acquisition of machinery and equipment in 2015–2016 in comparable prices (22–25 percent) are less in comparison with 2014.
Overview of Manufacturing Industry in Russia — 2017

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