Roland Berger Focus

August 2017

Polish industry outlook

Tackling the gap between labor costs and productivity

Roland Berger

50 years

navigating complexity

Management summary

Despite Poland's significant economic progress since the 1990s, much of Polish industry is hampered by a worsening labor cost-performance ratio, less and lower quality machinery and equipment than most other countries in the European Union (EU), and insufficient capital investment.

Industry 4.0 is already transforming industrial production in some of the world's most advanced economies. Having thoroughly analyzed Industry 4.0, consultancy Roland Berger is ready to advise and assist Polish companies keen to embrace the opportunities offered by this fourth industrial revolution. In particular we can help companies gain large and sustained increases in productivity and competitiveness in international markets.

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Poland at a crossroads

A post-transformation success story to date

CATCHING UP WITH EUROPE'S TOP ECONOMIES

Poland has been an economic success story since its transition, or transformation, from communism to capitalism, having cut its development gap with Western Europe almost by half. Helped by positive growth every year over the past 20 years, Poland's ratio of gross domestic product (GDP) per capita to the average level of EU-15[1] countries has increased from 36% to 63%. Gradual integration with European markets and joining the EU in 2004 has boosted growth. Recognized as a star emerging economy with long-term solid growth, Poland is the only country in Europe whose economy did not contract in the global financial crisis of 2007-2008.

POLAND: INDUSTRIAL POWERHOUSE

Industrial production plays a vital role in the Polish economy, just as it does in Poland's western neighbor, Germany. Close to 26% of total gross value added[2] is generated by industry, which is well above the EU average of 19%. It is therefore important to examine this vital sector's performance and outlook compared with international competitors. Poland's industrial sector encompasses three broad subsectors: manufacturing; mining; and energy, oil and gas[3]. The economy's almost 50 years of central planning and a focus on heavy industries can be seen in the relatively large share of energy, mining and metal production. However, significant shares are also attributable to major export sectors such as electronics and automotive. → A

LABOR COSTS 70% LOWER THAN IN GERMANY

These industries have boomed thanks to two key factors determining foreign companies' choice of investment location in labor-intensive industries, namely labor costs and market access. Hourly labor costs in Poland are among the lowest in the EU and are matched only by Poland's eastern neighbors and the newer member states of Southeastern Europe. At an average of under EUR 9 per hour, Polish employment costs are two-thirds less than in the EU as a whole, and over 70% less than in neighboring Germany. Added to that, Poland offers a highly educated and motivated workforce – 43% of people aged 25-34 hold a tertiary education degree, compared with an average of 38% in the EU.

"Industrial production plays a vital role in the Polish economy, generating 26% of total gross value added."

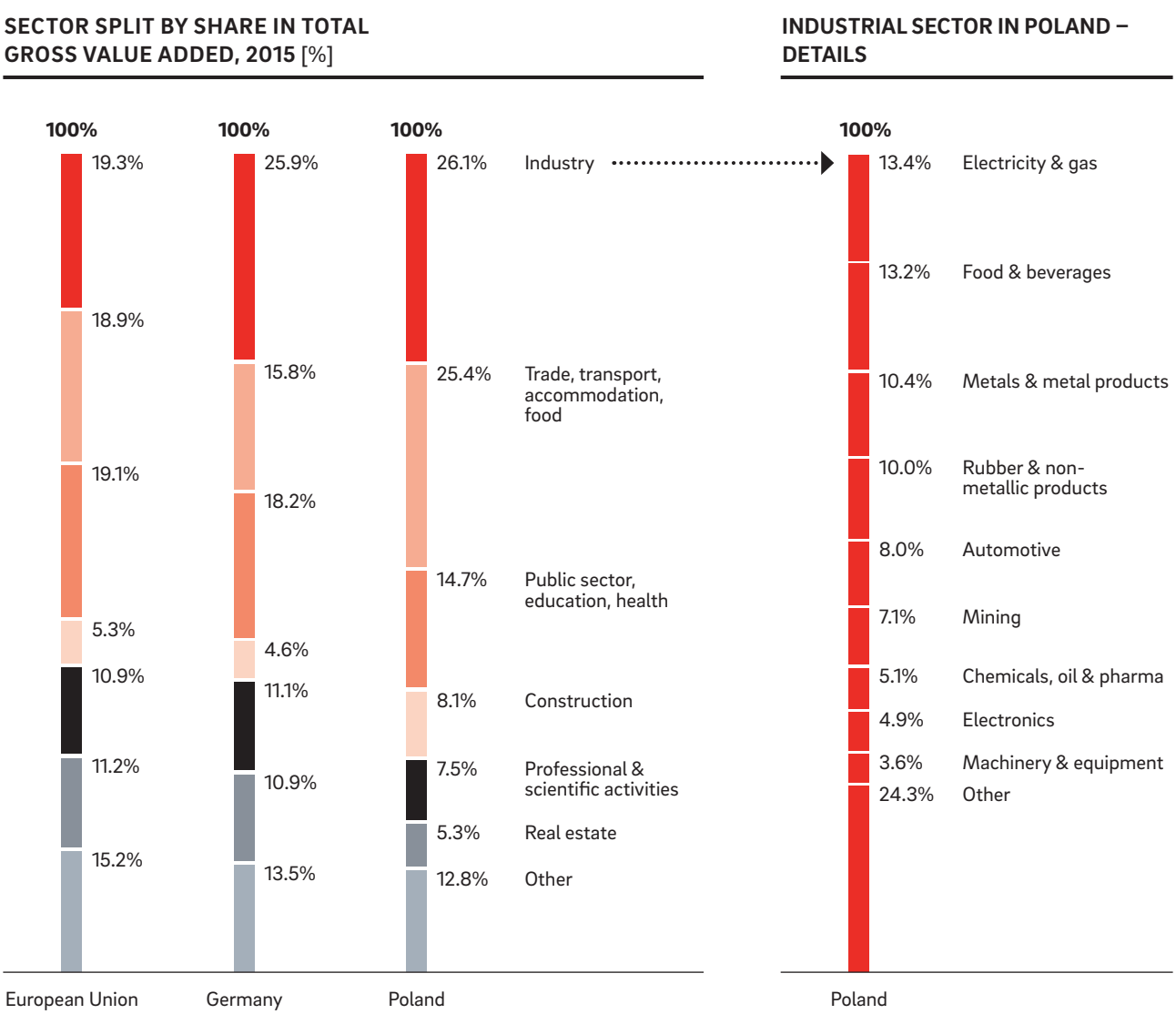
Lower labor costs, good access to the attractive markets of Western Europe, and rapidly improving transport infrastructure have helped to make Poland a popular location for manufacturing, logistics hubs and shared service centers. Indeed, both foreign direct investment and exports have surged since the transformation, especially following full opening of the internal EU market in 2004. Foreign direct investment is now 30 times higher than in 1995, while exports have increased nine-fold. The EU, and Germany in particular, are Poland's key trade partners.

Growth has also come from EU cohesion funds, of which Poland has been the largest recipient. The economy has benefited from access to EUR 67 billion in the years 2007-2013, and is allocated EUR 77 billion for 2014-2020. A large share of this is spent on innovation and development, and most of the remaining 40% on infrastructure. → B

[1] Belgium, Denmark, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, United Kingdom, Austria, Finland and Sweden. [2] Gross value added is the value of produced goods minus the cost of inputs.

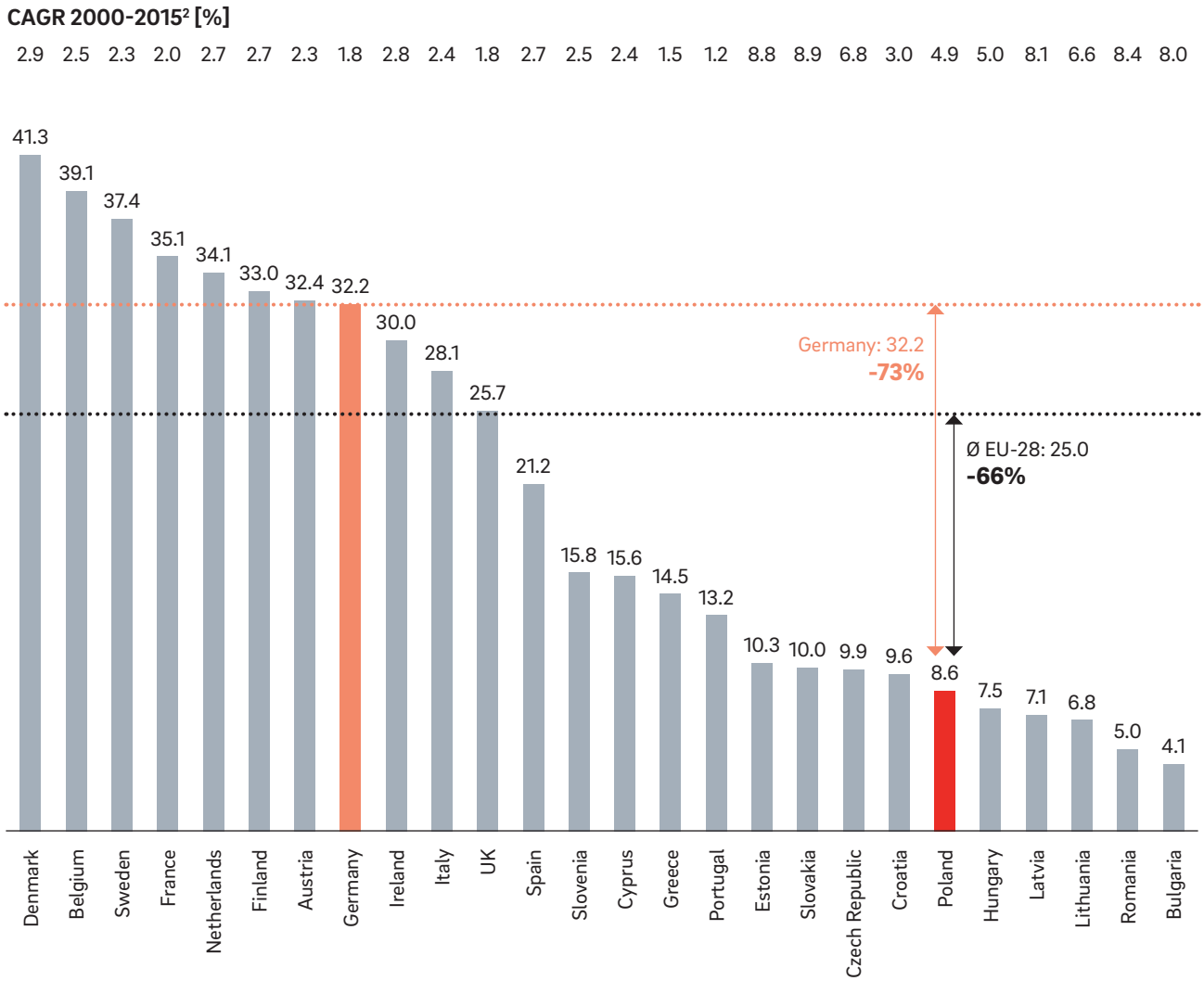
[3] The industrial sector is defined as Section B, C and D of NACE Rev. 2

A: Industry is a key sector of the Polish economy.
Share of industry in the economy.



Source: Eurostat, GUS, Roland Berger

B: Hourly labor costs in Poland average one third of those in the European Union.
Total labor cost per hour[1], 2015 [EUR].



1 EU-28, excluding Malta and Luxembourg; Industry, construction and services; Total labor cost is defined as wages plus social contributions
2 Greece: CAGR 2000-2014; France, Croatia, Austria, Sweden: CAGR 2004-2015

Source: Eurostat, Roland Berger

"There is a clear gap between rising labor costs and increasing productivity, and this gap is rapidly getting wider. Businesses and the government must face it – Poland's labor cost advantage is fading."

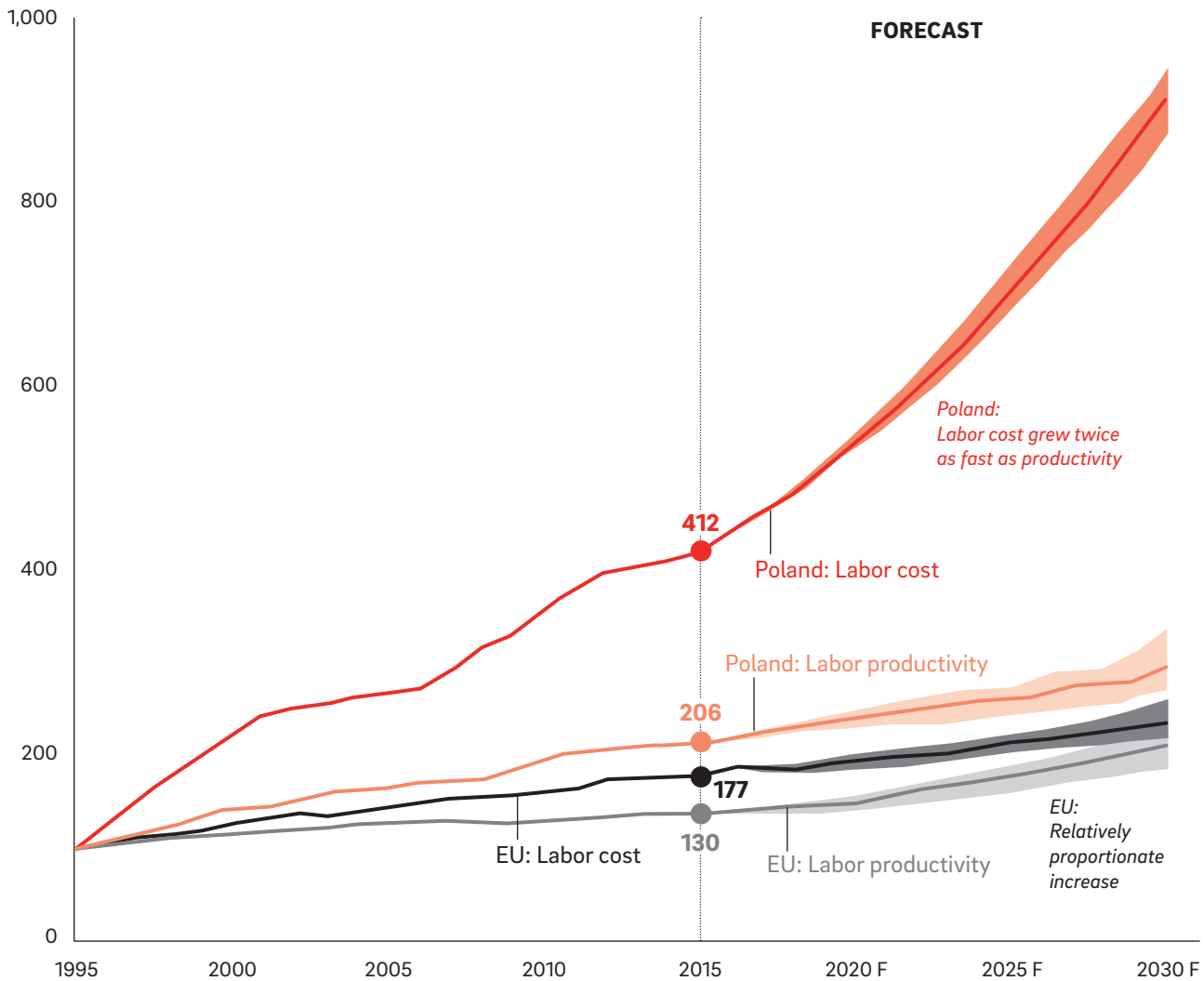
Relatively low labor costs provide a competitive advantage despite Poland having the fourth lowest productivity in the EU. Labor productivity, as measured by the gross domestic product per hour worked, is half that of France and Germany, and around 60% of the EU average. Productivity differs markedly between Western Europe and the EU's new member states, mainly due to the latter's past central planning and in particular the inefficient allocation of resources, underinvestment, obsolete technology, structural changes in the 1990s and a mismatch of skills. Until now though, lower costs have more than compensated for the productivity gap.

WEAKENING COST ADVANTAGE

Poland's cost advantage is not sustainable. Despite being much lower, at almost 5% a year Polish labor costs are rising far faster than the average of 2% in France and Germany. Labor costs have quadrupled since 1995, while productivity has only doubled. Polish wages are therefore catching up with the European average faster than productivity is, reducing competitiveness. Poland's fading cost advantage must be addressed by businesses and the government. → C

Furthermore, the Polish economy is undercapitalized, and increased investment will be insufficient to close the labor cost-productivity gap in the foreseeable future. On average, each worker in Poland is equipped with capital assets of lower value than in other European countries. This means less and lower quality machinery and equipment. At four to six times less than Western Europe and two to four times less than the Central and Eastern Europe region, the difference in asset value is quite striking. In addition, Polish industrial assets, and in particular machinery and equipment, are characterized by higher depreciation than in other European countries. While the degree of depreciation varies significantly by industry, from 50% in the oil industry to 75% in textiles, much Polish machinery looks limited, basic – and old. Again, this difference results from decades of underinvestment due to both poor economic decisions and, more recently, Polish companies' unwillingness to invest. If nothing changes, this will hinder their competitive performance in the future.

C: Benchmarking the extremes in terms of AuM, gross margin, and growth through net new money in 2016.
Gap in growth rates of labor productivity and labor cost, 1995-2015 [1995=100].



Source: Polish MoF, European Commission, Oxford Economics, OECD, Roland Berger

How Poland can remain competitive

Industry 4.0 is bringing new competitive gains and challenges

THE FOURTH INDUSTRIAL REVOLUTION IS HERE

Aware of the threat to their industrial sectors from low-cost countries, the world's most advanced economies are looking to gain the competitive edge using advanced technologies. The fourth industrial revolution, or Industry 4.0, is expected to transform the economy and disrupt the competitive status quo at country and company level. Industry 4.0 is the industrial application of concepts applied in digital transformation. Its key elements include complete connectivity in real time, smart, decentralized and self-optimizing systems, and modularity allowing for reconfiguration according to changing business and operational needs. Solutions such as 3D printing, virtual reality and predictive maintenance are already widely used and are transforming industrial production in some advanced economies. → D

ROLAND BERGER INDUSTRY 4.0 ADOPTION STUDY

Germany and the USA are among the leaders of the change, but other European countries and the industrial powerhouses of Asia have also announced initiatives to develop and support 'factories of the future'. Meanwhile, Poland remains hesitant about the opportunities offered by Industry 4.0.

Based on a recent Roland Berger study assessing European countries' readiness for Industry 4.0 solutions, Poland is among the bottom three economies in the Roland Berger Industry 4.0 Readiness Index. This index is based on production process sophistication, degree of automation, workforce readiness and innovation intensity ('industrial excellence'), as well as value added, industry openness, innovation network and internet sophistication ('value network'). Despite a relatively high share of and reliance on manufacturing in Poland, advanced technologies, innovation and openness are not present on a large scale. Realizing the importance and potential of ongoing changes is crucial to winning the competitiveness race. → E

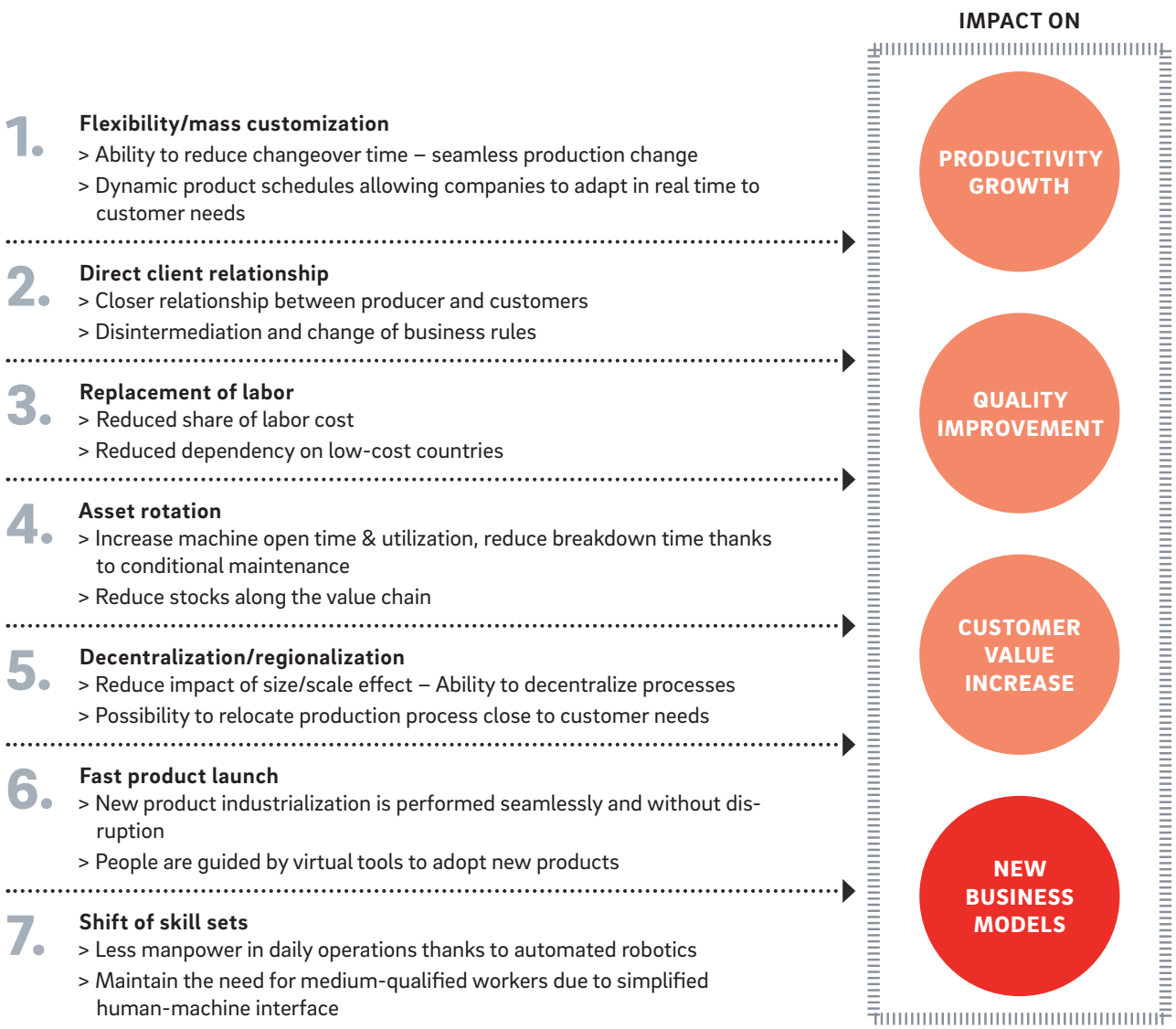
FOUR GROUPS OF INDUSTRIES FACE FOUR TYPES OF CHALLENGES

Polish industries vary by their degree of growth generated from investments in assets and their exposure to international markets. The first dimension, industry growth attributable to capital deepening and widening, is a proxy for the complexity of investments in fixed assets. Industries with a low rank are characterized by reliance on labor and hesitate to expand their asset base, either in terms of quality or quantity. Those with a high rank are asset growth leaders. The second dimension, share of exports, indicates the exposure to and reliance on foreign markets. This is important in two ways: industries with a high share of exports can be thought of as having a relative advantage compared with foreign competitors, since they have captured a share of the international market. However, they are also potentially at risk of being affected by Industry 4.0 disruption in the advanced economies they export to. All industries can be split into four groups with different characteristics. → F

High-potential exporters comprise industries which both have a competitive advantage internationally, and generate a large share of their growth from investments in fixed assets. These include two export stars of Poland, automotive suppliers and electronics manufacturers. Companies in this group have a high potential to compete in the fourth industrial revolution and even emerge stronger, but at the same time are highly exposed to competitors who invest in Industry 4.0 solutions.

Capital-intensive local players invest significantly in improving their asset base, but nevertheless focus on the local market. They tend to include heavy industries, such as oil and gas, and mining, although the food and beverages industry is also present here. It might be tempting to think that these companies are local by nature, however, international examples clearly show that even mining products can be exported if competitive enough.

D: Industry 4.0 will have a fundamental impact – Companies that adapt will benefit from new opportunities, others are threatened.
Impact of Industry 4.0.

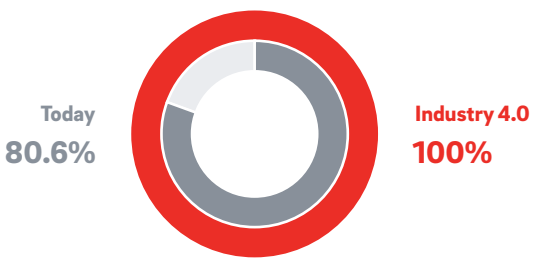


Source: Roland Berger

E: Impact of Industry 4.0 for a typical automative supplier.
Six performance areas are affected to a different extent.

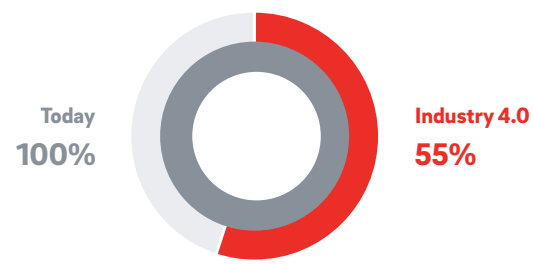
PROFITABILITY

CAPITAL TURNOVER (SALES/INVESTED CAPITAL)

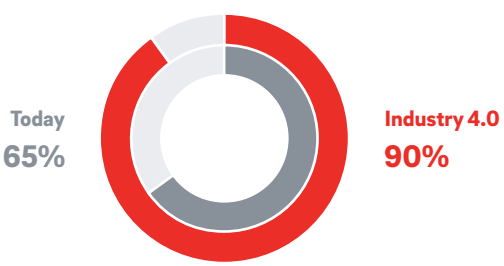


RETURN ON CAPITAL EMPLOYED (ROCE)

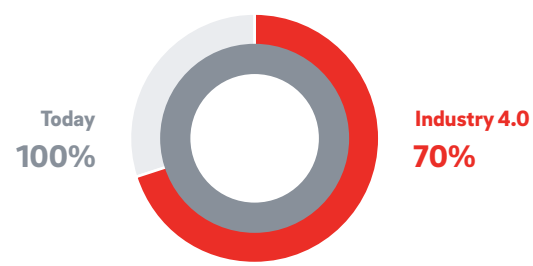
PERSONNEL COSTS



CAPACITY UTILIZATION OF PLANTS

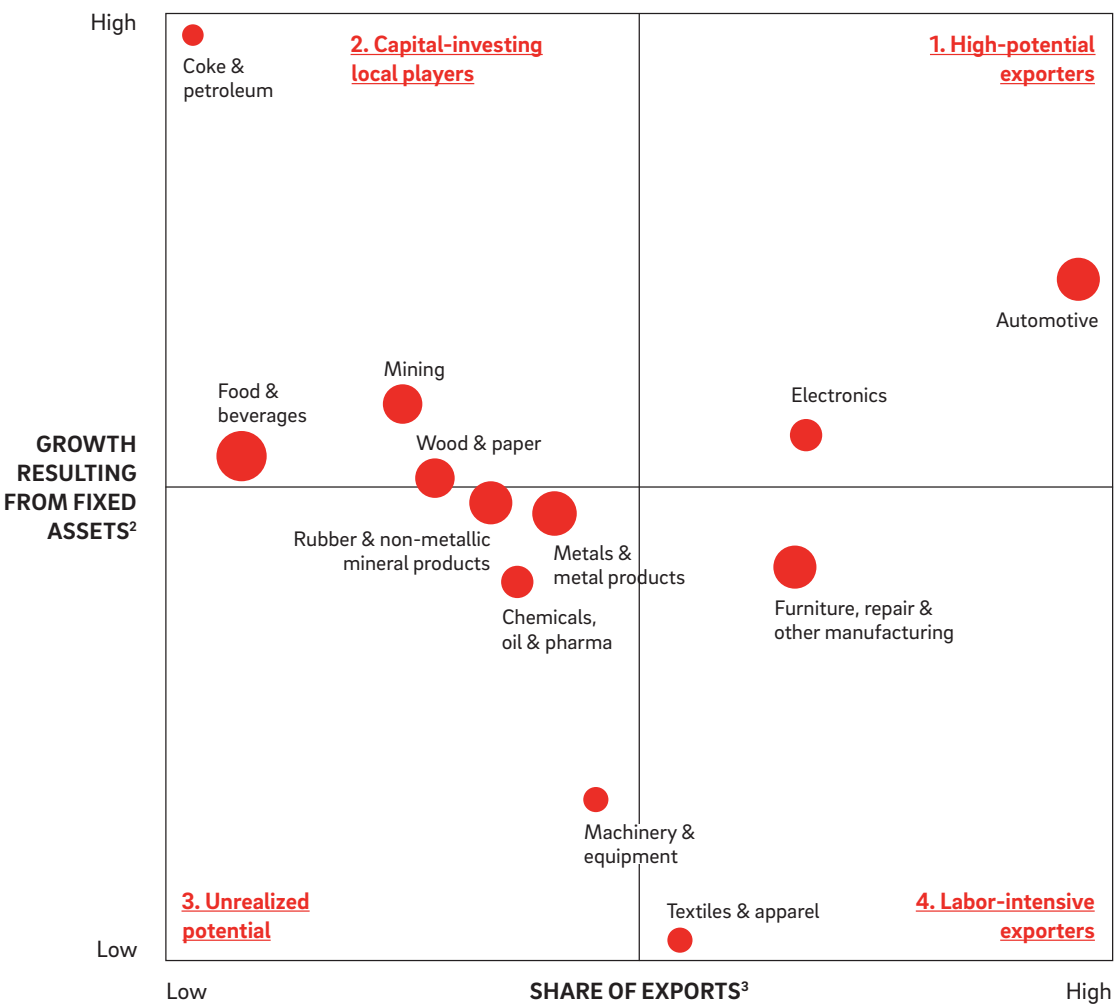


MACHINE PARK



Source: Roland Berger

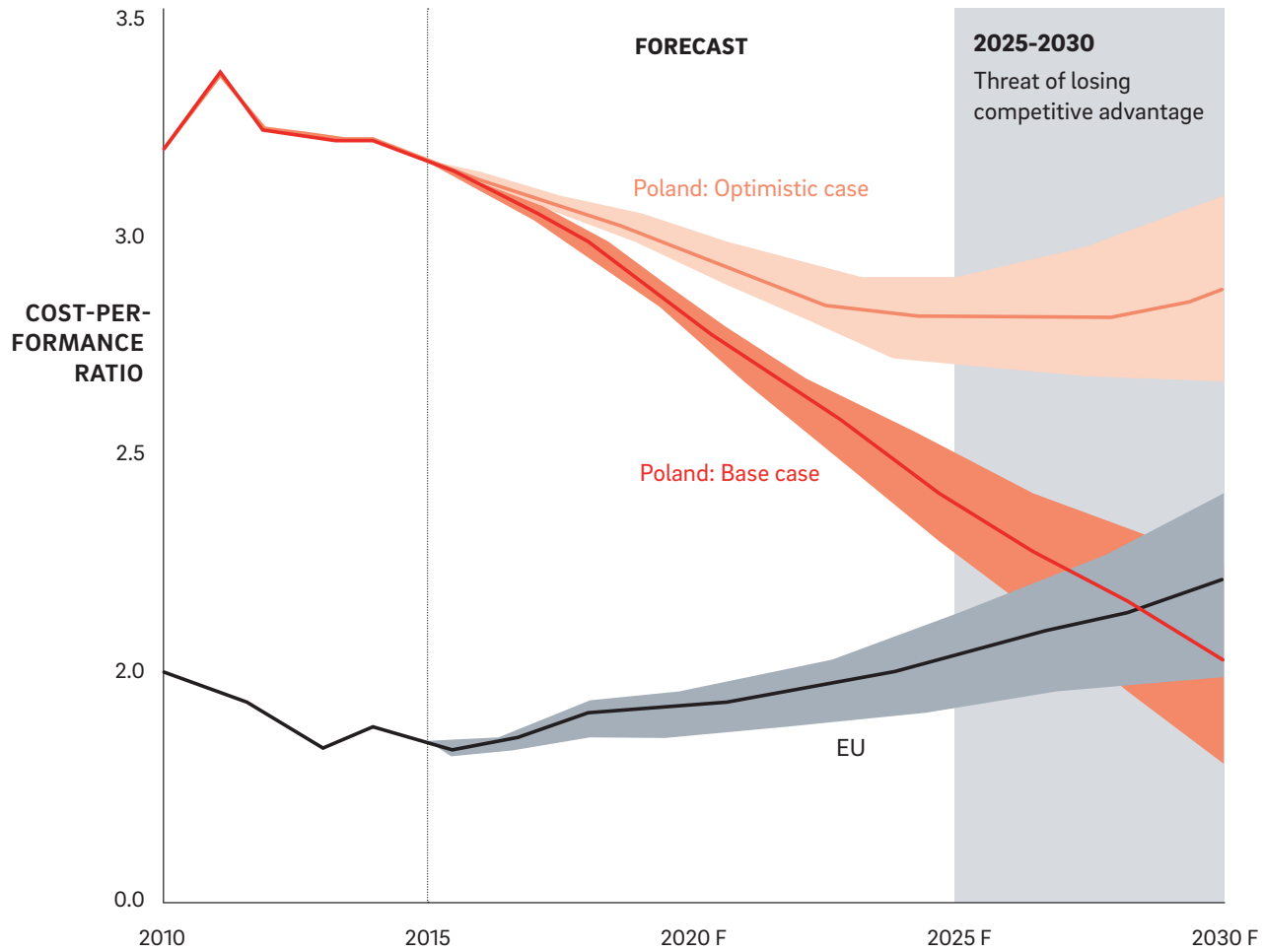
F: Polish industries differ by fixed asset performance and degree of international exposure.
Asset growth performance vs. export performance by industry[1].



1 Manufacturing and mining (NACE Rev. 2 section B and C). 2 Growth generated from capital deepening, calculated as the share of capital contribution to GDP growth (KLEMS methodology, 2009-2014 average) adjusted for industry size. 3 Calculated as the share of export value in total production value, 2013 (latest available data).

Source: Roland Berger

G: Given trends in labor costs and productivity, Poland could lose its cost advantage in about 10-15 years.
Expected development of labor cost-performance ratio[1] in Poland and the EU.



1 Labor cost-performance ratio is defined as labor productivity (EUR '000) over total labor costs (EUR '000)

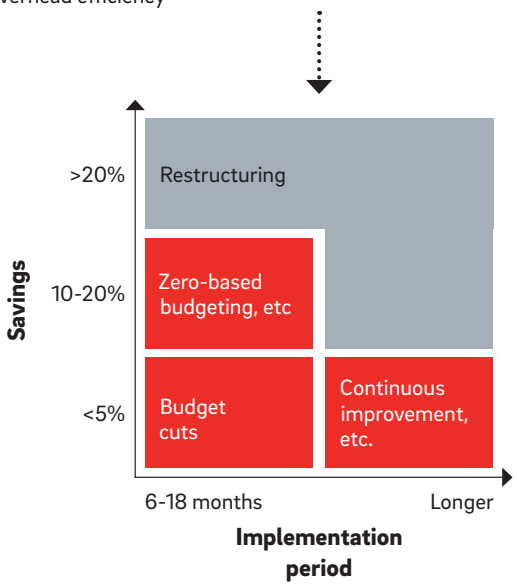
Source: Polish MoF, European Commission, Oxford Economics, OECD, Roland Berger

H: We cover a broad spectrum of performance improvement aspects and strategic topics to increase company value and win the market.
Service portfolio at a glance.

A. VALUE CREATION **B. TRANSFORMATION**

Transformation & strategic topics

1 Industry 4.0/ digital	2 Corporate finance	3 Operations strategy	4 Transformation/ leadership/HR	5 Restructuring & corporate performance
Selected products				
Industry 4.0 and automation	Buy-side/sell-side	Strategic orientation	Organization	Financial, operational, strategic restructuring
Digital business models	Distressed M&A	Efficiency increase	HR	Corporate performance
Smart data and multi-channel	Target search	Recruiting	Transformation	CRO
Cloud and enablement technologies	Validation	Performance improvement	Overhead efficiency	
	Joint ventures	Product value management		
	IPO	Purchasing strategy		
	Debt advisors	Shared services		
	etc.	Service excellence		
		etc.		



Source: Roland Berger

The unrealized potential group includes sectors that are neither competitive internationally, nor making the large capital investments needed to improve. They tend to use assets that often require modernization to match their competitors' technologies. The low export share suggests scope to increase competitiveness in international markets.

Labor-intensive exporters are companies that compete almost entirely on low manufacturing costs, and disregard improvements in fixed assets. Despite having a competitive advantage now, they are the most likely to be affected by rising labor costs.

BASE CASE SCENARIO: WAIT AND SEE COMPETITORS GROW

All things unchanged, the gap between labor costs and productivity can be expected to widen further, and Poland's labor cost-performance ratio will continue to deteriorate. The historically low and weak asset base and insufficient capital investment will probably weaken the growth of capital-intensive local players, who may eventually slip to the bottom-left quadrant. On the other hand, both high-potential and labor-intensive exporters will need to face directly the increased competitive pressure from international players enjoying the productivity gains offered by Industry 4.0 solutions. If Polish exporters do not radically improve productivity and keep competing on costs, cost performance is projected to fall by around a third, risking the loss of foreign markets. This may happen during the next 10 to 15 years and the cost advantage many companies have relied on will no longer be there. → G

INDUSTRY 4.0 SCENARIO: URGENT TRANSFORMATION AND VALUE CREATION INITIATIVES

Much more optimistically, there is another scenario for the Polish industrial sector that depends on companies realizing the urgent need for important change and finding new sources of competitive advantage. If they take action by improving the key pillars of business performance and exploring the opportunities offered by Industry 4.0, they should be able to improve productivity enough to offset the adverse trends. These new stimuli can raise the productivity of Polish industry to initially counteract worsening cost performance, and in the long run create sustained additional competitive advantage relative to the EU. If no action is taken now, it will be more difficult to catch up in the future.

EACH COMPANY NEEDS DIFFERENT SOLUTIONS FOR ITS SPECIFIC CHALLENGES

What can industrial companies do to respond to these challenges and future-proof their businesses? The type and range of possible measures vary for each group. High-potential exporters are well positioned for focusing on value creation, Industry 4.0 deployment, and developing new business models. Their lack of total reliance on low labor costs but their major dependence on international markets means they should invest in advanced technologies and fine-tune their operations to compete head-on with large international players. → H

However, companies in the **unrealized potential** group need to take care of the basics first. A thorough transformation program focused on increasing financial and operational performance would enable these companies to optimize key functions and cut costs. Some may even require redefinition of their strategic orientation and core business models to secure future growth. **Capital-intensive local players** and **labor-based exporters** are heterogeneous groups which may require a mix of both transformation and value creation initiatives. Since all businesses are different, there is no 'one-size-fits-all' solution and specific recommendations must be developed on a case-by-case basis.

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WE WELCOME YOUR QUESTIONS, COMMENTS AND SUGGESTIONS

AUTHORS

Torsten Henzelmann
Senior Partner
+49 160 744-8185
torsten.henzelmann@rolandberger.com

Tomasz Narloch
Executive Advisor
+48 608 284 618
tomasz.narloch@org.rolandberger.com

Konrad Gruda
Executive Advisor
+48 601 364 303
konrad.gruda@org.rolandberger.com

About us

Roland Berger, founded in 1967, is the only leading global consultancy of German heritage and European origin. With 2,400 employees working from 34 countries, we have successful operations in all major international markets. Our 50 offices are located in the key global business hubs. The consultancy is an independent partnership owned exclusively by 220 Partners.

Navigating Complexity

For half a century, Roland Berger has helped its clients manage change. Looking at the next 50 years, we are committed to supporting our clients conquer the next frontier. To us, this means navigating the complexities that define our times. We help our clients draft and implement responsive strategies essential to success that lasts.

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ROLAND BERGER GMBH
OpernTurm
Bockenheimer Landstraße 2 – 8
60306 Frankfurt am Main
Germany