

THE CASE OF THE CHEMICALS INDUSTRY & THE MODERN INDUSTRIAL ECONOMY

The chemicals industry is indispensable to the modern industrial economy. However, the solutions it provides for global challenges and the investment and jobs it supports, can only be guaranteed if the industry is able to compete on a global basis. This article considers what pro-competitiveness policies can look like in a modern Turkish and European industrial economy, touching on energy, better regulation, trade and innovation, and the crucial role of training and development opportunities for the innovators of the future. Finally, the article looks at the opportunities and challenges offered by the circular economy and the importance of striking the right policy balance to support competitiveness and growth.

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The chemicals industry plays a vital role in the modern industrial economy. The materials it develops and manufactures go into a truly astonishing range of products that we all use every day. From packaging to containers, footwear to personal health, building and construction, to water treatment and energy efficiency, the list is nearly endless. Scores of other industries and thousands of individual businesses depend on chemicals as a basic building block of the industrial economy. It is an industry that can truly be described as indispensable. And it is an industry that can help solve some of the biggest challenges facing our societies, including resource scarcity, access to clean drinking water, food security, and rising energy consumption. It is an industry to be proud of but not one to take for granted.

As with every building block industry, the products made, the value chains supported, the jobs created, and the solutions engineered, can only be guaranteed if the industry is able to compete on a global basis. And this is an area of concern. In Europe as a whole, the chemicals sector is simply not competing effectively enough to attract its fair share of global investment. A few figures make this point very effectively. Over the past decade, Europe's share of total world economic growth has been around 25 percent, probably more than most people think. However, when it comes to the chemicals sector, Europe has only managed to secure about two percent of total world growth. In other words, Europe has missed out on more than 20 percent of growth in its own backyard. The story is generally similar even in the more rapidly expanding Turkish economy. This may seem discouraging, but the good news is that just a few changes could put Turkey and the EU in a position to compete much more effectively for their fair share of global industrial investment.¹ It is important to consider what these pro-competitiveness policies can look like in a modern industrial economy.

Energy Policy

The first key area is energy policy. Getting energy policy right is crucially important for industrial competitiveness in general and for the chemicals sector in particular. Hydrocarbons are the foundation of the chemicals industry, where they are used both for fuel and feedstock. Shale oil and gas development in the US and recent events in the global markets, have shown that oil and gas resources are cost competitive and a long way from exhaustion. At the same time, renewables can make a substantial contribution to a lower carbon economy, but they need to be cost competitive at market scale, and this should be the underlying policy objective. On the journey to a lower carbon world, it is important to look for the most cost effective vehicle

¹ In this article, "Europe" refers to the Council of Europe and is inclusive of all member states.

for systematic reduction of carbon dioxide and other greenhouse gas emissions. An emissions trading scheme along the lines of the EU can deliver on this objective in the electricity generation and industrial sector, as long as it is clear that the purpose is not to raise financing for renewables, or indeed any particular form of energy, but to meet greenhouse gas targets at the lowest cost to the economy. Looked at this way, the EU Emissions Trading Scheme (ETS) is doing a good job and doing it well.

Beyond this, the principles you would expect to find in an effective energy policy are clear. Firstly, the energy market needs to be connected and dynamic; it needs to encourage competing sources of internal and external supply, and it should enable energy users to select their preferred energy supply mix and contractual arrangements. A competitive economy also needs energy policies that minimize the additional costs on energy supplies, rather than adding to them through taxes, levies, and surcharges, as we see today in many parts of Europe. It simply cannot make sense when these added costs mean that the end-user price of electricity adds up to many times the wholesale market level.

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It is also essential that the non-industrial part of the economy, such as buildings and agriculture, delivers its full share of targeted greenhouse gas reductions. In the EU, for example, buildings alone are responsible for 36 percent of all CO₂ emissions. In practice, this means more emphasis on energy efficiency, on insulation for buildings and domestic appliances, on lightweight materials and packaging for transport, and on high strength materials for efficient renewable energy generation. These are all areas where the products of the chemicals sector will make an indispensable contribution.

Better Regulation

Important though it is, energy is only one part of the policy mix for building industrial competitiveness. Another is the crucial need for better regulation. The chemicals industry is a strong supporter of efficient and effective regulation to support public confidence. However, regulation also needs to be carefully framed in order to encourage and not damage innovation and growth. The objective of better regulation should be better risk management, to find a balanced approach that supports and does not block new ideas and innovation, while at the same time protecting the environment and public health. Seen from this perspective, better regulation should be written on

the basis of the best available scientific evidence, with the impact on innovation and competitiveness fully taken into account. Smarter and better regulation will support innovation and competitiveness, and avoid uncompetitive and unproductive costs that hurt the entire economy.

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For this reason, support is steadily growing in Europe for the introduction of the Innovation Principle in EU policymaking, legislation, and regulatory practice. The Innovation Principle simply says that “whenever legislation or regulation is under consideration, the impact on innovation should be assessed and addressed.” In other words, if policy makers agree that innovation is important, it should be treated as important in all aspects of regulatory decision making. It is a sound principle that deserves to be widely incorporated into legislative and regulatory practice.

Trade

It is clear that our world is truly global, and we in Europe cannot act in isolation. We all depend on trade, and open trade remains the key to economic prosperity and industrial success. It is fundamentally important that regional and global initiatives to lift barriers to trade are successfully realized, including the proposed Transatlantic Trade and Investment Partnership (TTIP). Given the opposition expressed by some stakeholders, the arguments for open and integrated trade need to be fully and unambiguously heard. With open trade, better regulation, and more competitive energy markets, there is no reason why Turkey and the EU cannot maintain and strengthen their role in the global manufacturing sector. However, for true global success, one more magic ingredient is needed, and this word has already been mentioned a number of times in this article.

Innovation

Innovation is where Turkey and the EU, and in particular the young people of Turkey and the EU, can play a crucial role. The need is for world-beating science, exceptional engineering, the best products and services, and better business models. The challenge is simply to be the best in every aspect of business. There is only one way to achieve this: by investing in people. It is clear that schools and universities have a key role to play as they empower great students and deliver unique training and development opportunities for the innovators of the future. Companies can also play an important part by developing chemical and other industry professionals

that think in original ways, challenge conventions and aim for excellence. These expectations need to be reflected in business partnerships with universities and research institutes, in collaboration with customers and suppliers, and as a responsible member of the communities where companies have their operations and facilities.

Circular Economy

There is one particular area where it will be crucially important to ensure the right mix of regulation, innovation, and competitiveness, and this is the circular economy. The commitment to the most efficient use and re-use of raw materials through their life cycle lies at the heart of the circular economy. It is a concept that is widely supported in the industry. The circular economy figures prominently, for example, in Dow's recently published

2025 Sustainability Goals. And many of the products of the chemicals industry do exactly what the circular economy asks. In terms of the low carbon economy McKinsey estimates, for example, that every ton of CO₂ emitted by the chemical industry helps to save 2.5 tons of CO₂ through the lifetime of the products made. At a major Dow chemicals plant in Spain, the water used in the cooling towers comes from a circular process that dramatically reduces the amount of water taken from the nearby River Ebro and significantly reduces ecological stress on the region.

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The European Commission in Brussels recently adopted an ambitious new package to stimulate the transition towards a circular economy in Europe. The chemicals industry welcomes this move and is engaged in active dialogue in Brussels and many other capital cities on policy direction. The details are important. If handled correctly, the circular economy could provide Turkish and European manufacturing with a valuable opportunity for innovation and growth, but there is also the risk of adding new regulatory and cost burdens that will damage industrial competitiveness. Again we see the need for Turkey's and the EU's legislators to support rather than damage competitiveness, and it is vital that all the stakeholders have and make full use of the opportunity to be heard in the policy debate.

Conclusion

Indeed, this is the main message to be taken away from the Turkish and the EU industry today. There is a huge opportunity to compete and succeed in the global

economy. All across the region we have world-class universities, research clusters, innovative start-ups, international businesses, integrated supply chains, and some of the best and most dedicated minds in the world available and looking for opportunities. There is a huge opportunity for governments to give the industry the best possible chance to succeed through competitive energy policies, better and more pro-innovation regulation and open trade. The potential is there and if the policies are right, there is every reason to feel confident about the future of the industry in Turkey and the EU and about its contribution to a prosperous, innovative, and increasingly sustainable economy.