



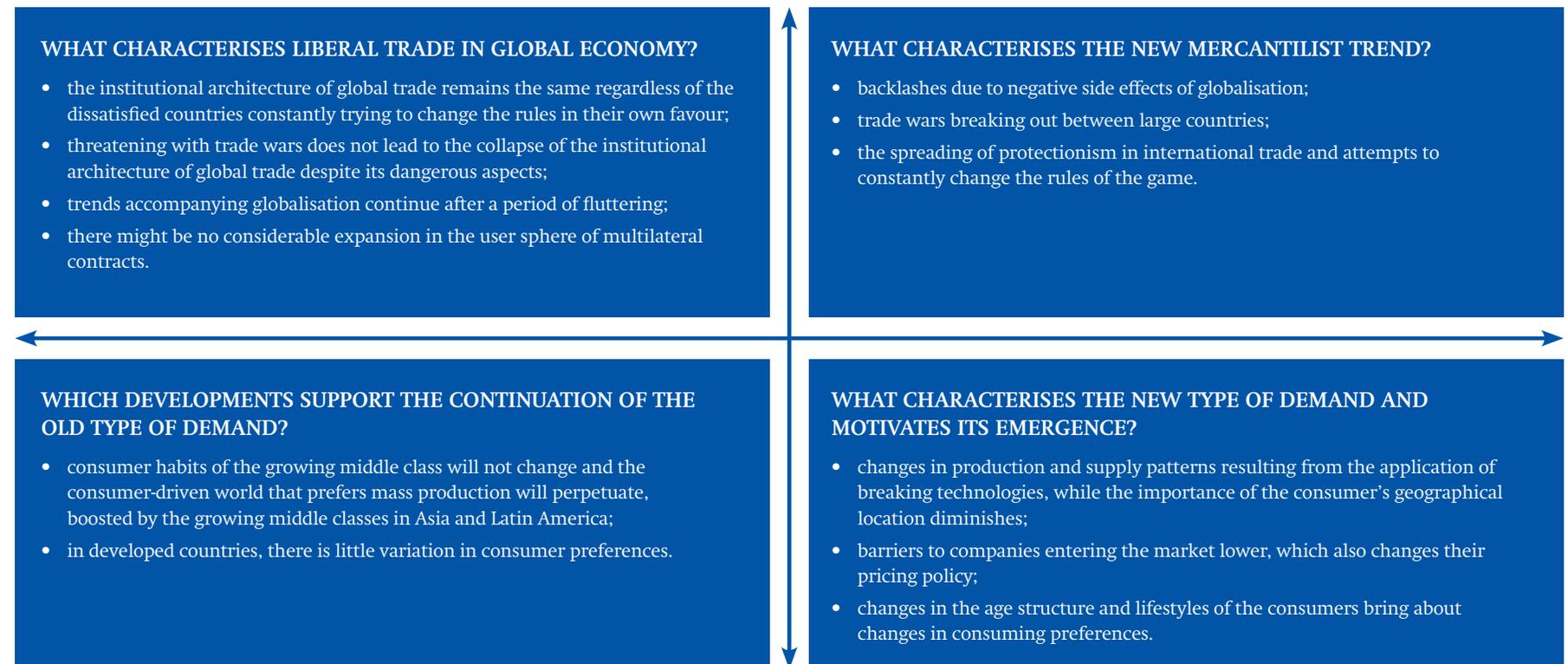
Future scenarios for productivity growth

Productivity scenarios describe the potential changes in global value chains and what these entail for Estonian companies, the development of their business models, strategic decisions, and cooperation. These also give an indication of the risks and opportunities inherent in each development

avenue. The scenarios can be useful when designing policies that support business and productivity growth, mitigate possible risks and address the challenges that could arise in different scenarios. As an open economy, Estonia is sensitive to what is going on in global economy. This

is why the scenarios give primacy to the directional developments that could possibly happen in the global economy: first, the opposition between possible trends that would affect international trade: **liberalism and new mercantilism**; and second, competition and demand in global economy,

between the **so-called old type of demand that prefers mass production and the so-called new type of demand that prefers personalised products and services.**





Future scenarios for productivity growth

	FREE TRADE CONTINUES IN GLOBAL ECONOMY AND LONG GLOBAL VALUE CHAINS (GVC) DOMINATE	PROTECTIONISM SPREADS IN GLOBAL ECONOMY AND VALUE CHAINS BECOME MORE REGIONAL
OLD TYPE DEMAND PREVAILS	<p>Scenario 1. The world is a global marketplace</p> <p>Global free trade recovers and companies converge into long global supply chains, where the participation condition is cost efficiency. Asian and other developing markets enjoy a competitive advantage. The growing middle classes of developing countries that prefers mass production drive the demand. Estonian companies participate in the GVCs through Nordic companies that have developed supply chains with Asia. Since salaries are on the rise, more automation is required to achieve the cost efficiency required by GVCs. To increase the added value, industrial companies need to move to the level of recognised suppliers and product developers. Producers of end products are focussed on sufficiently narrow market niches where the MNEs do not operate. Demand does not support the breakthrough of innovative technology-based companies and the level of innovation remains modest in economy. In the labour market, there is the danger of being locked in old skills, there is not enough motivation to diversify one's competence. The growth of added value tends not to increase, and convergence is moderate.</p>	<p>Scenario 3. Encapsulation to/of Europe, i.e. thicker "glass ceiling"</p> <p>Protectionism spreads in global economy and regions become blocks. Units of production companies move from USA to Europe and Asia, markets are reallocated, and leading companies change their supply policies and practices. The nature of demand does not change and relies on the growing middle classes of developing countries. Demand grows faster in Asia, and if the MNEs also move there, Europe is in danger of encapsulating. Estonian (and European) companies will lose their chance to do business on faraway markets because the growth there will not reach us. Many Estonian companies may lose their current positions in GVCs which served other regions. For Estonia, Europe's role as an export market grows. The cost advantage of Estonian economy will recover partially, because production in Asia becomes more expensive, thus the subcontracting of Scandinavia and Western Europe, may partially return, having left here due to high labour costs. This will postpone Estonia's investments into automation and smart production solutions. Growth of added value and convergence may come to a halt.</p>
NEW TYPE DEMAND PREVAILS	<p>Scenario 2. World of smart consumers</p> <p>Recovering free trade and diverse and changing new type demand provide a competitive advantage to countries where the economy is more technology-intensive and benefits from updated business models. Production and services mix, platform and sharing economy spread. Supply chains become more complex. Digital platforms where the consumer communicates directly with the "factory" (e.g. 3D-printing cluster) take over increasing amounts of functions in the supply chain as well as in the organisation of payment and supply. Production in regular factories is on the decline. New demand is mainly spreading in Europe and Nordic countries, where the consumers prefer personal, functional, and environmentally friendly products and services. This enables the technology and start-up companies to obtain increasingly more relevant positions in the economic structure and they will slowly take over from the traditional industries. Small producers are supported by increasing demand for products and services with a "small footprint" and the sharing economy. Growth of added value and convergence may accelerate.</p>	<p>Scenario 4. European Wild West</p> <p>Protectionism rules in international trade, trading blocks are set up, and value chains become regional. At the same time, the development of a new type of demand is thriving; its growth is supported by new technologies, demographic changes, increase in consumer awareness, and changes in attitudes. The supply chains that fed companies this far fall apart and the formation of new ones is dictated by the changed demand environment. Industries can no longer do without implementing Smart Factories. In production, just like in other sectors, we will see developing digital platforms that connect the consumers directly with production options and take over the functions of the supply chains. Without changing the business strategy there is a high risk of falling out of the competition. A lifeline for Estonian companies is the introduction of diverse technologies, contributions into research and development activities, innovation in product and service development, and orientation towards the Nordic and Western European markets where the new demand type dominates; the geographic proximity also favours moving there. Growth of added value and convergence depends on the risks (not) materialising and, thus, developments may take a different courses.</p>



Effect of development scenarios on significant economic indicators

		THE WORLD IS A GLOBAL MARKETPLACE	WORLD OF SMART CONSUMERS	ENCAPSULATION TO/OFF EUROPE, I.E. THICKER “GLASS CEILING”	EUROPEAN WILD WEST
	Current level	Change (growth, reduction, or change in share, etc.)			
Annual total global economy volume	\$17,73 trln ¹	↗	→	↘	↘
Share of intangible investments	31% ²	→	↗	→	↗
Share of exporting companies	29% ³	↗	↗	→	→
Share of labour costs in added value	58% ⁴	→	↗	→	↗
Share of highly qualified employees ⁵	44% ⁶	→	↗	→	↗
Labour productivity per worked hours based on GDP, compared to EU28 average	66% ⁷	→	↗	→	↘ ↗

¹ WTO, 2018 https://www.wto.org/english/res_e/statis_e/wts2018_e/wts2018_e.pdf

² EIB Investment Survey 2017 <http://www.eib.org/en/about/economic-research/surveys-data/investment-survey.htm>

³ Estonian Tax and Customs Board, value added tax returns data 2017

⁴ Statistics Estonia data, 2016

⁵ ISCO skill groups 3-4, source: ILO 2018

⁶ ISCO skill categories 3-4, source: www.ilo.org (table: EMP_2EMP_SEX_OCU_DT)

⁷ Eurostat, 2017 <https://ec.europa.eu/eurostat/web/products-datasets/-/tesem160>



Risks and opportunities of development scenarios

	RISKS	OPPORTUNITIES
The world is a global marketplace	<ul style="list-style-type: none"> • The growth capability of Estonian companies with only the support of growing production volumes is limited, because there is no cost advantage compared to Asian production. • Danger of being locked in old skills, there is not enough motivation to diversify one's competences. • Excessive investments into tangible assets: investments into expanding production volumes may have exhausted the companies' investing capability and this can prove to be a hindrance in automation and application of technology. 	<ul style="list-style-type: none"> • By being higher up in the value chain, it is possible to develop a national supply network that increases the added value created in Estonia as well as the productivity of the companies participating in the national chain. • In order to satisfy the increasing old type of demand, there will be more orders from Asia, enabling the Nordic region to preserve its position in the GVC; the leading companies there will provide Estonian industry with increasingly complex subcontracts. • Production is brought to countries with better availability of resources and labour force. • Targeting narrow market niches where multinational companies do not operate.
World of smart consumers	<ul style="list-style-type: none"> • Companies are inadequately prepared to identify new demands and to meet these, low ambition. • Investment horizon and risk increase, payback period gets longer. • Previously over-investing into tangible assets may hinder automation and introduction of new technology. 	<ul style="list-style-type: none"> • Cooperation with Nordic companies – from subcontractors to equal business partners to cover new demand in larger European countries. • Development of technology-based companies, “tailor made solutions”, providing services to digital platforms, personalised products and services, eco-products, circular and sharing economy.
Capsulation to/of Europe, i.e. thicker glass ceiling	<ul style="list-style-type: none"> • Europe falls into the periphery of global economy and the demand decreases. • If trade restrictions are accompanied by restrictions on capital movements, the strategy of establishing production units in other regions will fail. • If the internet becomes fragmented due to regulative barriers, the entire technology sector is under fire. For Estonia, this would mean that the export of e-state services to Arabic countries, Africa, and other distant markets would stop, among other things. • The cost advantages of Estonian subcontracting producers recover partially, which postpones investments into automation. 	<ul style="list-style-type: none"> • Serving market niches on the European market that are free from third country imports. • Development of digital services and internet-based business, which is independent from trade limitations. Even if the limitations extend to the internet, the hampering regulations on the operations of US and Chinese digital platforms in Europe have a stimulating effect on the development of EU's digital platforms, and promote the expansion of Estonian IT and internet businesses on the European markets. • Attaining better positions in regionalising value chains.
European Wild West	<ul style="list-style-type: none"> • Competition in Europe increases, i.e. not everyone finds a place on the regionalised market. • Current business strategies of companies turn out to be unsustainable and companies fall off the market. • Companies are inadequately prepared to identify new demands and to meet these, lack of ambition. • Due to the small size of companies, they have poor capacity to raise capital, which is important in developing product, service, and business models. 	<ul style="list-style-type: none"> • Focus is on the changing demand of nearby countries (Nordic countries, Western Europe). • Production and service providers relying on new technology-based combined solutions (digital, internet of things, AI, etc.) enter the market. • In case of distant markets, the focus is on digital and internet-based services, the expansion of which is not limited by trade barriers (presuming that the internet remains sufficiently open). • “Tailor made solutions”, providing services to digital platforms, personalised products and services, eco-products, circular and sharing economy.