

*United Nations – Economic Commission for Europe
Committee on Forests and the Forest Industry*

SLOVENIA

Country Market Statement 2017

Ministry of Agriculture, Forestry and Food

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1. General economic trends

This Chapter is reproduced from the publication: Autumn forecast of economic trends 2017. Institute of Macroeconomic Analysis and Development (IMAD), 2017.

The autumn forecast, issued by the Institute of Macroeconomic Analysis and Development of the Republic of Slovenia, envisages GDP growth of 4.4% this year, and a continued broad-based economic growth in 2018 (3.9%). Key factors in this year's faster growth are strong export growth and the influence of government investment dynamics. In the following years, economic growth will be increasingly characterised by demographic trends, which will be reflected especially in lower employment growth, and consequently in decreased disposable income and private consumption.

Export growth is accelerated by boosted growth in foreign demand accompanying favourable economic conditions in most major trading partners. At the same time, export performance, which has been improving ever since 2011, has improved further this year. Export growth is expected to remain high also in the next year, with a growth in foreign demand similar to this year and a further improvement of export performance.

Domestic consumption will remain the key driver of economic activity also in the next year. Household consumption is expected to increase further this year amid growth in disposable income due to favourable labour market conditions, which benefit consumer confidence. In the following two years, private consumption growth will gradually slow down, especially due to the expected lower employment growth. Growth in investments is also expected. Growth in demands and favourable investment conditions (high yields, low interest rates) will support growth in investment in machinery and equipment and, with the recovery of the real estate market, a growth in housing investment. Following a considerable fall due to the transition to a new European financial perspective, 2017 will see a stop in this decreasing trend of government investments, which will be reflected in a key strengthening of total investment activity. Government consumption, although modest, will continue to rise in these three years.

2. Policy measures

Green economy is a long-term strategic guideline and an opportunity for the development of new green technologies, creation of new green jobs, more efficient management of natural resources, promotion and development of Slovenian know-how. Furthermore, it represents an opportunity for economic growth and improvement in terms of international competitiveness while also reducing the environmental risks, which adversely affect the quality of life and well-being in people. The transition to a green economy also demands that existing production models and consumption patterns be changed to greener and more sustainable forms, that economic incentives and the development of less burdensome technologies and innovations are supported, that the management of resources, land, water, waste and energy is improved. The government will implement measures foreseen within the framework programme and thus create appropriate conditions for sustainable growth and development, and guide the transition to a greener economy.

The Smart Specialisation Strategy (S4) addresses a broad range of policies related to innovation and represents an implementing document in the field of research and development, industrial policy, entrepreneurship promotion, employment policy, education, rural development and international relations. It is a platform for concentrating development investments in areas where Slovenia has the critical mass of knowledge, capacities and competences, and where there is innovation potential for placing Slovenia within global markets and thus enhancing its recognisability.

The Smart Specialisation Strategy includes an elaborate comprehensive bundle of measures, which will positively influence the development of green economy. Based on this Strategy, the realisation of development investments in the amount of EUR 750 million is foreseen yearly. The measures relate to the field of research, development and innovation, human resource development, entrepreneurship and

rural development, and incentive measures of a country of development (public procurement, tax relief, economic diplomacy and promotion, issuing permits and eliminating regulatory boundaries).

The common denominator of the Smart Specialisation Strategy are sustainable technologies and services for a healthy life, on the basis of which Slovenia will become a green, active, healthy and digital region with top-level conditions fostering creativity and innovation focused on the development of medium-and high-level technological solutions in niche areas.

The Smart Specialisation Strategy of the Republic of Slovenia is a strategy aiming to:

- a) strengthen the competitiveness of the economy by enhancing its innovation capacity;
- b) diversify existing industries and service activities; and
- c) boost growth of new and fast-growing industries and enterprises.

The priority areas S4, which are directly connected with the forest-wood value chains, are the following:

- Natural and traditional resources for the future: the objective pursued here within the field of application „Networks for the transition to circular economy“ is connecting stakeholders (business entities, educational and research system, non-governmental organisations, the state and individuals) into value chains according to the principle „economy of closed material cycles“ and the development of new business models for the transition to circular economy.
- Healthy working and living environment: the objective pursued here within the field of application „Smart buildings and homes, including wood chain“ is inter-sectoral networking and integration of the wood chain in the design of homes and working environment of the future by also promoting research and innovation deriving from traditional knowledge and skills of the use of wood and wood-compatible natural materials.

Strategic Research & Innovation Partnerships (SRIP), which are directly connected with the forest-wood value chains, are the following:

- Smart buildings and homes, including wood chain SRIP
The Smart buildings and homes, including wood chain SRIP is focused on a wide area of smart and sustainable buildings (wooden or classical), home appliances and home management systems, and it also includes wood, wood technologies and wood value chain. It is organised into four focus areas: a) smart appliances and systems, b) wood and wood chain, c) active building management, and d) advanced non-biogenic construction products.
- Networks for the transition into circular economy SRIP
The SRIP strategy – Networks for the transition into circular economy takes into consideration the fact that the transition from a linear to a circular economy brings new challenges and opportunities to the reforming economy, and creates new and sustainable competitive advantages on the European and global levels. SRIP focus areas and technologies are sustainable biomass transformation and new bio-based materials, use of secondary and raw-materials and reuse of waste, and production of energy based on alternative sources.

The government of the Republic of Slovenia adopted the Operational Programme for the National Forest Programme 2017-2021 (OP NGP). The OP NGP defines current priorities in the field of forests and forestry, and these priorities form the basis for measures and forestry policy tasks. The system of four priorities and ten measures within the OP NGP covers all aspects of sustainable forest management (environmental, economic, social) and determines a transparent frame and content of forestry policy.

These four priorities are:

- a) Conservation of forest landscape, ecosystem, species and genetic biodiversity, and monitoring forest health and vitality.
- b) Ensuring the sustainability of forest yield and implementing all its functions.
- c) Optimisation of forest management from an organisational and financial aspect.

d) Encouraging coordination and communication between all stakeholders involved in national and foreign forest and forestry projects.

Based on the Act on the Management of Forests Owned by Republic of Slovenia, a new corporate entity, Slovenski državni gozdovi d.o.o. (SiDG; www.sidg.si), was established under the sole ownership of the RS in 2017, and the RS may not allocate or transfer its share in this company to another entity. The goal of this company is the management of forests owned by the RS in accordance with the principles of transparency, efficiency and responsibility while managing state-owned assets, and in accordance with the objectives of the National Forest Programme, applicable legislation and forest management plans. The company is an important actor in the wood market with an annual scope of over 1 million m³.

Rules on the measurement and classification of timber assortments from forests were adopted for the purpose of measuring and classifying forest wood assortments owned by the Republic of Slovenia, and they entered into force on 1 July 2017. The Rules define the methods for measuring and classifying forest wood assortments owned by the Republic of Slovenia according to their dimensions, quality and purpose, for the purpose of their sale. The Rules apply only to state-owned forests and are without prejudice to the market for wood from private forests. These new Rules emphasize rules and quality assortments classes, as they are established in Central Europe markets, especially in Austria, Germany and Switzerland.

The Rural Development Programme 2014-2020 enables the implementation of measures which support the development of wood industry and forestry, for example:

- Sub-measure M6.4 - Support for investments in the establishment and development of non-agricultural activities, where priority will be given also to non-agricultural activities related to heat and power generation from renewable energy sources, such as wood biomass, biomass, manure, liquid manure, water, wind and sun. There are several possibilities for financing biomass investments, depending on whether the subject is a natural person or a legal person.
- Sub-measure M8.6 - Investments in pre-industrial processing of wood. The subject of the public tender are investments in pre-industrial processing of roundwood and activities of primary small-scale wood processing, which diversify the production of beneficiaries. This sub-measure supports investments in forestry technologies and in processing, mobilisation and marketing of forest products. This sub-measure also supports investments in production of pellets and wood chips as a supplementary sawmills activity. Public support is granted in the form of non-refundable and refundable financial aid. Co-financing is limited to the following beneficiaries: companies, cooperatives, sole traders and farms with a registered subsidiary on-farm activity that are defined as micro or small enterprises.
- Sub-measure 9.1 – Setting up producers' groups and organisations in the agricultural and forestry sector. This sub-measure encourages the setting up and operation of producers' groups in the agricultural and forestry sector, where these groups are set up for the purpose of joint action on the market. Beneficiaries are: producer groups which are legal entities and fulfil the conditions for micro-, small and medium-sized enterprises. Support is granted in the form of a flat payment, paid in annual instalments in the first five years after the date the producers' group was verified.

A key development document in the field of energetics is under consideration—the Slovenian Energy Concept (SEC). Together with the Energy Act (EZ-1) it shall provide, on the basis of adopted international obligations, long-term goals for reliable, sustainable and competitive energy supply for the period leading up to 2035 and 2055. The two umbrella goals of the SEC are:

- Reducing greenhouse gas emissions connected with the use of energy for at least 40% until 2035 compared to 1990 levels;
- Reducing greenhouse gas emissions connected with the use of energy for at least 80% until 2055 compared to 1990 levels;

The public tender for co-financing of district heating systems based on energy from renewable sources for 2017-2020 enables financial incentives for investments into new district heating systems based on energy from renewable sources (hereafter: DH RES) and DH RES micro systems. Investors who are broadening existing DH RES systems or installing new boilers run on wood biomass as an energy source for the existing DH system (hereafter: operations) are also entitled to financial incentives within the following context:

- Installation of DH RES systems with boiler capacity up to 10 MW or installation of DH RES micro systems with boiler capacity up to 1 MW;
- Expansion of existing DH RES system network with or without the installation of additional boilers run on wood biomass;
- If the use of solar energy as an additional energy source contributes to improved economy of the whole DH RES system, the solar system for sanitary hot water can also be included in the operations.

An important part of the climate and energy policy where promoting the development in the field of generating electricity from RES and CHP is concerned is the so-called Support Scheme for RES and CHP, under which producers of electrical energy from renewable energy sources in co-generation with high efficiency can be granted state aid. The Scheme has been amended and modified numerous times in the last several years (it was first drafted in 2002). The updated Support Scheme was only fully developed at the end of 2016 (EZ-1) after its notification procedure was concluded with the European Commission in October 2016. The Scheme supports the production of electrical energy from the following renewable sources: water, wind energy, solar energy, geothermal energy, biomass energy, biogas energy, landfill gas energy, treatment plants energy and biodegradable waste energy. Production plants using renewable energy sources with a rated output not exceeding 10 MW can be included in the Support Scheme, except production plants using wind energy, where the limit is set to 50 MW, and production plants in co-generation with high efficiency, where the limit is set to 20 MW. At the end of 2016, the Support Scheme for RES and CHP already included approx. 2400 producers with a total of 3888 production plants, out of which 85% were solar plants. All producers are included in the Support Scheme with their production plants, which are classified under inclusion conditions in effect prior to EZ-1 (greater rated outputs).

3. Market factors

Data sources: IMAD, SORS and SFI

In the first half of 2017, GDP was up 4.7% year-on-year, while the available indicators of activities and confidence foresee similar trends also in the second half of the year. Export growth is accelerated by boosted growth in foreign demand accompanying favourable economic conditions in most major trading partners. Markedly higher export growth compared to 2016 is an important factor in this year's higher economic growth, which is apart from the boosted growth in foreign demand also related to the improvement of export performance. A considerable improvement in labour market conditions is accompanied by a further increase in the disposable household income, which will contribute to a continued growth in private consumption due to a high consumer confidence factor. Similarly to last year, this year's higher economic growth (an increase of 3.1% compared to 2016) is also influenced by government investment dynamics, which caused a decrease in economic growth (1.6%) last year. This year, they are expected to grow, which will be reflected in private investments in machinery and equipment, and the revival of housing investments, and will consequently lead to a considerable acceleration of total investment activity growth in 2017. Following employment growth in the state sector, and goods and services expenditures, state consumption is expected to modestly increase this year (IMAD 2017).

The positive lever in the use of wood products in construction are Eco Fund grants and credits for efficient energy consumption (construction of low energy buildings, energy adaptation and renovation of buildings, builders' joinery, insulation of buildings...), and green public procurements, which continuously promote the construction of public wood buildings.

The wood processing industry (NACE C16) is continuing its favourable trends this year, and the production index increased by 5.2% in the first six months. Sales revenues increased by 5.7% in the first seven months compared to the same period in the previous year: 3.8% on the domestic market and 7.1% in export.

The first half of 2017 witnessed the formal establishment of the corporate association SLOLES (SLOLES Association, Slovenian Wood Association), which brings together sawn wood producers and producers of further processed semi-manufactured sawn wood products, who engage in commercial activities in the field of sawn wood and semi-manufactured wood products. The Association covers over 50% of the total sawn wood production, and their share in sawn hardwood is even higher, as all larger processors of hardwood logs are members of the Association. The Association's activities are aimed at strengthening the competitive advantages of companies in primary and secondary wood processing sectors in forest-wood value chains, including the strengthening of their sales channels. The Association's purpose is development, integration and quality work of all Slovenian sawmill operators and wood retailers. Additional areas of work and goals also include the promotion of use of Slovenian wood and wood products, support to Association founders and members, promotion of technological development of production and products, gaining operational funds from the EU and Slovenian public tenders, and looking for new strategic partners, domestic and foreign buyers.

Due to continued bark beetles' gradation, a large offering of conifer wood is available on the market exceeding domestic demand, which translates to favourable prices of raw material input for the industry.

Croatia's measure, implemented this June, to limit (prohibit) the export of unprocessed oak wood, prejudices the oak wood market and adversely affects the business of Slovenian companies importing oak wood from Croatia (logs, lower quality wood, wood chips) and/or process wood for customers who buy wood in Croatia. This prohibition is in effect for the species pendunculate oak and sessile oak, i.e. for all roundwood (logs, wood for panels, other industrial wood, fuel wood), sawn wood (with humidity over 20%), and wood waste, which is a by-product in wood felling and processing. The prohibition is a result of the adopted regulation on phytosanitary measures for preventing the spread of the oak lace bug *Corythucha arcuata* (Say, 1832), published on 1 June 2017, and which entered into force immediately.

4. Developments in the wood products market

Data sources: SORS, IMAD, CCIS Wood Processing and Furniture Association, CCIS Paper and Paper Converting Industry, SFI; recalculations, analysis and interpretation of SFI

a) Roundwood

2016

As in 2015, the production of forest wood assortments in Slovenia reached record heights – predominantly due to sanitation harvesting, which was a consequence to the damage caused by bark beetles. The production of forest wood assortments amounted to 5.4 million m³ last year (without bark) last year, which was primarily due to the restoration following the damage caused by bark beetles. Last year, the scope of conifer roundwood amounted to 3.5 million m³ (+14%), and that of deciduous trees to 1.9 million m³ (-5%). The scope of the damage caused by bark beetles last year was the largest recorded in Slovenia history. The increased amounts of harvested conifers were also apparent in the larger quantity of wood acquisitions from private forests, monitored by the Statistical Office of the Republic of Slovenia. A record scope of acquisitions from forest wood assortments from private forests was recorded in 2016, as it increased by 25%, especially due to increased acquisitions of conifers (+35%), on the other hand, acquisitions of deciduous trees decreased (-11%). Conifer wood acquisition coincided with developmental characteristics of bark beetles, as the

peak in acquisitions was recorded in the last quarter of the year, which coincides with the dynamics of conifer logs export. Due to increased quantities of conifer logs on the market and a changed structure of assortments, average prices typically decreased during this period. The acquisition of deciduous tree logs increased (+20%), especially beech and oak. Total roundwood exports exceeded 3 million m³ in 2016, and the foreign trade surplus for all forest wood assortments exceeded 2.5 million m³. The largest surplus was recorded in conifer logs (1.8 million m³).

Additionally, some changes occurred in the market due to the expiry of 20-year concessions in state-owned forests, and due to the founding of the SiDG company (Slovenski državni gozdovi, d. o. o.), where a substantial difference needs to be noted: SiDG does not purchase and sell wood from private forests. In the second half of 2016, the company sold 530,000 m³ of forest wood assortments, predominantly conifers. Conifer logs are of course the most market-attractive assortment – they dominate in terms of quantities and the structure of produced forest wood assortments (and consequently also in terms of export). Conifer trees harvesting from state-owned forests (according to Slovenia Forest Service data) amounted to approx. 30% of the total harvested quantities of conifer wood. The remaining quantities come from private forests (and on a smaller scale from forests owned by local communities), which are at the same time also the main source for wood intended for export.

2017

The production of forest wood assortments remains under the influence of the damage on conifer trees caused by bark beetles. This year's harvesting priority remains restoration following the damage caused by bark beetles. The Act on Forests, which enables the implementation of procedures within administrative execution, was amended and modified to ensure a more efficient implementation of sanitary measures. According to Slovenia Forest Service data, less trees were marked for harvest in volume due to bark beetles in the first eight months of this year compared to the corresponding period in the previous year (-17%). Due to harvesting of trees as a consequence to last year's damages, the scope of harvesting in the first eight months of this year was at a similarly high level compared to the corresponding period in the previous year (1.1 million „gross“ m³ of conifer trees).

Wood acquisitions from private forests decreased by 5% in the conifer tree segment and increased by 17% in the deciduous tree segment during the first seven months compared to the same period in the previous year. In the deciduous tree segment, the acquisition of lower quality wood remained at a similar level compared to the previous year, however the acquisition of logs increased by more than 50%, especially due to increased acquisitions of beech logs. The trend of increased acquisitions of oak logs continues also this year (+26%).

In the first half of 2017, export remained at a similar level compared to the previous year. In the first half of 2017, export of conifer logs decreased by 5% compared to the previous year. In the first half of 2017, import increased by 25%.

b) Wood biomass for energy

Renewable energy sources supply (excluding hydro energy) amounted to 31518 TJ in 2016, which is 3.3% more compared to 2015. Non-renewable industrial waste supply amounted to 1795 TJ in 2016. The structure of supply with renewable energy sources and non-renewable industrial waste is predominated by wood and other solid biomass constituting a share of 75.9%. This is followed by geothermal energy (6.0%), non-renewable industrial waste (5.4%), solar energy (4.3%), biodiesel (3.5%), other biogases (2.9%) and other RES (biogasoline, landfill gas, sewage sludge gas and wind energy – 2.1%).

The largest consumer of wood fuels are households using predominantly firewood, which they acquire from their own forests or the market. The largest single consumer of wood for energy purposes remains the district heating system in Ljubljana with an installed capacity of 152 MW, however this

system utilizes the co-incineration of coal and wood. The thermal power plant and the district heating plant use more than 100,000 tons of wood chips per year; last year, they produced 6.7% more „green energy.“

Firewood is the most popularly used type of wood fuel, however the estimates for yearly production of firewood are not entirely accurate. Most recent SORS data from 2015 show that households consume 1,600,000 tons of wood fuels, which are predominantly firewood. The price of firewood with humidity levels of approx. 20% and lengths between 25 and 33 cm amounted to EUR 134 at the end of the heating season 2016/2017, which is 4% less compared to the beginning of the heating season. The Slovenian Forestry Institute monitors wood fuel prices and regularly publishes them at <http://wcm.gozdis.si/cene-lesnih-goriv>

Despite an increase in the domestic production of pellets, Slovenia remains a net importer of pellets. The main consumers of wood pellets are households, followed by larger public buildings and other users. The most recent collection of data on pellet production in Slovenia (concluded by SFI in May 2017) shows that there are currently 19 producers of pellets in Slovenia – only one of them has a yearly production of above 50,000 tons, and only one of them has a yearly production of between 15,000 and 50,000 tons. The production of pellets in Slovenia was estimated at 115,000 tons for 2016. The production in the last two years has been relatively constant and dependent mostly on available raw materials, as production capacities of individual producers exceed the realised production.

The predominant part of Slovenian pellet production is exported to Italy. Last year, the export of pellets recorded a 14% increase. Italy remains the key export market (over 90% of quantities). Compared to the previous years, 2016 was also marked by a record import of pellets, which exceeded 200,000 tons (+36%). Most pellets are imported from Romania (40%), followed by Bosnia and Herzegovina, Croatia and Austria.

Pellets as the most expensive form of wood biomass are 32% cheaper (EUR 54/MWh) than heating oil, whose price fluctuated around EUR 80/MWh in the first half of 2017. The difference between the prices of heating oil and pellets increased by 10% in comparison with the previous year. A ton of pellets, packed in 15 kg bags, cost EUR 253 on average after the end of the heating season 2016/2017. In comparison with the same period in the previous year, prices have decreased by less than 0.5%.

The quality of wood pellets, available on the Slovenian market, improved significantly compared with previous year. According to an independent analysis of pellet quality on the Slovenian market, the share of pellets classified as A1 increased (60% of samples). Three years ago, pellet samples belonging to the A1 quality class only amounted to 27%.

Wood chips are predominantly used for energy purposes, and the Thermal Power Plant Ljubljana is by far the largest consumer with an annual consumption of over 100,000 tons. The consumption of wood chips in the production of wood products (fibre boards, pulp, chemicals) amounts to less than 10% of the total consumption in Slovenia. Wood chips manufacturers are technologically well equipped. It is estimated that there are more than 200 producers of wood chips in Slovenia. There are over 20 wood chippers in Slovenia that can achieve a production capacity of at least 100 nm³/h. Yearly production scope remains at a high level due to restoration following the damage caused by bark beetles gradation. Slovenia is a net exporter of conifer wood chips and a net importer of deciduous wood chips. In wood chips import, deciduous wood chips prevail (a share of 80-90%), and in export, conifer wood chips hold the greatest share (70-80%). Last year, wood chips export amounted to 244,000 tons (+3%), while import decreased by almost 10%. Wood chips are predominantly imported from Croatia and exported to Austria and Italy.

The price for best-selling wood chips (humidity approx. 30% and particle size of approx. 36 mm) averaged at EUR 74/t at the end of the heating season 2016/2017, which is approximately 11% more compared to the second half of 2016.

c) Certified wood products

265,000 ha of forests are certified by the FSC system, which represents more than 20% of the complete forest area in Slovenia, where these are predominantly national forests (235,000 ha). The area according to the national certification scheme PEFC for forests has increased by 20% and now encompasses 50,000 ha of privately owned forests.

Companies use the FSC and PEFC certificates for tracking wood predominantly as a marketing mechanism for export markets and compliance with green public procurement policies. The number of companies with the FSC or PEFC certificate for tracking certified wood (CoC) continues to increase. Among these, the FSC CoC certificates hold the predominant share. Despite this, interest in PEFC certified products is increasing, mostly due to exports to Austria.

d) Value-added wood products

The Slovenian furniture industry produced net sales revenues in the amount of EUR 315 million in 2016, which is 10% more compared to 2015. The furniture industry sector ended the fiscal year with a net profit for the second time since 2007, which increased by more than 4 times last year. The share in the net sales revenues structure in foreign markets for the furniture industry NACE C31 amounted to 45% last year. Foreign market sales recorded an increase of 7.6% last year. The most intensive destinations for furniture exports are Germany, Italy and Austria.

The furniture industry production index (the entire furniture industry in NACE C31), which also includes the production of wooden furniture, increased by 11.5% in the first seven months of this year compared to the same period in the previous year. The net sales revenues within the comparative periods increased by 12%: both in the domestic and foreign markets. The euro area recorded an 8.8% increase in net sales revenues.

Slovenian manufacturers of prefabricated wooden buildings (Section of Slovene Manufacturers of Prefabricated Houses (SSPMH) within CCIS) increased their net sales revenues by 5% last year. Foreign markets recorded a 20% increase. Over 60% of the production is exported. Last year, export increased by 23% in value. The most important export was aimed at Germany, Switzerland, Austria and Italy. Positive trends are expected to continue in 2017 and 2018.

e) Sawn softwood

Foreign trade trends show an increased activity of Slovenian sawmills, which is a consequence of increased log quantities in the market due to restoration following ice damage, damage caused by bark beetles gradation, market surpluses and lower log prices. The sawn softwood industry in Slovenia is hindered by the unfavourable structure of sawmills—size, technological equipment and lack of foreign investments into modern larger sawmills.

The predominant part of sawn softwood export comes from Austria and is exported through the Port of Koper. The import decreased by 22% in quantity in 2016. The export of sawn softwood decreased by 13% last year. A similar scope of foreign trade is foreseen for this year.

Sawn softwood export into neighbouring countries (Croatia, Italy and Austria) increased again by 22% in 2016 and exceeded 250,000 m³ following an increase in 2015 (+13%). In the Italian market, sawn softwood export exceeded 130,000 m³ (+25%) last year; in 2017, a decrease in export to Austria is expected and a slight increase in export to Italy.

f) Sawn hardwood (temperate and tropical)

Sawn hardwood production is moderately increasing. Sawn deciduous tree wood export increased by 15.8% in volume in 2016, however the import decreased somewhat (-3.3%). It is estimated that in 2017, the export shall further increase in volume. Last year, a surplus in foreign trade was recorded for sawn hardwood, which is expected to further increase this year. Last year, the export of sawn oak wood recorded a 31% increase. Austria and Italy are the main export markets for sawn oak wood, receiving over 50% of exported quantities. Sawn beech wood in Slovenia is used in the production of laminated boards from solid wood, beech wood dowels and furniture. Italy is the main export market for sawn beech wood.

The quantities and values recorded in the production, the import and export of sawn wood from tropical tree species are negligible. A similar low level of sawn wood from tropical trees foreign trade is foreseen for 2017.

g) Wood-based panels (including veneer)

The consumption of all types of wood-based panels increased by 5.5% in 2016, which reflects favourable trends in the furniture industry and an increased scope of residential buildings construction. An increase in the consumption of panels is foreseen for 2017 and 2018 (2% per year).

In 2016, 178,000 m³ of particle boards (including OBS boards) were used in the manufacture of furniture and in construction, which amounts to a 6% increase compared to the previous year. A slight increase in the consumption of particle boards is expected in 2017 mainly due to favourable trends in the furniture industry and construction of residential buildings. Particle boards originate entirely from imports, as the last remaining manufacturer of particle boards in Slovenia filed for bankruptcy at the end of 2015. The consumption of fibreboards stabilised at 40,000 m³. A moderate increase in the consumption of fibreboards is foreseen for 2017 and 2018. The best part of sliced veneer manufacture is performed as a service for customers within the EU. The number of veneer manufacturers decreased last year, as one of the largest manufacturers of sliced veneer in Slovenia stopped their production of veneer last year. 2017 and 2018 forecasts remain unpredictable due to Croatia's prohibition of oak log exports.

Plywood panel production is dominated by tri-layer shuttering composite conifer panels. The majority of manufactured products is exported. The export of tri-layer shuttering panels increased by 20% in value and 16.5% in volume in 2016. We estimate that favourable manufacture and export results, which are a result of positive trends in the European construction sector, will continue also in 2017.

h) Pulp and paper

The scope of mechanical pulp production decreased by 5.6% in 2016. In 2017 and 2018, the production is expected to increase by 5-10% annually. Pulp export is negligible as the production in Slovenia is entirely integrated. Last year, pulp import increased by 8.5%, and it is expected to increase by another 2% this year.

According to CCIS data, the whole Manufacture of paper and paper products industry (C 17) recorded a 2.2% decrease in 2016, and net sales revenues increased by 2%. Manufacturers of cardboard and paper products produced 4.9% more products compared to the previous year (production in 2016: 756,000 tons), an increase was also recorded for export. Last year, the industrial production index of the whole C 17 industry was at 105.1. In the first seven months of 2017, the industry recorded a 1.4% increase in the industrial production index compared to the same period in 2016. Sales revenues in C 17 increased by 2.1% in the first seven months of 2017.

i) Innovative wood products

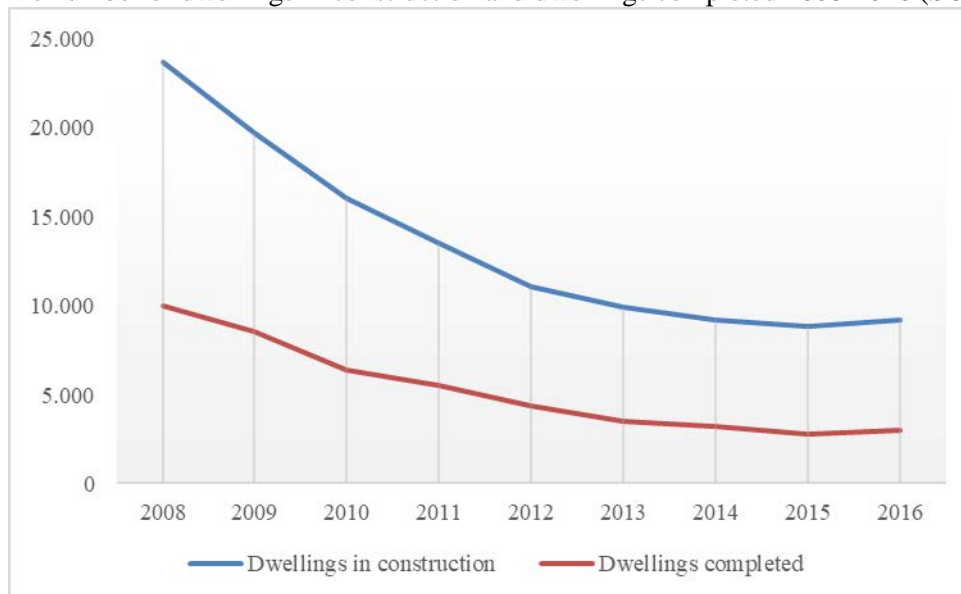
The Wintherwax project (www.wintherwax.si) developed a window integrating two technologies (thermal modification and wax treated wood). Thermal modification ensures good insulation and resistance to wood fungi, and wax treated wood provides water resistance and an aesthetic look. This newly developed material is suitable for the production of windows, and also for the production of insulation. The project team consisting of members from the Biotechnical Faculty and M Sora and Silvaproduct companies was awarded the Puh Award of the Republic of Slovenia for Innovation in 2016. The development of new wax-based wood protection systems continues within the Tigr4smart project, which successfully gained funds from the Ministry of Education, Science and Sport from the public tender Research and Innovation (RRI) in Networks and Value Chains. The programme is a collaboration of 15 partners and is worth EUR 9.18 million, and it received co-financing in the amount of EUR 5.91 million.

j) Residential construction and construction

The value of construction decreased last year by 14%, and the value of construction work on buildings increased by 2%, where the increase in value of construction work on residential buildings amounted to 10%.

The value of construction was higher by 16.4% in the first seven months of 2017 compared to the same period in the previous year. In construction of buildings, the value of construction increased by 32.6% and the value of civil engineering by 10.8%. Government investments are expected to increase this year, and the revival of housing investments is expected to continue. The decreasing trend in the construction of residential buildings came to an end last year with the number of completed residential buildings increasing by 7% (10% by area surface). Even the construction sector recorded 4.4% more residential buildings compared to the previous year. Positive trends and an increase in construction of residential buildings are expected this year also.

Image 1: The number of dwellings in construction and dwellings completed 2008-2016 (SORS)



Company activity within the Manufacture of other builders' carpentry and joinery (NACE: C16.230), which consists of the manufacture of prefabricated wooden buildings, builder's joinery (windows, doors, stairs...) and glued laminated roof trusses and roofing, continued positively also last year. According to CCIS, this segment gained a EUR 16.4 million net profit in 2016, which exceeded the net profit gained in 2015 by 26.7%. Sales revenues created by companies in this industry on foreign

markets increased to 58.2%, while export revenues increased by 15% year-on-year. Slovenia is a net exporter of wooden windows and doors. The decreasing trend in the export of wooden windows has come to an end, while the export of wooden doors is on the rise. In 2016, wooden windows export recorded a 18.1% increase in value and a 13.9% increase in volume. Wooden doors export recorded a 20.9 % increase in value and a 18.8 % increase in volume. A continued increase in doors export is expected for 2017.

5. Tables

a) Economic indicators

	2016	Autumn Forecast (September 2017)		
		2017	2018	2019
GROSS DOMESTIC PRODUCT				
GDP, real growth (%)	3.1	4.4	3.9	3.2
GDP, nominal growth (%)	4.1	5.8	5.9	5.0
GDP in EUR billion, current prices	40.4	42.8	45.3	47.5
Exports of goods and services, real growth (%)	6.4	8.8	7.5	6.1
Imports of goods and services, real growth (%)	6.6	8.9	7.7	6.3
<i>External balance of goods and services (contribution to growth in pps)</i>	0.5	0.7	0.6	0.5
Private consumption	4.2	3.3	3.0	2.3
Government consumption	2.5	1.1	0.9	0.9
Gross fixed capital formation	-3.6	9.0	8.0	7.0
<i>Change in inventories and valuables (contribution to growth in pps)</i>	0.7	0.1	0.0	0.0
EMPLOYMENT, EARNINGS AND PRODUCTIVITY				
Employment according to the SNA, growth in %	1.9	2.7	1.7	0.9
Number of registered unemployed, annual average (in '000)	103.2	89.1	82.2	79.5
Registered unemployment rate (%)	11.2	9.5	8.7	8.4
ILO unemployment rate (%)	8.0	6.8	6.2	5.8
Gross earnings per employee, nominal growth (%)	1.8	2.7	3.6	3.6
Gross earnings per employee, real growth (%)	2.1	1.2	2.0	1.5
- private sector	1.9	1.3	1.8	1.9
- public sector	2.6	1.5	2.5	0.7
Labour productivity (GDP per employee), real growth (%)	1.1	1.6	2.2	2.3
BALANCE OF PAYMENTS STATISTICS				
Current account balance (EUR bn)	2.1	2.0	2.3	2.5
- as a % of GDP	5.2	4.7	5.1	5.3
PRICES				
Inflation (Dec/Dec)	0.5	1.7	1.9	2.1
Inflation (annual average)	-0.1	1.5	1.6	2.1
ASSUMPTIONS				
Foreign demand, real growth (%)	3.9	4.6	4.7	4.7
GDP in the euro area, real growth in %	1.8	1.9	1.8	1.5
Oil price (Brent crude, USD/barrel)	45	51	52	52
Non-energy commodity prices (USD), growth	-2.0	7.5	2.1	0.8
USD/EUR exchange rate	1.11	1.13	1.18	1.18

Source: IMAD (Institute of Macroeconomic Analysis and Development of the Republic of Slovenia), Autumn Forecast of Economic Trends, September 2017. Sources: For 2016 SURS, BoS, ECB and EIA; for 2017–2019 IMAD forecasts. The Autumn Forecast of Economic Trends is based on statistical data, information and adopted measures known at the cut-off date of 6 September 2017.

b) Production and foreign trade

Product Code	Product	Unit	Historical data		Revised	Estimate	Forecast
			2015	2016	2016	2017	2018
1.2.1.C	SAWLOGS AND VENEER LOGS, CONIFEROUS						
	Removals	1000 m ³ ub	2.210	2.660	2.660	2.500	2.400
	Imports	1000 m ³ ub	13 #	10 #	24	15	15
	Exports	1000 m ³ ub	1.293 #	1.250 #	1.810	1.550	1.450
	Apparent consumption	1000 m ³ ub	930	1.420	874	965	965
1.2.1.NC	SAWLOGS AND VENEER LOGS, NON-CONIFEROUS						
	Removals	1000 m ³ ub	321	329	329	350	350
	Imports	1000 m ³ ub	47 #	52 #	52	60	60
	Exports	1000 m ³ ub	199 #	160 #	179	200	200
	Apparent consumption	1000 m ³ ub	169	221	202	210	210
1.2.1.NC.T	of which, tropical logs						
	Imports	1000 m ³ ub	1 #	1 #	1	1	1
	Exports	1000 m ³ ub	0 #	0 #	0	0	0
	Net Trade	1000 m ³ ub	1	1	1	1	1
1.2.2.C	PULPWOOD (ROUND AND SPLIT), CONIFEROUS						
	Removals	1000 m ³ ub	550	578	578	540	520
	Imports	1000 m ³ ub	168 #	130 #	120	160	170
	Exports	1000 m ³ ub	375 #	375 #	418	400	370
	Apparent consumption	1000 m ³ ub	343	333	280	300	320
1.2.2.NC	PULPWOOD (ROUND AND SPLIT), NON-CONIFEROUS						
	Removals	1000 m ³ ub	559	412	412	465	465
	Imports	1000 m ³ ub	65 #	70 #	78	90	90
	Exports	1000 m ³ ub	439 #	400 #	310	360	360
	Apparent consumption	1000 m ³ ub	185	82	180	195	195
3	WOOD CHIPS, PARTICLES AND RESIDUES						
	Domestic supply	1000 m ³	1.100 C	1.100 C	1.100	1.100	1.100
	Imports	1000 m ³	367 C	331 C	331	350	350
	Exports	1000 m ³	734 C	735 C	735	730	730
	Apparent consumption	1000 m ³	734	697	697	720	720
1.2.3.C	OTHER INDUSTRIAL ROUNDWOOD, CONIFEROUS						
	Removals	1000 m ³ ub	100	75	75	70	70
1.2.3.NC	OTHER INDUSTRIAL ROUNDWOOD, NON-CONIFEROUS						
	Removals	1000 m ³ ub	72	56	56	60	60
1.1.C	WOOD FUEL, CONIFEROUS						
	Removals	1000 m ³ ub	203	180	180	170	160
1.1.NC	WOOD FUEL, NON-CONIFEROUS						
	Removals	1000 m ³ ub	1.040	1.092	1.092	1.050	1.050

Product Code	Product	Unit	Historical data		Revised 2016	Estimate 2017	Forecast 2018
			2015	2016			
5.C	SAWNWOOD, CONIFEROUS						
	Production	1000 m ³	625	625	625	650	650
	Imports	1000 m ³	820	955	639	640	640
	Exports	1000 m ³	896	775	776	780	780
	Apparent consumption	1000 m ³	549	805	488	510	510
5.NC	SAWNWOOD, NON-CONIFEROUS						
	Production	1000 m ³	100	105	105	110	110
	Imports	1000 m ³	106	103	103	110	110
	Exports	1000 m ³	98	111	113	125	125
	Apparent consumption	1000 m ³	109	96	95	95	95
5.NC.T	of which, tropical sawnwood						
	Production	1000 m ³	0	0	0	0	0
	Imports	1000 m ³	3	2	1	2	2
	Exports	1000 m ³	1	1	0	1	1
	Apparent consumption	1000 m ³	2	1	1	1	1
6.1	VENEER SHEETS						
	Production	1000 m ³	20 C	24 C	24	22	22
	Imports	1000 m ³	13 C	12 C	12	12	12
	Exports	1000 m ³	18 C	23 C	23	22	22
	Apparent consumption	1000 m ³	15	13	13	12	12
6.1.NC.T	of which, tropical veneer sheets						
	Production	1000 m ³	1	1	1	1	1
	Imports	1000 m ³	0	0	0	0	0
	Exports	1000 m ³	1	1	1	1	1
	Apparent consumption	1000 m ³	0	0	0	0	0
6.2	PLYWOOD						
	Production	1000 m ³	78 C	86 C	86	90	95
	Imports	1000 m ³	34 C	41 C	41	51	55
	Exports	1000 m ³	59 C	68 C	68	79	85
	Apparent consumption	1000 m ³	53	59	59	62	65
6.2.NC.T	of which, tropical plywood						
	Production	1000 m ³	0	0	0	0	0
	Imports	1000 m ³	8	10	10	12	12
	Exports	1000 m ³	0	0	0	0	0
	Apparent consumption	1000 m ³	8	10	10	12	12
6.3	PARTICLE BOARD (including OSB)						
	Production	1000 m ³	65	0	0	0	0
	Imports	1000 m ³	159	183	183	182	185
	Exports	1000 m ³	59	7	7	5	5
	Apparent consumption	1000 m ³	166	176	176	177	180
6.3.1	of which, OSB						
	Production	1000 m ³	0	0	0	0	0
	Imports	1000 m ³	18	34	34	22	25
	Exports	1000 m ³	1	1	1	1	1
	Apparent consumption	1000 m ³	17	33	33	21	24
6.4	FIBREBOARD						
	Production	1000 m ³	130 C	130 C	130	130	130
	Imports	1000 m ³	51 C	58 C	58	67	67
	Exports	1000 m ³	141 C	148 C	148	155	155
	Apparent consumption	1000 m ³	40	40	40	42	42
6.4.1	Hardboard						
	Production	1000 m ³	0	0	0	0	0
	Imports	1000 m ³	9	13	13	11	11
	Exports	1000 m ³	10	12	12	10	10
	Apparent consumption	1000 m ³	-1	0	1	1	1
6.4.2	MDF/HDF (Medium density/high density)						
	Production	1000 m ³	130	130	130	130	130
	Imports	1000 m ³	42	45	45	55	55
	Exports	1000 m ³	131	136	136	145	145
	Apparent consumption	1000 m ³	40	39	39	40	40
6.4.3	Other fibreboard						
	Production	1000 m ³	0	0	0	0	0
	Imports	1000 m ³	0	1	1	1	1
	Exports	1000 m ³	0	0	0	0	0
	Apparent consumption	1000 m ³	0	0	0	1	1
7	WOOD PULP						
	Production	1000 m.t.	90 C	85 C	85	95	100
	Imports	1000 m.t.	228 C	247 C	247	252	255
	Exports	1000 m.t.	8 C	13 C	9	9	9
	Apparent consumption	1000 m.t.	309	319	323	338	346
10	PAPER & PAPERBOARD						
	Production	1000 m.t.	721 C	730 C	756	760	765
	Imports	1000 m.t.	480 C	648 C	648	700	700
	Exports	1000 m.t.	608 C	642 C	642	660	665
	Apparent consumption	1000 m.t.	594	736	762	800	800
4.1	WOOD PELLETS						
	Production	1000 m.t.	110	115	115	115	120
	Imports	1000 m.t.	150	202	202	215	215
	Exports	1000 m.t.	122	138	138	160	160
	Apparent consumption	1000 m.t.	138	179	179	170	175