

**85th Euroconstruct Conference:
European Construction Market
Outlook Until 2020**

**Continued Expansion of Austria's
Construction Markets**

Julia Bachtrögler, Michael Klien, Michael Weingärtler

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Austrian Institute of Economic Research

Abstract

Austria is on a track of economic expansion with solid growth in 2017 (GDP +2.9 percent). Strong foreign trade and high business confidence were driving industrial investments. Labour markets are improving – having a positive impact on private consumption which additionally supports the economic development. Therefore, the outlook for 2018 is more optimistic than previously anticipated. The construction business benefits from this economic framework. All construction segments are currently exhibiting growth, with the strongest increases in non-residential construction and civil engineering. The residential construction market in Austria is in the midst of an expansion phase where dynamics are expected to slow down towards 2020.

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85th EUROCONSTRUCT Country Report



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Table Of Contents

The EUROCONSTRUCT Network	4		
Member Institutes	4		
Austria	7	—	AT
Belgium	29	—	BE
Czech Republic	49	—	CZ
Denmark	73	—	DK
Finland	103	—	FI
France	129	—	FR
Germany	155	—	DE
Hungary	183	—	HU
Ireland	209	—	IE
Italy	237	—	IT
Netherlands	267	—	NL
Norway	289	—	NO
Poland	311	—	PL
Portugal	337	—	PT
Slovakia	359	—	SK
Spain	383	—	ES
Sweden	403	—	SE
Switzerland	435	—	CH
United Kingdom	453	—	UK
General Definitions	472		

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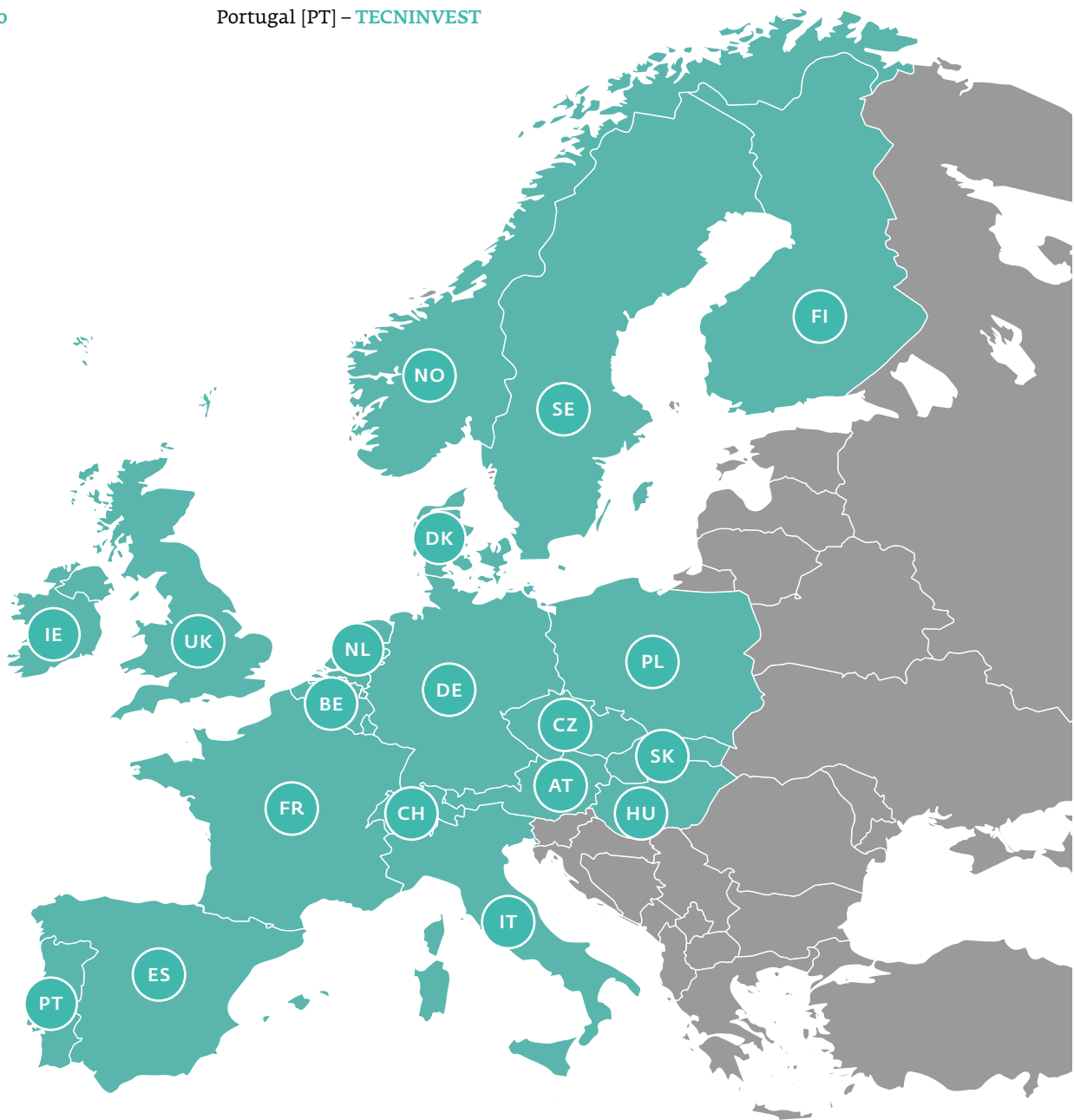
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1. Summary and Conclusions

Austrian overall economic growth remains at a high level. GDP grew by 2.9% in 2017 compared to the previous year, and a further expansion by 3.2% in 2018 is expected according to latest WIFO forecasts from March 2018. This development is largely based on the favorable international economic situation that is reflected by a rising export demand for Austrian goods. Industrial production in particular gains from the sustained growth in foreign trade, which is leading to higher investments in the expansion of production capacities. The economic upswing is expected to slow down in 2019 when the forecasted GDP growth rate declines to 2.2%.

The residential construction market in Austria is in the midst of an expansion phase. After 2.4% in 2017, it will also exhibit a growth rate close to 2% in 2018. In the years until 2020, growth starts to bottom out at around 1%. A somewhat lagged upswing can be expected for housing renovation, which will continue to grow faster over the next years as land prices stay increasing. Overall, the high population dynamics, which is indicated by current record levels of building permits, ensures a positive development in the segment in the coming years. With financing conditions largely unchanged, further increases in house prices keep further residential construction attractive.

Non-residential construction benefits from the current favourable business climate. In 2018 the strong export market drives mainly industrial construction (+2.2%) which is expected to remain high also in 2019 (+1.9%). Office construction performed strong already in 2017 (+5.7%); also because of large office projects in the capital city. Most of them will be finished in 2018 which leads to a lower growth by 1.4% in this year and hardly any major impulses are expected for the upcoming years. Higher

employment and increasing private consumption is stimulating commercial construction in 2018, but growth will slow down because of market saturation in city-regions and legal limitations of new green-field shopping centres. Public investments show a stable growth path in 2018 and 2019. Educational construction profits from the vivid investments of BIG (in the area of higher education) which is partly offset by the low municipal investment activity, leading to a combined growth of 1.8% in 2018 and 1.5% in 2019. Growth in health investments are expected to slow significantly in 2018 (+1.4%) as the public debt brake begins to work. The increase in health investments is therefore nearly solely based on the engagement of the private sector.

Civil engineering growth is largely determined by investments in transport infrastructure. The outlook for investments in the highway network is very positive, but growth in this area is completely offset by low municipal investments resulting to a decline in total road construction by 1.9%. Regarding the highway network, Asfinag's budgetary plans show a strong investment activity in 2019 which is likely to lead in an overall growth by 3.6% in 2018. Railway construction on the other hand shows a different investment cycle according to the latest infrastructure framework plan. Projects were partly postponed leading to lower growth in the period 2018 to 2019. The telecom sector will benefit from the broadband support programs in the year 2018 and partly in 2019. Energy and water works on the other side show comparatively low investment activities in the forecasting period. Energy works still suffer from low energy prices while growth in the water works are hampered by low demand because of tight municipal finances and also because of the already high degree of connectivity.

2. Macro-economic outlook

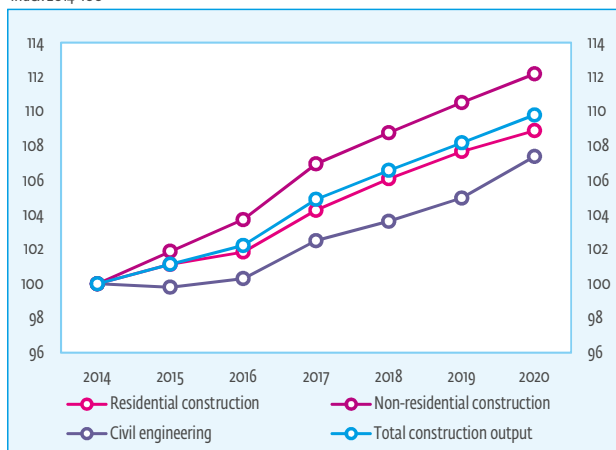
The growth rate of the Austrian economy in 2017 outperformed the one observed for other countries within the euro area, and this pattern is projected to continue in the years 2018 and 2019. According to the current WIFO forecast, the increase in the GDP growth rate will amount to 3.2% in 2018 and, given the expected deceleration of the economic upswing in the global economy, to 2.2% in 2019.

Foreign trade

Similar to 2017, one of the main drivers of the Austrian growth performance in the next two years is strong export demand. Although the Euro is expected to appreciate further (compared to the US-Dollar) until 2018, the Austrian export market continues to benefit from sustained high international demand.

Total Construction Output by Sector from 2014 to 2020

index 2014=100



Source: EUROCONSTRUCT (85th Conference)

With reference to the most important trade partners, growing export demand stems from the positive economic outlook for Germany, Italy as well as Central and Eastern European countries. The latter (Poland, Slovakia, Slovenia, the Czech Republic and Hungary) grew by 2 percentage points faster than the EU average in 2017, however, this difference is projected to decline in subsequent years, to on average 1 percentage point in 2019. The market share of Austrian imports in all trading partners' foreign demand is projected to grow less in 2018 and 2019 than in 2017, when it exhibited a peak of a 6 percentage points-rise as compared to the previous year. That year, export flows to all main trading partners were increased apart from those to the United Kingdom, which is likely to reflect uncertainty about the "Brexit", and Switzerland.

Given the announcement of US-President Trump to introduce tariffs on certain steel and aluminium imports and consider additional protectionist measures, the results of current negotiations with the European Union will be crucial for the development of international trade in the near future. Moreover, volatility in financial markets has increased in 2017, which might translate into unexpected consequences for the real economy.

Industrial production

Especially industrial production benefits from ongoing export growth. The growth rate of 6.7% in 2017 is projected to be exceeded by 1.1 percentage points in 2018 and to stagnate in subsequent periods. Real effective exchange rates for industrial goods continue their steady increase. In line with that, business sentiment remains positive, but in contrast to the preceding development, has not improved anymore since the beginning of 2018.

Due to high capital utilisation to serve export demand, the enlargement of production capacities has boosted private investment, which therefore represents another major determinant of the economic upswing of the Austrian economy.

Labour market

The steep increase in the number of employed persons in Austria, accounting for employment growth of 1.8% in 2017, is expected to be just slightly dampened in 2018. Therefore, labour market dynamics reflect the high levels of exports and consequently the capacity enhancements of Austrian companies (in the industrial production sector). In addition, the labour force grew slower, which further contributes to decreasing unemployment rates. While the unemployment rate (national definition) added up to 8.5% in 2017, it is projected to drop to 7.7% in 2018 and 7.3% in 2019.

Not only may the slow-down of the economic upswing in Austria and the international economy curb the creation of new jobs. There is also uncertainty regarding

labour market and other economic policies implemented by Austria's new government as well as their short- and mid-term effects.

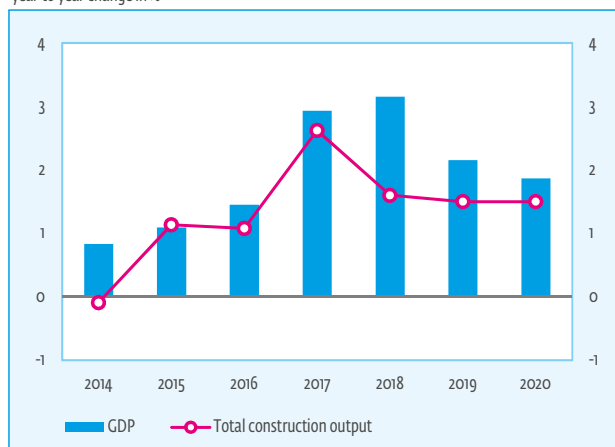
Consumer demand

Continuous reductions in the unemployment rate in 2017 have led to improvements in consumer sentiments, which translated into growing private consumption (+1.4% in real terms compared to the previous year). Nevertheless, the pace of growth has decreased in comparison to 2016, which is due to slow growth in the income for households.

Up from 2018, the favourable economic state is forecasted to spur higher wage growth, which will re-boost consumer demand. Decreasing saving rates of private households in 2018 mirror that development, however, a trend reversal towards an increase in saving rates is predicted for 2019.

GDP and Total Construction Output from 2014 to 2020

year to year change in %



Source: EUROCONSTRUCT (85th Conference)

Prices and monetary policy

The current WIFO forecast predicts inflation to stagnate to the level of 1.9% in the years 2018 and 2019. It is expected that crude oil prices rise in those years but that inflation tendencies are dampened by the ongoing appreciation of the Euro compared to the US-dollar. Moreover, as not only wages but also productivity is predicted to grow faster, labour cost increases are not accelerating inflation.

The European Central Bank is not expected to follow the Federal Reserve in step-wise increases of the main refinancing rate before autumn of 2019. In spite of the announcement of a phasing-out phase for bond purchasing programmes, monetary policy will therefore continue to promote private and public investment.

Fiscal policy

The WIFO forecast from March 2018 predicted that the Austrian fiscal balances improve such that the deficit will reduce to 0.3% of GDP in 2018 and turn

into a surplus of 0.1% of the forecasted GDP in 2019. However, the new budgetary draft from April 2018 exhibits a deficit of 0.4% for 2018 and an even balance for 2019. While the budgetary draft contains few dramatic changes in fiscal policy, the overall plans for a reduction of tax burden coupled with the goal of a budgetary surplus will require consolidations in various areas in the next years.

Forecast uncertainties

Regarding the new government programme, some uncertainty remains with respect to the future tax burden, effects on private consumption and production. The abolishment of two labour market programmes may moderate private demand for consumer goods, while it is not yet clear which further announced policies are going to be actually implemented.

Regarding the global economic activity, increasing volatility in financial markets and the United States' intention to restrict imports and limit trade agreements imposes uncertainty to forecasts of future trade flows.

Finally, the national public balances within the European Union will be strongly affected by the United Kingdom leaving the EU. On the one hand, the cease of the UK's contributions to the EU budget requires additional payments by the other (financially solid) member states. On the other hand, resulting changes in trade patterns within the EU but also between the EU and the rest of the world that are yet unknown may lead to a bias in the forecast of the economic development.

Key Macroeconomic Indicators in Austria 2016 to 2020

annual percentage change, real terms

	2016	2017	2018	2019	2020
Gross domestic product	1.5	2.9	3.2	2.2	1.9
Private consumption	1.5	1.4	1.8	1.6	1.6
Public consumption	2.1	1.1	1.1	1.2	1.2
Investment (GFCF)	3.7	4.8	3.5	2.5	2.1
Inflation	0.9	2.1	1.9	1.9	1.9
Unemployment	6.0	5.6	5.2	5.0	5.0

Source: Statistics Austria. WIFO-forecasts March 2018.

3. Housing Market

Austria's residential construction market is in the midst of an expansion phase. In 2017, total residential construction (both new construction and renovation) grew at 2.4%, and will grow only slightly

below 2% in 2018. The recovery of the Austrian residential construction market since 2014 is therefore about to continue in 2018. From 2018 onward the growth prospects are still positive albeit somewhat lower than currently.

3.1 New residential construction Interest rates and financing conditions

The low interest rate situation is still prevailing in Austria and Europe. Although there were some signs of a reversal due to the change of the monetary stance in the US, interest rates for housing have reached a new low in January 2018. Average interest rates for new housing mortgages are around 1.8%. Also the strong credit growth continued in 2017: Compared to 2016, the stock of outstanding mortgage loans increased by 4%. New housing loans grew by an astounding rate of 26%, after a decline of 8% last year.

An ongoing trend in housing finance in Austria is the shift from variable to fixed rate loans. In the third quarter of 2017, the former accounted for "only" 60% of new loans compared to 88% three years before. While this is still a high percentage compared to other countries it suggests that households increasingly try to lock in the low interest rates. For the coming years, this shift should also help to shield Austrian households from a potential reversal in monetary policy and increasing interest rates. Given that the ECB has not yet decided to change its policy of high liquidity and low interest rates – the WIFO forecast until 2020 predicts only a modest increase to 0.4% and 1.6% for short and long-term rates – financing is not expected to be a constraint for housing construction in the next years.

It has to be mentioned, however, that apart from the ECB's policies, there is the risk that the national authorities (Austrian national bank and Financial Market Supervision in Austria) start to regulate credit supply for housing loans. In mid-2017, the bill related to the so-called macroprudential toolkit was adopted by the Austrian parliament. The comprised instruments allow the national authorities to regulate financing institutes with respect to minimum requirements for lending standards, for instance imposing limits to the loan-to-value ratio etc. Depending on the further developments in the areas of housing prices as well as housing loans, the authorities might employ these instruments in order to avoid the build-up of unsustainable trends.

Building permits

As one of the main indicators of residential construction, building permits have conveyed a very vivid picture of the Austrian residential construction market. Considerable and repeated increases since 2010 leading to historic heights with figures

of more than 50,000 units in new residential buildings in the year 2015 have suggested that the dynamic population growth had a strong and direct impact on demand.

Even more, the latest figures from Statistics Austria led to a very strong upward revision of building permits for 2016 as well as 2017. In 2016, housing permits increased by more than 7,000 units, which represents a growth well above 10%. A further increase by roughly 5,000 units in 2017 has led building permits to a new record high of more than 62,000 units. Such levels have last been registered in the late 1970's.

Unfortunately, however, the evolution of housing permits is only partially reflected in production and national accounts data. Although the reasons for this disconnect are not entirely clear, and remain even if a lag between building and construction is taken into consideration, the differences question the reliability of the building permit data as an indicator for construction activity. Particularly recent periods are often subject to substantial revisions. Nevertheless the overall expansion as indicated by the permits data is beyond question.

A regional analysis shows that a large part of the increase since 2015 is concentrated on Vienna, which more than doubled its number of building permits to 22,700 in 2017. With respect to the other regions, the evolution of permits appears much more diverse and uneven. While Styria and Vorarlberg followed the strong national expansion, Upper Austria, Lower Austria, Carinthia and Tyrol exhibit (considerably) fewer building permits in 2017 than in 2015.

What is more, building permits for one- and two-family homes have already registered a small reduction in 2017 whereas the overall growth stems exclusively from multi-storey buildings. This fits the regional picture as most multi-storey buildings are located in big cities like Vienna or Graz (Styria).

Given the already very high levels of building permits, WIFO forecasts for 2018 onwards suggest little upward potential and a high probability for downward corrections. In the case of one- and two-family homes, a further decline in 2018 and a short-lived upward tick in 2019 are predicted. In 2020 the number of permits is expected to lie a few hundred units below its 2017 level. Similarly for multi-storey buildings, a continued dynamic growth path cannot be sustained in the coming years. After stagnation in 2018, the further development will lead to a continued but still moderate decrease in the number of units until 2020. Overall, the number of permits will still be very high, but a correction of the large increases since 2015 appears unavoidable.

Regional Building Permits in New Residential Buildings

number, ,000

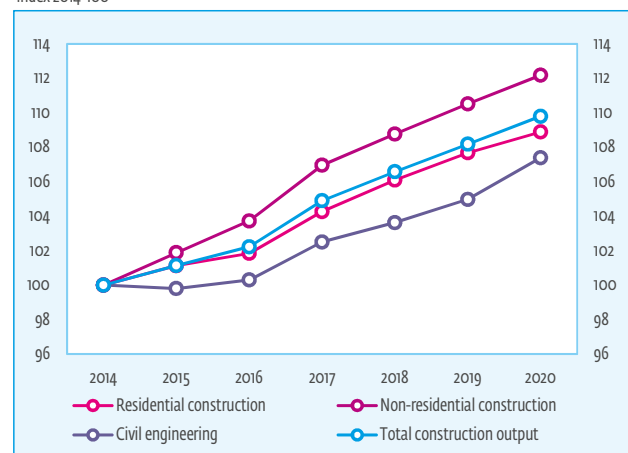
	2012	2013	2014	2015	2016	2017
Burgenland	1.133	1.629	1.968	1.931	1.611	1.392
Carinthia	2.656	2.416	2.718	2.915	2.537	2.315
Lower Austria	7.353	8.273	8.916	9.164	9.032	8.809
Upper Austria	7.366	7.244	9.089	7.535	9.142	7.498
Salzburg	2.868	3.764	3.011	3.168	2.923	2.607
Styria	5.891	7.317	7.754	7.261	9.527	9.740
Tyrol	4.011	4.089	4.337	5.360	4.679	4.197
Vorarlberg	2.702	2.287	2.665	2.777	2.800	3.284
Vienna	6.926	9.590	9.014	10.752	15.724	22.797
Austria	40.906	46.609	49.472	50.863	57.975	62.639

Source: Statistics Austria (April 2018).



Total Construction Output by Sector from 2014 to 2020

index 2014=100



Source: EUROCONSTRUCT (85th Conference)

House prices and real estate

In concert with population growth, increasing house prices indicate that demand exceeds supply and that housing construction becomes more profitable. This is also consistent with the most recent data on house prices, which shows considerable growth, but at lower rates than in the past years. In 2017, house prices (according to an index from the Austrian national bank) increased by 3.8%, which is roughly half of its growth in 2016 (7.3%).

Interestingly, Vienna as the price driver in the years after the crisis is again on the lower end of the spectrum, with increases of 3.8% in 2016 and 1.5% in 2017. A few quarters of sinking house prices indicate that a plafond has been reached in Vienna. Conversely, higher growth rates are found in other Austrian

regions, where prices increased by 9.1% in 2016 and 4.9% in 2017. However, despite the lower increase in 2017, it has to be mentioned that the growth rates have been consistently increasing since Q1 2017, and have reached 10% in Q1 2018. It is therefore an open question if 2018 will see a renewed price dynamic, particularly in regions apart from Vienna.

While house prices have increased considerably in Austria, it has taken several years to materialize into very strong additional housing construction. A partial explanation for this is that residential construction, in contrast to non-residential construction, never really faced a slump during the economic crisis of 08/09. The level of housing construction has consistently been on or above the pre-crisis levels. Moreover, house price changes were heavily concentrated on some areas, and therefore also new construction might simply have shifted to the high demand areas, leaving overall volumes relatively unchanged. The regional differences in building permits would support this conjecture.

Another possible explanation is the limited availability of land in high density areas. Land is in the centre of many political and policy discussions to address the affordability of housing. If house prices are driven by higher land prices, it is hardly surprising that construction output lags behind the evolution of house prices.

Related to house prices, also the number of transactions is currently stabilizing. After three years with extraordinarily strong growth rates, the data for 2017 (-0.2%) suggests that the strong dynamic of the previous years has come to a halt.

House Prices

year-on-year change, %

		2012	2013	2014	2015	2016	2017
Austria	Total	12.4	4.7	3.5	4.1	7.3	3.8
	Total	15.7	8.7	4.2	2.2	3.8	1.5
Vienna	1+2 Family Houses	3.5	2.9	-3.3	2.6	-1.9	2.5
	Flats	16.7	9.1	4.7	2.2	4.2	1.4
	New flats	7.0	3.7	1.0	4.7	10.1	1.8
	Used flats	18.2	9.8	5.2	1.9	3.4	0.8
Austria without Vienna	Total	10.8	2.7	3.1	5.1	9.1	4.9
	1+2 Family Houses	8.7	1.1	6.4	6.8	7.5	1.9
	Flats	11.6	3.3	1.9	4.5	9.7	5.8
	New flats	2.2	2.2	-11.2	0.4	7.9	2.1
	Used flats	12.9	3.4	3.5	4.9	9.8	5.9

Source: OeNB (2018), Prof. Wolfgang Feilmayr. Department for spatial planning. TU Vienna.

Real estate transactions

number in '000, volume in billion Euro

		2013	2014	2015	2016	2017
Austria	number	81.447	96.197	112.124	121.436	121.171
Vienna		12.484	15.189	18.052	19.490	21.378
Austria	volume	16.0	19.5	23.5	26.9	28.1
Vienna		4.9	6.0	7.2	8.2	8.8

Annual average percentage change

		2013	2014	2015	2016	2017
Austria	number	-12.5	+18.1	+16.6	+8.3	-0.2
Vienna		-11.2	+18.1	+18.8	+8.0	+9.7
Austria	volume	-8.3	+21.9	+20.4	+14.2	+4.7
Vienna		-5.5	+23.4	+19.7	+14.6	+6.6

Source: RE/MAX (IMMOUnited calculations), 2018. – Based on the official land register which covers new and existing buildings. Transactions cover all types of buildings (residential and non-residential) and land.

Public sector and policies

Since the end of 2017, Austria has a new federal government. Although only a few policies have been implemented yet, several of the governments' plans can have important effects on residential construction.

- **Wohnbauoffensive and WBIB:**

In the wake of the creation of the budgetary draft for 2018 and 2019, the federal government has decided to step out of the Wohnbaubank WBIB, which is an integral part of the Wohnbauoffensive started in 2015. The government therefore withdrew its guarantee for the Wohnbaubank, which would have aided in ensuring low interest rates for the loans from the bank. Instead, the federal government has asked the regional governments (Länder) to take on this position because they are already legally responsible for housing policies. As it is not clear whether the Länder will continue supporting the WBIB, the future of the Wohnbauoffensive is highly questionable. Although it was never clear how many additional units are created through WBIB, the halt of the operations will have a small detrimental effect on new public housing.

The housing activities from the second national initiative (Austrian Real Estate – ARE) continue as planned.

- **Taxes on house purchases and land tax:**

The new federal government seeks to lower the overall tax burden which is potentially relevant in two areas concerning residential construction. Firstly, the conservative party has announced to slash a large part of taxes on (first time) house purchases. These taxes and fees amount to 5 to 10% of the transaction. As such this would be a considerable

reduction. However, in the current seller market, it is not clear which share of this tax reduction would end up with the buyers, therefore possibly limiting the additional transactions. Moreover, the costs of this measure are not negligible and may not be consistent with the government's aim of a balanced budget. Secondly, launched in the fiscal compact between federal, regional and local governments in 2016, a reform of the land tax system was being negotiated. Given the government's aim to reduce the tax burden, any reform which would increase land taxes – which are relatively low in Austria due to a several decade old tax base (Einheitswerte) – seems unlikely.

In both cases, the new government has not yet communicated any concrete policy measures. However, regulatory changes in these two areas can have very immediate effects on housing construction and should therefore be monitored closely.

- **New rental regulations:**

In its coalition program, the new government has announced to reform rental regulations, as have virtually all governments before. The envisaged reform, as far as the coalition program can be interpreted, is largely following the suggestions of the real estate sector. This implies changes in renter protection, particularly with respect to areas where renters received high benefits such as in the case of very old rental contracts. There are also plans that the cost for restorations of existing apartments can more easily be added to the rent. A key question will also be how the government tackles limited duration renting, which has been increasing strongly over the last few years. As for the above tax plans, the new rental regulations have not been officially presented and might take several years for implementation.

Apart from the initiatives of the federal government, housing policies are a core competence of regional governments. One of the main instruments of the regional government to steer residential construction is public housing support (literally housing construction subsidy). The subsidy, which varies between 2,000 and 3,000 million Euro per year, decreased by a considerable portion (roughly 20%) between 2014 and 2016. The decline from 2.9 billion to 2.4 billion is a mix of supply and demand side factors. On the supply side, some provinces are under pressure to reduce public spending to fulfil the national stability pact. Since 2017, the debt brake on the sub-national level, as part of the stability pact, requires provinces (and municipalities) to limit their annual deficits to 0.1% of GDP, collectively. On the demand side, the favourable financing conditions make public subsidies, which are frequently coupled to energetic and thermal buildings standards, less appealing. As a result, purely privately financed housing construction is

increasing in Austria. The budgetary drafts on the province level do not suggest a significant recovery of housing construction subsidies, suggesting little impulse through this scheme.

Public Housing Support

volume, million Euro

	2011	2012	2013	2014	2015	2016
Burgenland	137	149	123	135	124	131
Carinthia	496	490	470	622	472	434
Lower Austria	253	229	310	339	284	275
Upper Austria	298	215	272	262	188	168
Salzburg	438	430	441	444	451	380
Styria	253	265	255	268	270	277
Tyrol	177	221	168	146	147	141
Vorarlberg	526	467	563	629	514	510
Vienna	137	149	123	135	124	131
Austria	2,659	2,562	2,672	2,939	2,528	2,378

Source: BMF (2017).

3.2. Residential renovation

In the recent economic upswing, not only new construction but also residential renovation benefits from increased demand. Due to the strong increase of land prices, which are considered a major driver of home prices, residential renovation should grow even stronger than new residential construction.

In 2018, as in the years before, housing renovation still lags behind new residential construction. Several explanations arise. Firstly, the Austrian housing subsidies are very much centered on new construction. A comparatively low share of housing subsidies is available for renovation works. Increasing the supply of new units has ever been the ideology behind Austria's housing subsidy scheme.

Secondly, subsidy schemes for renovation have been decreasing over the last years. Since 2010, the regional subsidy schemes – part of the previously mentioned housing construction subsidy scheme – which are the largest component of public renovation initiatives, have almost constantly been in decline: From roughly 850 million Euro in 2010 to 560 million Euro in 2015. The subsidy cuts were therefore most pronounced in the area of renovation, and larger than those in other areas. Moreover, on the federal level the so called 'renovation cheque' ('Sanierungsscheck') had a total amount of 100 million Euro for several years after 2009. In 2015, the total budget was reduced to 80 million Euro and further to 43 million in 2016 and 2017. In part, the budgetary cuts were motivated by weak demand for

these type of subsidies. This also suggests that subsidies are only part of the explanation why residential renovation is comparatively low.

Thirdly, the low uptake rate suggests little interest from households to engage in renovation and energy efficiency measures due to insufficient financial incentives. A number of institutional factors aid to this problem. For instance, renovation costs can only be partially factored into rents. Combined with the principal agent issue that the benefits (e.g. energy savings) accrue to the renter and not the owner of the apartment aggravates this problem.

Despite these problems, high land prices coupled with high housing cost in urban areas is pushing residential renovation in the coming years.

4. Non-residential Market

Austria's non-residential market strongly benefited from the current favourable business climate in 2017. WIFO's latest March 2018 forecasts showed also an upwards revision of the overall economic development to 3.2% in 2018 (previously: +2.8%). The upward revision is based on improved investments in fixed assets which are expected to increase by 6.0% in 2018 and higher exports which are projected to expand by 5.5%. These positive economic trends lead to higher employment and stronger private consumption which is expected to grow by 1.8% in 2018. Industrial construction, but also office and commercial construction will benefit most from this development. Public consumption lags behind with a growth of 1.1%. Stronger impulses are not expected in the near future from this area

since one of the main governmental targets is a balanced budget in 2019. Weaker public investment could be observed especially on municipal level in the past years. In order to strengthen municipal infrastructure the Austrian government passed a law called "Support for Municipal Investments" (Kommunalinvestitionsgesetz 2017). This program provides financial support with a volume of 175 million Euro, generating investments of roughly 3 times the subsidy. Most important target areas in non-residential construction are:

- 1) Building, expansion and renovation from child day centres and schools
- 2) Building, expansion and renovation of facilities for elderly and persons with disabilities
- 3) Building and renovation of sports facilities and public buildings owned by municipalities

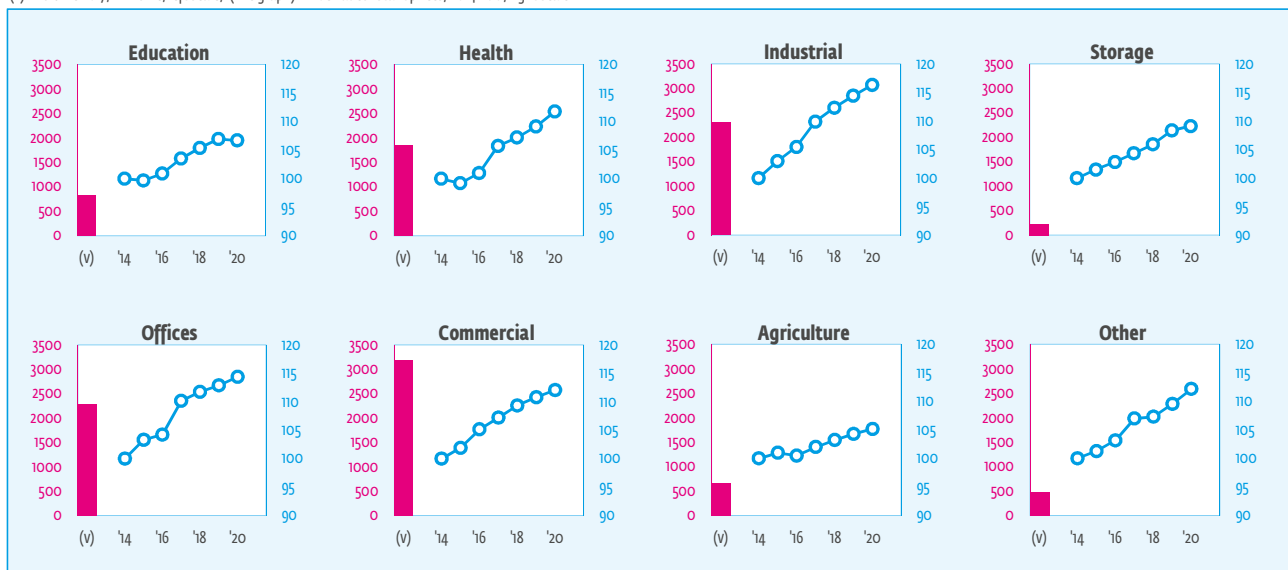
In 2019 investment levels will remain high in total non-residential construction. Growth is expected to slow down because of several reasons. First of all, the overall economy is forecasted to grow at a lower pace (GDP 2019: + 2.2%). Additionally major projects will be finished by the end of 2018 and early 2019, especially in the area of office construction. Furthermore, market saturation can be observed in some area, all above in commercial construction. In summary, non-residential growth is forecasted to continue in 2019 by 1.5% and in 2020 by 1.4%.

New non-residential construction by subsectors

Education. In Austria educational construction takes place on the municipal and state ('Bundesländer') level. Furthermore investments are additionally undertaken by BIG, the federal real estate company, which is the most important players in this sector.

New non-residential: breakdown by subsectors

(v) = volume 2017, million €, left scale; (line graph) = index at constant prices, 2014=100, right scale



Source: EUROCONSTRUCT (85th Conference)

According to the budgetary plan 2018/19 investments of BIG will increase significantly until 2023. Currently 80 projects (new and overall renovation) with a volume of 1.7 billion are budgeted. The impact on educational construction will be slightly less, because this volume also includes other public office buildings. Investments of BIG are expected to increase in 2018 (after declined in 2014 and 2015 and only marginal growth in 2017). Numerous educational projects are currently on the way. One of the larger current new construction projects are the expansion of BOKU University Vienna (completion 2018), Future Art Lab Musical University Vienna (completion 2019). A further even stronger upturn is expected in 2019 when BIG's highest investment levels in this decade are envisaged.

This positive development on the part of BIG was partly offset by the forecasted weaker investment of municipalities in 2017. It has to be noted that investments on this regional level doubled from 2011 to 2016 because of a higher need for child-care and kindergarten facilities. In 2018 construction output in the educational sector is therefore expected to grow by 1.8% and by 1.5% in 2019, where a temporary peak is projected. A downturn in volume in 2020 is likely from today's point of view.

Health. Health investments (including equipment) amounted to 2.7 billion Euro in 2016 according to the latest figures of the System of Health Accounts. As described in the previous reports, the health sector is characterized by comparatively lower public investments while the private sector is continuously expanding. Within the four year period 2013 to 2016 the share of private investments increased by more than six percentage points to 48.9% on total health investments. It can be derived that nearly half of Austria's health investments is done by private entities by 2018.

The strong private engagement indirectly implies the ongoing high demand for health services, mainly in the area of care facilities because of the aging population. Demographic development shows that the population over 75 years will grow by 140,000 persons within the next ten years. The share of population within this age group will more than double (from 4.0% to 8.1%) between 2010 to 2050.

The demand for health services are growing steadily – nevertheless investments will increase only at a slower rate. This can be partly explained by existence of an already very dense hospital network (see excursus on hospitals). Another influencing factor originates from public finances. A so-called public 'debt brake' which is in place since 2017, will force the state governments to tighten cost controls in the upcoming years and this will also affect the health sector.

Excursus Hospitals

The latest OECD 'Health at a Glance 2017' report confirmed that Austria has the largest number of hospital discharges within the 34 member states, which is 64% above the OECD average. Hospital discharges even increased in the past two years by nearly 4 percentage points. Austria ranks also within the top five nations regarding the number of hospital beds per 1,000 inhabitants (7.6). This clearly restricts the future development in this area.

As a result less construction projects will take place in the upcoming years. The hospital sector is generally in a consolidation phase. Several hospitals are planned to be merged and/or restructured to increase the efficiency in the health sector. Construction related growth in the health sector will be therefore only expand minor at rates of 1.4% in 2018 and around 2% in the years 2019 and 2020.

Industry. Construction of industrial buildings grew by around 4.2% in 2017. This area profited from the positive business climate which is based substantially on a dynamic export sector (2018: 5.5%, 2019: 4.5%). The capital goods industries profit most from this trend. Investments in equipment increased steadily in the past two years. Companies currently have to expand their product capacities to fulfil demand. WIFO surveys showed that in 2017 the capacity utilisation rose dynamically and reached in the first quarter 2018 similar high levels compared to the years 2007 and 2011. Despite a sound export market also a strong domestic private consumption is additionally supporting this development. This robust performance is expected to continue at least in the first half of 2018. A peak could be reached in summer 2018. A slowdown of the international economy is expected to start from mid-2018 onwards. This is supported by the expectations of the Austrian companies regarding the future business development which did not increase since the beginning of 2018. Capacity utilisation is expected to remain high, but the currently vivid investment activity will flatten. Private consumption will also remain high until the end of the forecasting period but it will not stimulate industrial production additionally.

These factors will lead to a lower construction growth until 2020. Forecasts project a growth in industrial building investments by 2.2% in 2018. The expansion of industrial construction will continuously decline to a rate of 1.9% in 2019 and 1.6% in 2020.

Office. Austrian investments in office construction had a volume of about 2.28 billion Euro in 2017. Vienna is the most important office market with a total office space of about 11 million square meters by the end of 2017 according to CBRE. In 2017 the office

market could pick up significantly with 154,000 square meters completed after several years with relatively poor performance. CBRE forecasts expect a further significant growth in output in 2018. Estimations from the real estate companies EHL and CBRE expect around 280,000 square meters in office space completed. Large scale projects like the Austria Campus (1020 Vienna, size: 6 buildings totaling 200,000 sqm), The Icon Vienna (1040 Vienna, size: 74,200 sqm) and ViE (1030 Vienna, size: 13,800 sqm). The current positive market situation led the vacancy rate decline under 5% in the capitol Vienna. Average rents are also increasing slightly according to the real estate companies mentioned. EHL projects a slight increase of average rents by 14.30 Euro to 14.50 Euro per square meter. One of the reasons for the price increase is the higher demand for new high quality office buildings which are more often requested from companies. The Austrian office sector is also interesting for multinational companies, since prime rents of 26 Euro are rather low in European comparison.

Office construction is also positively influenced by the investment market which gets more international with new players expected on the Austrian market in 2018.

After a very dynamic year 2017 with a construction market growth by 5.7% compared to the previous year – materializing in the high number of office completions in 2018 – growth is expected to continue in 2018 but a lower rate of 1.4%. The outlook will stay positive in 2019 and 2020 with growth rates of about 1%.

Commerce. Commercial construction is influenced by two different trends. On the positive side, high private consumption is stimulating the market. Consumer spending increased by 1.4% in 2017 and an even stronger expansion is expected for 2018 and 2019 with growth rates of 1.8% and 1.6% respectively. Tourism is additionally supporting the retail market. Overnight stays, totalling to 15.5 million in 2017 increased by around 4% compared to 2016. Furthermore, Austria – above all Vienna – is one of the top ten targets for new business entrants. A survey from CBRE in 2017 showed that 29 brands planned to enter the Austrian retail market.

On the downside competition got stronger. New projects are located almost exclusively in top locations. Research from EHL real estate showed that as a consequence the criteria for top locations also became stricter. This also led to higher vacancy rates in areas which were considered as top locations in the past. Also construction of new green-field shopping centres nearly stopped. The reasons are two-fold: on the one hand side the supply is sufficient in most areas because of the already high level. On

the other side, also regulatory reasons restrict the construction of new green-field shopping centres.

In short, commercial construction will be strong in 2018 with expected growth of 2% in 2018 and a slow-down is forecasted for 2019 (+1.3%) and 2020 (+1.1%).

Taken all new non-residential construction sectors together, growth will be stable in 2018 (1.7%) and it is expected to slow down marginally in 2019 and 2020 with rates of 1.5% and 1.4% respectively.

5. Civil Engineering Market

Austrian civil engineering is highly influenced by public spending, above all in the area of transport infrastructure. Also the majority of data revisions in this 85th Euroconstruct update for civil engineering originate from the transport sector. These changes were needed to go in line with the new budgetary draft for 2018/2019 which was presented by the Ministry of Finance on 21 March 2018. The government's target is to reach a budget surplus in 2019. The focus of the new budgeting period is set to families, education, research and public security. This implies a change in public policy which also has an impact on civil engineering. Several projects will be delayed especially in the area of railway construction (see details in chapter 5.1 / railway infrastructure) which will result to lower construction volumes in this area. Road construction is less affected by these measures, since at least the high level road network is not financed from the public budget.

In general, civil engineering projects are likely to be realised faster in the future because of planned changes in the process of the environment impact assessments. This is part of a so called "Location Development Act" ("Standortentwicklungsgesetz") which is currently under negotiation.

In summary, total civil engineering investments grew in 2017 at a rate of 2.2% and therefore significantly lower than expected (previous forecasts: 3.2%). The outlook is positive, even if growth will be minor in the years 2018 and 2019 with rates at 1.1% and 1.3% respectively. Stronger impulses are expected in 2020 with a growth by 2.3% compared to the previous year. This growth stems from stronger public investment activity, especially in the railway infrastructure.

5.1 Civil engineering by sectors

Road infrastructure. Investments in road infrastructure are only partly affected by the new budgeting period. This leads to two different trends in this construction sub-sector depending on the type of road network.

1) Low-ranked road network. Investments in this area take place on municipal and state levels where the volume was stagnating or even declining in the past years. Additionally, transport investments in the budgetary drafts (“Landesrechnungsvorschlag”) were in some states lower than the final values in the financial statements (“Landesrechnungsabschluss”).

2) High-level road network: In the area of the high-level road network (highway infrastructure) investments are currently increasing. One of the reasons is that highways are run and operated by Asfinag (Austria’s highway financing stock cooperation). Asfinag is fully owned by the Austrian Republic; nevertheless it is independent from the public budget, because it finances its project from its own resources. The main source of income stems from the yearly toll (Vignette) for passenger vehicles and the distance-based toll for heavy vehicles which generated high revenues in the past years. Toll revenues increased significantly by 5.8% in 2017 reaching a level of 2.03 billion Euro. Heavy vehicles contributed most with an increase by 7.6% in revenues.

In 2018, nearly 1.1 billion Euro will be invested in the Austrian highway network. Most of the funds (335 million Euro; 34%) are spent for new projects (excluding tunnels), 316 million Euro (29%) is spent for renovation works (excluding tunnels) and 280 million Euro is budgeted for tunnel projects (new and renovation). The rest (110 million Euro) is used for toll and traffic management, etc.

Current large new construction highway projects in Austria are:

- A26 Linzer Highway (project start: 2018, planned end: 2023, budgeted volume 668 million Euro)
- S7 Fürstenfelder Expressway (project start: 2017, planned end: 2023, budgeted volume 488 million Euro)
- A7 Mühlkreis Highway (project start: 2018, planned end: 2020, budgeted volume 168 million Euro)
- A9 Pyhrn Highway – Gleinalm tunnel (project start: 2013, planned end: 2019, budgeted volume 290 million Euro)
- A11 Karawankentunnel (project start: 2018, planned end: 2023, budgeted volume 168 million Euro)
- S3 Weinviertler Expressway (project start: 2017, planned end: 2020, budgeted volume 132 million Euro)
- S16 Arlberg Expressway (project start: 2016, planned end: 2019, budgeted volume 130 million Euro)

Asfinag’s budgetary plan indicates a significant stronger increase in 2019 and a slowdown in growth in 2020 with total volumes of 1.4 billion Euro and 1.5 billion Euro respectively.

Total road investments in 2017 amounted to about 2 billion Euro. Thereof around 50% of investments are led into the extension and renovation of the highway network. The rest is split into investments on municipal (35%) and on federal level (25%).

All in all, the positive development of the highway sector was fully subdued by declining investments on municipal and federal level which will lead to an expected downturn in volume, at least in 2018 (-1.9%). The outlook for 2019 is much more favourable – mainly because of Asfinag’s ambitious investment targets which should ensure a positive development in the whole road works sector (+3.6%) in 2019 which is expected to hold on also in 2020 at an only a marginal lower growth rate of 2.3%.

Railway infrastructure. Investment in the railway sector were influenced significantly by the recent budgetary 2018/2019 planning. In contrast to highway financing, the railway sector fully depends on the public household planning. This already led to lower investments in 2017 when instead of an increase only the level of 2016 could be achieved. The projected increase did not take place because of slower than anticipated progress. Additionally the new railway infrastructure plan 2018/2019 shows a new investment schedule for several railway projects. This will lead to a low increase in 2018 (starting from an already minor volume, because of the weak performance in 2017). Also the investments for 2019 were adjusted causing lower investment than forecasted in the previous 84th Euroconstruct report. Since projects were only postponed, stronger impulses in railway investments are expected in 2020 and the upcoming years.

The most important railway projects which determine the investment cycle did not change and include the following:

- The “Brenner Basis Tunnel”, is currently the largest railway project with a volume of close to 5 billion Euro (without financing costs). Within the period 2018-2020 investments of about 952 million Euro are budgeted. The project is at the beginning – less than 17% of the total volume was spent at the beginning of 2018. Annual investments are expected to increase in course of the construction progress from 211 million Euro in 2018 to 470 million Euro in 2020 and over 500 million Euro in the years afterwards. The route is planned to be finished in 2025.
- Southern route (“Südbahnstrecke”). The main project is the “Semmering Basis Tunnel”, connecting Gloggnitz and Mürzzuschlag with a volume of about 3.3 billion Euro. In the period 2018-2020 around 871 million Euro are budgeted. The largest investments will be spent in 2020 (312 million Euro) and not in 2018 as previously planned. Around one quarter of the project is finished and completion is expected in 2026.

- The “Koralmbahn”, connection Graz-Klagenfurt has a project volume of around 5 billion Euro. In the period 2018-2020 construction works will amount to 960 million Euro which are nearly evenly distributed over this three-year period. The opening of the route will be delayed towards 2026 instead of previously stated 2024.

All these large projects have in common that shares of the investment were shifted from the years 2018 and 2019 towards 2020 and 2021. This resulted in lower growth rates in the forecasting period towards 2020. Despite these project changes investments in railway construction are still favourable especially in 2018 with an expected growth at a rate of +4.8%. 2019 is much more negatively affected which results in a growth of only 1.5%. The investment cycle should gain in speed by 2020 with a forecasted growth by +6.0% in railway construction.

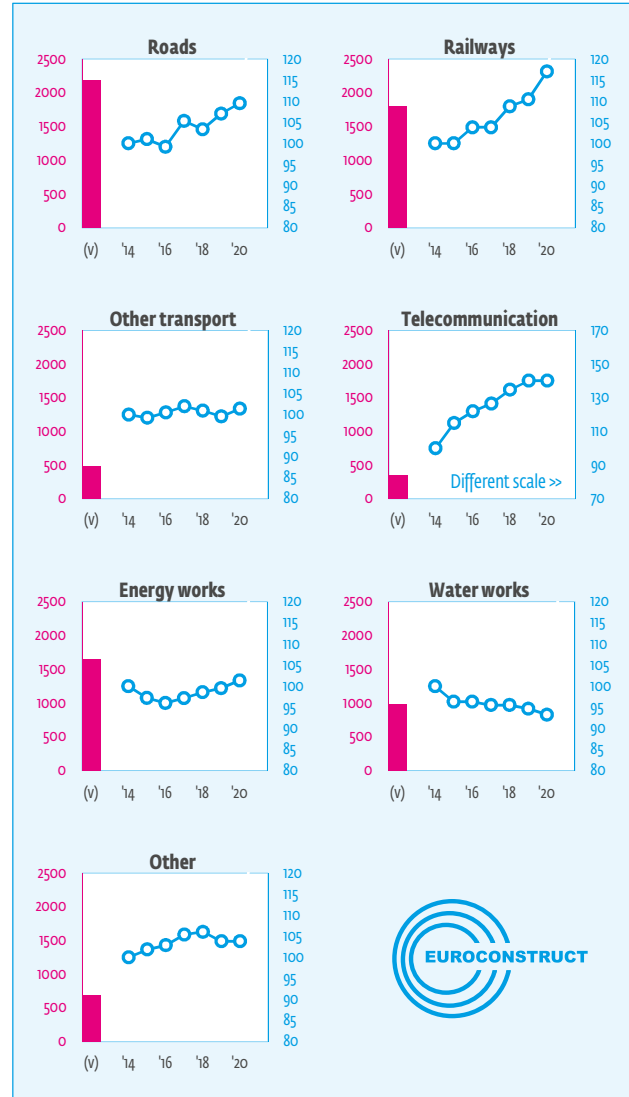
Telecommunication works. Investments in broadband and high speed internet connection lack behind other industrial countries, with an investment volume of only 0.23% of GDP. This is one of the lowest rates within the OECD. Therefore a public support program was introduced with a volume of 1 billion Euro from which nearly 350 million Euro were spent by the end of 2017. The current budgetary plan introduced in March 2018 contains public broadband support with a volume of 135 million Euro in 2018 and 145 million Euro in 2019. This represents an increase of over 7% compared to the previous year. The digital roadmap for Austria, introduced in early 2017, also plans the contracting of the 5G frequencies. The impact on telecommunication work will hardly exist in the forecasting period since investments into the 5G network are not likely to happen at a large scale before 2020.

In 2017 construction related telecommunication works increased by 3.8% and growth remained below the forecasts. The past tendering rules i.e. for telecommunications short pipework could not provide investment incentives for municipalities as planned. Funding rules were adopted and made more attractive. Furthermore the support volume increased in 2018 slightly than compared to 2017. The improved measures should ensure that the forecasted investment growth by 6.5% in 2018 and 4.0% in 2019 is maintained. No major additional impulses are expected in 2020 – at this time the market is likely to stagnate. The forecasted investment volume in 2020 is rather uncertain because it will mainly depend on the modalities of the 5G tendering process and its final costs.

Energy works. Austria’s volume of energy works amounted to around 1.7 million Euro in 2017. As described in the previous report Germany intends to introduce congestion management on the boarder

Total civil engineering: breakdown by subsectors

(v) = volume 2017, million €, left scale;
(line graph) = index at constant prices, 2014=100, right scale



Source: EUROCONSTRUCT (85th Conference)

to Austria. This would lead to different prices in Germany and Austria (instead of the currently same price) when capacity limits are reached. These plans were put into reality and will come into force on 1 October 2018. Recent analysis of energy exports calculated much smaller effects than originally expected. An evaluation of Aurora Energy Research showed that energy prices might only increase by 35 cent per MWh in Austria. One reason for the lower impact is that capacity management will affect only 10% to 15% of the total volume and parts of the increase can be also subset due to smart means electricity trade.

In general Austria’s power production is sufficient to satisfy electricity demand according to the energy regulator E-Control. Nevertheless, an expansion of hydro-power plants and further investments in renewable are necessary in order to meet the international climate target. The share of renewable energy according to the EU directive 2009/28/EC amounted to 32.8% (EU-28: 16%). The largest shares

within this area takes water power (37%), followed by solid biomass (29%). Wind, solar, biogas, geothermal and photovoltaic have all together only a share of about 10% of the renewable energy but the latter shows also the strongest growth in the recent past.

The outlook for energy investments is quiet dim even if an expansion especially in the network infrastructure would be needed. Low energy prices still dampen the outlook. Investments in the energy infrastructure will be therefore only around 1% in the upcoming years until 2020.

Water works. Austrian investments in the area of water and wastewater works amounted to about 980 million Euro in 2017. This area is highly subsidised. The funds for urban water management and water ecology had a volume of 340.9 million Euro. The public budget 2018/19 contains a minor increase of the support in 2018 (344.2 million Euro) and going back to the 2017 levels in 2019. However, much of this spending is based on past investment. Current subsidy levels are below 100 million Euro.

The market can be split into two types of investments: water and wastewater. The volume of water investments took a share of about 43% and wastewater investments had a share of 57% on total water works market in 2017. Inquiries in municipalities indicate that until 2020 mainly investments in the wastewater sector will decline stronger and here mainly because of a drop in new wastewater facilities. This can be explained by the high connection rate which varies between 95.1% and 100% depending on the municipal size class. On the other hand, renovation works in both areas, water and wastewater, perform rather stable.

All in all, the increase in funds will help stabilizing total water works sector in 2018. A decline by 0.9% is expected in 2019 among others also because of lower new waste water facilities. In 2020 a stronger reduction in investment by a rate of 1.5% is likely because of an expected stronger downturn in new fresh water activities.

APPENDIX – DEFINITIONS

Data from the national accounts represents an integral part of the reported construction forecasts. Not only the forecasts are updated in each report, but also the previously published data from the national accounts are revised regularly. The revisions affected almost without exception all economic areas according to official publications by the national statistics agency Statistics Austria. The revision calendar is as follows: The first data for year t are available in year autumn $t+1$, e.g. the first official data from the national accounts on growth or the construction industry for 2017 is available in autumn 2018. The main data sources for these figures are WIFO's economic forecasts as well as the monthly business surveys and other auxiliary data. In year $t+2$, information from structural business statistics is incorporated and the data revised if necessary. In year $t+3$, the compilation of input-output tables through the supply-use tables can lead to an additional revision of the official data.

Table 1

- **Population:** Statistics Austria, main scenario, on 1st January.
- **Households:** Statistics Austria, on 1st January.
- **Unemployed:** Austrian Public Employment Service (AMS), WIFO forecasts.
- **Unemployment rate:** Labor Force Survey, EUROSTAT, WIFO forecasts.
- Economic forecasts are based on the March 2018 WIFO forecasts (2018 to 2019) and on the spring 2018 WIFO mid-term forecasts (2020). All national account data (historic and forecasts) are based on ESA 2010 system.

Table 2

- **Construction output** includes own production (do-it-yourself), black economy and exports. Non-intensive private repair and maintenance measures were estimated by WIFO. The forecasts of growth rates reflect the WIFO March 2018 forecasts based on ESA 2010 (correspondently also Tables 4a and 4b).
- Data for cement consumption is derived from the information of the cement industry which level is remarkably stable over time.

Table 3

- Permits, starts and completions refer to new dwellings in new residential buildings.
- Permitted dwellings until 2017 are based on the official figures (April 2018) from Statistics Austria.
- **1+2 family houses:** Buildings with one or two dwellings (in previous reports buildings with one dwelling only).

- **Flats:** Buildings with three and more dwellings (in previous reports they referred to buildings with two and more dwellings).
- **Building starts:** No official statistics are available for Austria. The provided number is based on estimates considering a delay and drop out between permits and housing starts.
- **Building completions:** The results reported in this publication differ from official statistics from Statistics Austria. The reason for this deviation lies in the incomplete and delayed reporting to and from municipalities, which severely affects data quality. Data included in this report are based on housing permits and historical rates of completions.
- **Housing stock:** Annual average. The housing stock is a forward projection of the register based census 2011. Significant methodological changes in the 2011 census resulted in a higher housing stock.
- **Second homes. Vacancies:** WIFO forecasts based on Statistics Austria.
- **Home ownership rate:** WIFO forecasts based on Statistics Austria; share of dwellings owned by the occupier/relatives of the occupier.

Table 4a


- **Offices:** They include also other buildings for administration.
- **Miscellaneous:** e.g. buildings for sports and leisure time.

Table 4b

- **Other transport** includes mostly airport infrastructure as well as public transport (mainly underground transportation).
- **Energy works** includes construction of distribution lines for electricity as well as integral parts (e.g. related buildings such as power plants).
- **Water works** includes the construction of distribution lines for transportation of fluids (e.g. water utility lines, sewage) and related buildings (pumping stations), water well drilling and also the construction of river works, dams, etc.

Table 5

- Information is based on the March 2018 WIFO forecasts (2018 to 2019) and the spring 2018 WIFO mid-term forecasts (2020). Data stems from the national accounts based on ESA 2010 system.
- Volumes of each GDP component are at market prices. VAT included.
- The sum of the individual GDP components is not exactly equivalent to total GDP because of the so-called statistical difference. It represents a residual component which can be attributed to current account imbalances due to international trade and capital flows.


Country/Pays/Land: Austria					Table 1		
	MAIN DEMOGRAPHIC AND ECONOMIC INDICATORS PRINCIPAUX INDICATEURS DÉMOGRAPHIQUES ET ÉCONOMIQUES WICHTIGE DEMOGRAPHISCHE UND ÖKONOMISCHE INDIKATOREN						
					Forecast		Outlook
	2014	2015	2016	2017	2018	2019	2020
Population ('000s) Population Bevölkerung	8 508	8 585	8 701	8 773	8 822	8 871	8 919
Households ('000s) Ménages Haushalte	3 731	3 777	3 826	3 870	3 907	3 942	3 976
Unemployed ('000s) Chômeurs Arbeitslose	319	354	357	340	312	297	302
Unemployment rate (%) Taux de chômage Arbeitslosenquote	5.6	5.7	6.0	5.5	5.2	5.0	5.0
Change of GDP Variation du PIB Veränderung des BIP (% change in real terms)	0.8	1.1	1.5	2.9	3.2	2.2	1.9
Consumer prices (% change) Prix à la consommation Verbraucherpreise	1.7	0.9	0.9	2.1	1.9	1.9	1.9
Construction prices (% change) ¹⁾ Prix de la construction Baupreise	1.5	0.6	1.3	2.1	2.6	2.7	2.7
Short term interest rate ²⁾ Taux d'intérêt à court terme Kurzfristiger Zinssatz	0.2	0.0	-0.3	-0.3	-0.3	-0.1	0.4
Long term interest rate ³⁾ Taux d'intérêt à long terme Langfristiger Zinssatz	1.5	0.7	0.4	0.6	0.8	1.1	1.6

1) Refers to new construction only.

2) 3-month interbank rate (or equivalent).


3) 10-year government bonds (or equivalent).

AT


Country/Pays/Land: Austria		Table 2							
		CONSTRUCTION BY TYPE PAR TYPE D'OUVRAGE BAUPRODUKTION NACH BAUARTEN							
		Volume mill. euro ¹⁾	% change in real terms (volume)					Forecast	
2017	2014		2015	2016	2017	2018	2019	2020	
Residential construction Logement Wohnungsbau	New	11 952	0.0	1.5	1.3	2.5	2.0	1.4	0.7
	Renovation	5 239	-2.3	0.3	-0.6	2.1	1.2	1.7	2.1
	Total	17 192	-0.7	1.1	0.7	2.4	1.8	1.5	1.1
Non-residential construction Bâtiments non résidentiels übriger Hochbau	New	11 801	-1.2	1.7	1.9	3.6	1.7	1.5	1.4
	Renovation	3 530	0.4	2.5	1.4	1.5	1.7	2.0	1.8
	Total	15 332	-0.8	1.9	1.8	3.1	1.7	1.6	1.5
Building Bâtiment Hochbau	New	23 754	-0.6	1.6	1.6	3.0	1.9	1.4	1.0
	Renovation	8 770	-1.3	1.2	0.2	1.9	1.4	1.8	2.0
	Total	32 523	-0.8	1.5	1.2	2.7	1.7	1.5	1.3
Civil engineering Génie civil Tiefbau	New	6 518	2.4	-0.6	0.3	2.4	1.2	1.5	2.5
	Renovation	1 614	3.4	1.4	1.3	1.4	0.9	0.7	1.5
	Total	8 132	2.6	-0.2	0.5	2.2	1.1	1.3	2.3
TOTAL CONSTRUCTION OUTPUT		40 656	-0.1	1.1	1.1	2.6	1.6	1.5	1.5
		2017					Forecasts		Outlook
		Volume mill. tons	2014	2015	2016	2017	2018	2019	2020
Domestic cement consumption Consommation intérieure de ciment Inländischer Zementverbrauch		4.97	1.1	3.8	3.7	2.4	1.3	0.5	0.4

Renovation covers repair and maintenance, refurbishment and reconstruction.


1) At 2017 prices, excluding taxes.

Country/Pays/Land: Austria		Table 3						
		RESIDENTIAL CONSTRUCTION CONSTRUCTION DE LOGEMENTS WOHNUNGSBAU						
		Thousands dwellings						
						Forecast		Outlook
		2014	2015	2016	2017	2018	2019	2020
Building permits Logements autorisés Baugenehmigungen	1+2 family dwellings Individuels 1+2-Familienhäuser	16.3	16.5	18.0	17.5	17.4	17.6	17.2
	Flats Collectifs Mehrfamilienhäuser	33.2	34.3	40.0	45.2	45.2	44.1	43.3
	Total	49.5	50.9	58.0	62.6	62.6	61.6	60.6
Housing starts Logements commencés Baubeginne	1+2 family dwellings Individuels 1+2-Familienhäuser	15.2	15.6	16.4	16.8	16.6	16.6	16.5
	Flats Collectifs Mehrfamilienhäuser	30.4	32.1	35.3	40.5	42.9	42.4	41.5
	Total	45.6	47.7	51.7	57.3	59.5	59.0	58.0
Housing completions Logements terminés Baufertigstellungen	1+2 family dwellings Individuels 1+2-Familienhäuser	16.3	16.4	16.5	17.1	17.2	17.2	17.4
	Flats Collectifs Mehrfamilienhäuser	27.0	29.7	31.8	34.9	39.3	42.0	42.8
	Total	43.3	46.1	48.3	52.0	56.5	59.2	60.2
Housing stock Logements existants Wohnungsbestand	Total	4 562	4 606	4 653	4 703	4 758	4 815	4 874
	thereof second homes dont résid. secondaires davon Zweitwohnungen	262	264	267	270	273	276	280
	thereof vacancies dont inoccupés davon leerstehend	228	230	233	235	238	241	244
	share of family dwellings (%) part des maisons individuelles Anteil 1+2-Familienhäuser	47.5	47.3	47.1	46.8	46.5	46.2	45.9
Home ownership rate ¹⁾ Taux de propriétaires occupants Wohneigentumsquote		55.4	54.8	54.2	53.8	53.5	53.4	53.1

1) Cf. Appendix to the individual country report.


Country/Pays/Land: Austria		Table 4a							
		NEW NON-RESIDENTIAL CONSTRUCTION (PUBLIC AND PRIVATE) CONSTRUCTION NEUVE NON RÉSIDENTIELLE (PUBLIQUE ET PRIVÉE) NEUER NICHTWOHNHOCHBAU (ÖFFENTLICH UND PRIVAT)							
	Volume mill. euro ¹⁾	m ² x 1000	% change in real terms (volume)						
							Forecast		Outlook
			2017	2017	2014	2015	2016	2017	2018
Buildings for education Bâtiments de l'éducation et de la recherche Gebäude des Bildungswesens	826		-2.3	-0.3	1.2	2.6	1.8	1.5	-0.3
Buildings for health Bâtiments de santé Gebäude des Gesundheitswesens	1 841		0.3	-0.8	1.8	4.7	1.4	1.8	2.4
Industrial buildings Bâtiments industriels Industriegebäude	2 303		-2.1	3.0	2.4	4.2	2.2	1.9	1.6
Storage buildings Bâtiments de stockage Lagergebäude	235		-1.4	1.5	1.3	1.5	1.5	2.3	0.7
Office buildings Bureaux Bürogebäude	2 279		-1.1	3.3	0.9	5.7	1.4	1.0	1.3
Commercial buildings Commerces Geschäftsgebäude	3 184		-0.5	1.9	3.2	1.9	2.0	1.3	1.1
Agricultural buildings Bâtiments agricoles Landwirtschaftsgebäude	650		-2.3	1.0	-0.5	1.5	1.2	1.0	0.8
Miscellaneous Autres Sonstiges	483		-2.8	1.3	1.9	3.7	0.3	2.1	2.4
TOTAL	11 801		-1.2	1.7	1.9	3.6	1.7	1.5	1.4

1) At 2017 prices, excluding taxes.

Country/Pays/Land: Austria		Table 4b								
		TOTAL CIVIL ENGINEERING ENSEMBLE DU GÉNIE CIVIL TIEFBAU INSGESAMT								
		Volume mill. euro ¹⁾	% change in real terms (volume)							
								Forecast		Outlook
			2017	2014	2015	2016	2017	2018	2019	2020
Transport infrastructure Infrastructures de transport Verkehrsinfrastruktur	Roads Réseau routier Straßen	2 186	3.9	1.0	-1.8	6.2	-1.9	3.6	2.3	
	Railways Voies ferrées Bahnanlagen	1 803	1.4	0.0	3.8	0.0	4.8	1.5	6.0	
	Other transport Autres réseaux Übrige Verkehrsinfrastruktur	476	3.6	-0.8	1.3	1.4	-1.0	-1.4	1.9	
	Total	4 465	2.8	0.4	0.8	3.1	0.9	2.2	3.8	
Telecommunications Télécommunications Telekommunikation		339	1.3	15.0	6.0	3.8	6.5	4.0	0.0	
Energy works Réseaux d'énergie Energieversorgung		1 653	2.1	-2.8	-1.2	1.2	1.4	1.0	1.8	
Water works Réseaux d'eau Wasserversorgung		980	1.9	-3.7	0.0	-0.8	0.0	-0.9	-1.5	
Other Autres Sonstiges		695	3.9	1.9	1.0	2.5	0.6	-2.1	0.0	
TOTAL		8 132	2.6	-0.2	0.5	2.2	1.1	1.3	2.3	

1) At 2017 prices, excluding taxes.

AT

Country/Pays/Land: Austria		Table 5							
		GROSS DOMESTIC PRODUCT PRODUIT INTÉRIEUR BRUT BRUTTOINLANDSPRODUKT							
	Volume bill. euro ¹⁾	% change in real terms (volume)							
							Forecast		Outlook
		2017	2014	2015	2016	2017	2018	2019	2020
Private consumption ²⁾ Consommation privée Privater Verbrauch	192.7	0.3	0.5	1.5	1.4	1.8	1.6	1.6	
Public consumption Consommation publique Staatsverbrauch	72.3	0.8	1.5	2.1	1.1	1.1	1.2	1.2	
Gross fixed capital formation Formation brute de capital fixe Bruttoanlageinvestitionen									
Total	86.8	-0.7	1.2	3.7	4.8	3.5	2.5	2.1	
of which construction	40.1	-0.1	1.1	1.1	2.6	1.6	1.5	1.5	
Stocks (contribution as % of GDP) ³⁾ Variations de stocks Vorratsveränderungen	4.9	0.9	1.1	1.0	1.3	1.8	1.8	1.9	
Exports Exportations Exporte	184.6	3.0	3.1	1.9	5.7	5.5	4.5	3.8	
Imports Importations Importe	172.8	2.9	3.1	3.1	5.4	4.6	3.8	3.7	
GDP PIB BIP	369.2	0.8	1.1	1.5	2.9	3.2	2.2	1.9	

Standard National Accounts, gross figures.

1) At 2017 prices.

2) Including final consumption expenditure of NPISH's, ISBLM inclus, einschließlich POoE.

3) Including net acquisitions of valuables, net acquisitions d'objets de valeur inclus, inkl. Nettozugang an Wertsachen.

Notes



85th EUROCONSTRUCT Conference ○ 7–8 June 2018, Helsinki, Finland

GENERAL DEFINITIONS

The following notes describe which are the most common definitions of the concepts of the Euroconstruct report among the different countries. These definitions do not apply literally to each of the 19 countries, so readers are encouraged to check the specific methodological notes of each country in order to identify the possible deviations from these standards that may apply to that particular market.

Macroeconomic

- **Population and households:** as of January 1st.
- **Unemployed:** figures based on labour force surveys that also include jobseekers that do not register at the employment offices.
- **Unemployment rate:** as percent of total labour force.
- **Construction prices:** annual change rate of sales prices, not construction costs.

Construction Output

Production is calculated according to branch definition, including not just works done by construction firms, but also works done by all firms that execute construction work regardless of the industry group they belong to. It also includes:

- Services provided by public bodies in the case that fees are involved.
- The builders' own effort, like do-it-yourself works.
- Works done by unregistered firms (black economy) should be included.

VAT or any other sales tax are not included.

Production value of a **building** project, residential and non-residential, includes:

- Project development.
- Planning and engineering works, architects.
- Plot work up.
- Construction work on the building including all intermediate products (building materials, transport cost, energy, use of machinery and equipment etc.)
- Installations work (electrical, plumbing, glazing, paintings and wallpaper, lifts etc.)
- Public fees (for building permits etc.)
- Financial costs, like interest and fees on construction loans (external funding)
- Fees to estate agents
- Transaction costs, if any
- Advertisement costs, if any

Production of **civil engineering** in general follows the same rules, so the value of investments (and maintenance) in civil engineering includes all intermediate products and not only the civil engineering part.

Residential

This category includes:

- Permanent residences
- Second homes or holiday homes owned by households.
- Building objects considered as auxiliary of the main residential object, such as garages, out-houses or other annexes.

The **1+2 family dwellings** category includes:

- Detached or semi-detached houses that contain one or two dwellings (for example, a main dwelling plus one bed-sit, basement flat etc.)
- Farmhouses that contain one or two dwellings.

The **flats** category is for residential buildings that contain three or more dwellings, including the following cases:

- Row houses, linked houses and terraced houses.
- Multi-dwelling buildings of more than one storey, free-standing or linked.
- Residences and service residences for the elderly and other social groups, when the health care aspect is not dominant (otherwise they are categorised as nursing homes and accounted as non-residential)
- Student homes.
- Other residential buildings for communities.
- Dwellings in non-residential buildings.

A **second home** is defined as any dwelling of the residential categories (1+2 families or flats), that is only in use temporarily as a holiday or leisure residence. Second homes also include cottages, huts, shacks, chalets, etc.

When second homes are a market product that is different from permanent homes (design, size...) and that market is big enough to be noticeable, and statistics allow them to be distinguished from permanent homes, they may be excluded from the figures for permits, starts or completed dwellings. However, they still are included in stock figures. Investments in second homes are also included in residential construction.

A residential building is considered **completed** when either a temporary permission to use the building is given by the competent authority, or when a certificate for completion is issued by the competent authority. This certificate should be given when final documentation about the building and a declaration from the builder that the building is completed is available.

Non-residential

This category includes every other building that is not considered residential. The following cases are also treated as non-residential:

- Buildings for temporary residential use that have a commercial purpose, for instance hotels, hostels, motels and holiday homes for rent by businesses/public bodies.
- Homes for the elderly with manned facilities and nursing services.

Non-residential surface is measured as utility floor space, which is the floor area measured within the outer walls.

The category of **buildings for education** includes the facilities (also playgrounds) for:

- Pre-school, kindergartens.
- Primary and secondary education.
- Higher education, including laboratories and research facilities.

The category of **buildings for health** includes:

- Hospitals.
- Clinics, doctor's offices, medical centres, emergency clinics.
- Health and social services centres, health stations.
- Nursing homes.
- Residence and home with nursing and medical care.
- Buildings for rehabilitation, sanatoriums
- Other long-stay hospitals and primary health buildings.

The category of **industrial buildings** includes:

- Factory buildings.
- Workshops.
- Treatment plants, pumping stations, transformer stations that can be considered buildings.

The category of **storage buildings** includes:

- Warehouses.
- Cold storage warehouses.
- Silo buildings and other specialised storage.

The category of **office buildings** includes:

- Buildings for bureaucratic purposes, town halls.
- Banks.
- Post offices.
- Buildings for the media.

The category of **commercial buildings** includes:

- Shopping centres, department stores.
- Detached shops.
- Service stations.
- Other wholesale and retail trade buildings.
- Hotels, hostels, motels, pensions.
- Holiday camps, tourist chalets, apartment lodging buildings, camping huts, holiday bungalows.
- Restaurant buildings and derivatives: food kiosks, cafés, canteens, etc.
- Parking garages.
- Fair and congress buildings.

- Buildings related to transport infrastructures such as railway stations and underground stations, airport terminals, air traffic control towers, telecommunication buildings, etc.

The category of **agricultural buildings** includes:

- Buildings for animals, granaries, fruit and vegetable storage, agricultural silos, buildings for hay/grain drying
- Greenhouses.
- Works buildings used for fishery and hunting, including fish farms, fishery boat-houses and sheds.

The category of **miscellaneous buildings** includes:

- Non-residential space in residential buildings.
- Buildings for entertainment: cinemas, theatres, concert halls, opera houses, discotheques.
- Museums and art galleries.
- Libraries.
- Zoological and botanical gardens.
- Sports halls, ice arenas, indoor swimming pools, fitness centres and Buildings for other sports.
- Community centres, local meeting halls not for bureaucratic uses.
- Buildings for religious use: churches, chapels, houses of worship, parish houses, crematoriums, cemetery chapels, chapels of repose, convents, monasteries.
- Monuments.
- Prison buildings.
- Police stations.
- Fire stations, ambulance stations.
- Building for emergency preparedness: air-raid shelters, bunkers.
- Lighthouse buildings, pilot stations, radar facilities.
- Public toilets.

Renovation with change of use

Sometimes building renovation is related to a change of end use: from residential to non-residential buildings and vice versa. When a non-residential building is transformed to a residential building, the value of this production is included in residential renovation. And vice versa.

Civil Engineering

The category of **transport infrastructure** includes:

- Construction of roads and streets, including bridges and tunnels.
- Railways include also tramways and undergrounds, also with bridges and tunnels.
- "Other" collects airports and airfields, harbours, ports, breakwaters and moles, canals, etc.

The category of **energy** includes infrastructures for:

- Generating energy: power plants and power stations that can not be considered buildings, dams

for hydroelectric power production, wind farms, wave farms.

- Delivering energy: power transmission lines, gas supply lines.

The category of **water works** includes infrastructures for water supply, sewer and waste water transport and treatment; either for drinking water, irrigation, industrial water or river flow maintenance.

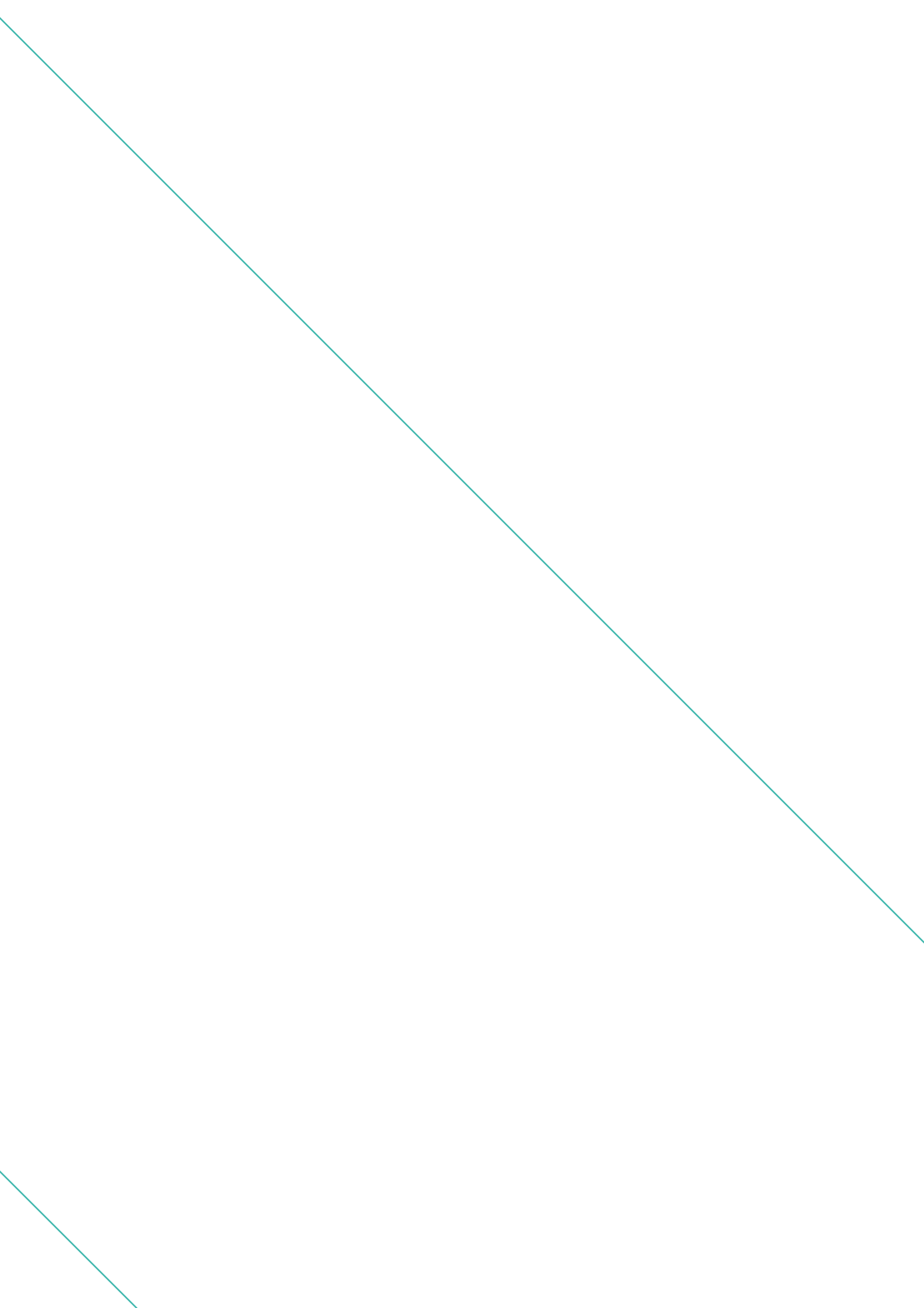
The category of **other civil engineering** includes infrastructures for agriculture, forestry and fishery, civil engineering facilities for the industry **that can**

not be considered buildings, outdoor sports and leisure facilities (for example, amusement parks).

Gross Domestic Product

To be comparable to the rest of the figures in Table 5, gross fixed capital formation in construction is measured at market prices, in contrast to the measure used in Tables 2, 4a and 4b that considers output at production prices, that is, without sales taxes (or sales subsidies).

Notes





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