

European  
Commission

ANNEX 4.1 TO THE JRC TECHNICAL REPORT

# High Growth Enterprises:

demographics,  
finance &  
policy measures

## FACTSHEET - AUSTRIA (AT)

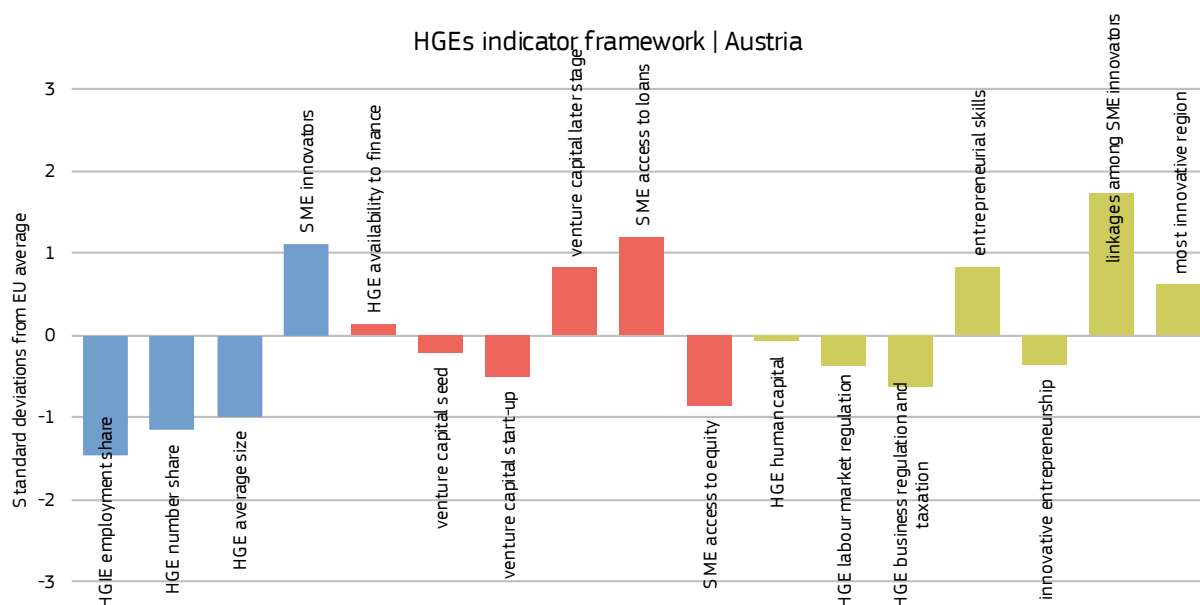
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## 1. Executive summary

AT is characterised by low and slow dynamics in high-growth enterprises (HGEs\*) compared to the EU average. Technological leadership in some HGEs also does not translate itself into economic benefits. Some of the factors that enable HGEs in AT to benefit commercially from their own technology can be shaped by its management. Other factors depend much more on the product market and the regulatory regime. They also require more start-up capital and professional experience from venture capitalists to better seize their technical or market opportunities. They also need to develop more linkages with other firms, which both creates the opportunity and demand for higher level of innovation.

Formal policies should encourage and support entrepreneurship by providing linkages with research organisation, suppliers, and universities. Financial support also needs to be better targeted and monitored. The effects of such policies depend very much on whether they target different stages of development and help HGEs to exploit new market opportunities.

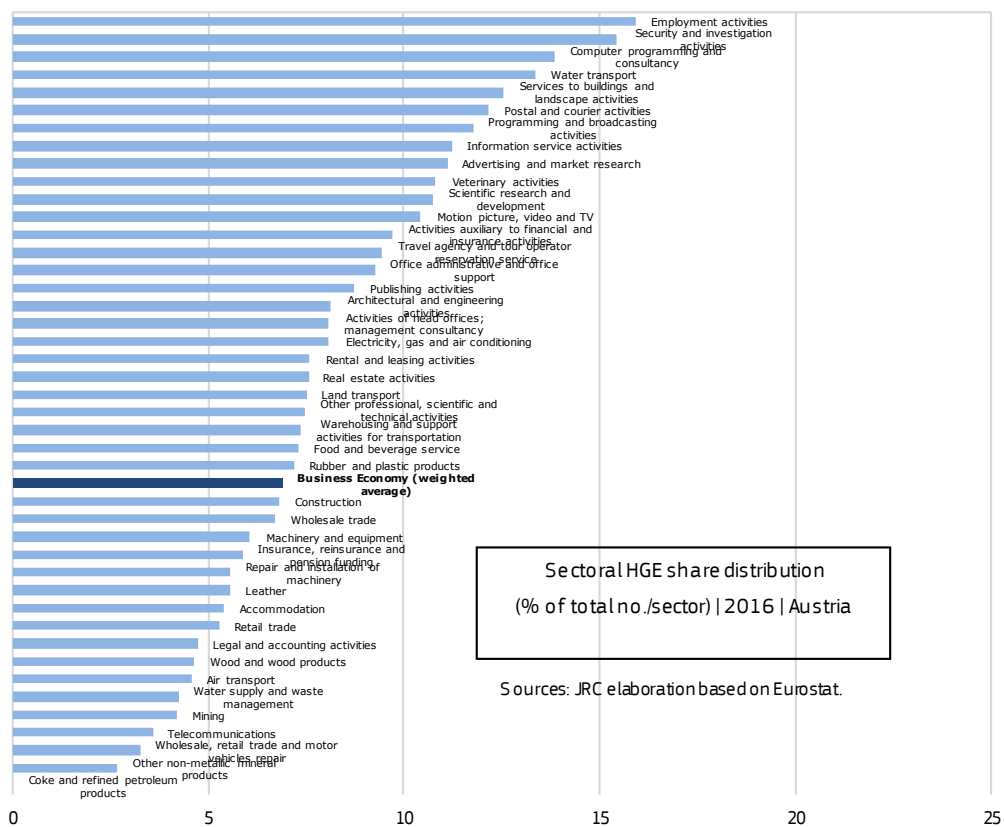
## 2. HGEs indicator framework



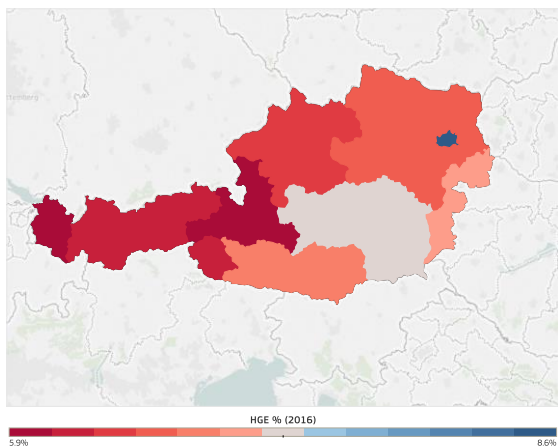
- AT performs below the EU average in fast growing innovative companies (in terms of employment share, share and average size), while it performs above the EU average in the share of innovative SMEs.
- In AT, there is a high access to finance for both HGEs and SMEs compared to the EU average. Regarding venture capital, on average, Austrian VC funds tend to invest more in later stage companies compared to other European countries. On the other hand, the early stage companies require more VC funding to growth. This may show a potential venture funding gap, between the initial stage and the scale-up stage.
- Although HGEs in AT possess skills and capabilities to create and develop new businesses, tend to cluster in most innovative regions, and develop linkages with SMEs, they require highly qualified personnel and a more supportive environment. Some sectors, like healthcare, are highly regulated in certain directions, and most HGEs need support/assistance to commercialise their innovation.

\* In line with Eurostat, HGEs are defined in this factsheet as enterprises having (i) experienced an annualised average employment growth rate of 10% per year over a three-year period and (ii) at least 10 employees at the beginning of the growth period. The importance of HGEs is directly linked to their substantial contribution to employment growth, productivity improvements, economic renewal and innovativeness.

### 3. Firm demographics and sectoral decomposition

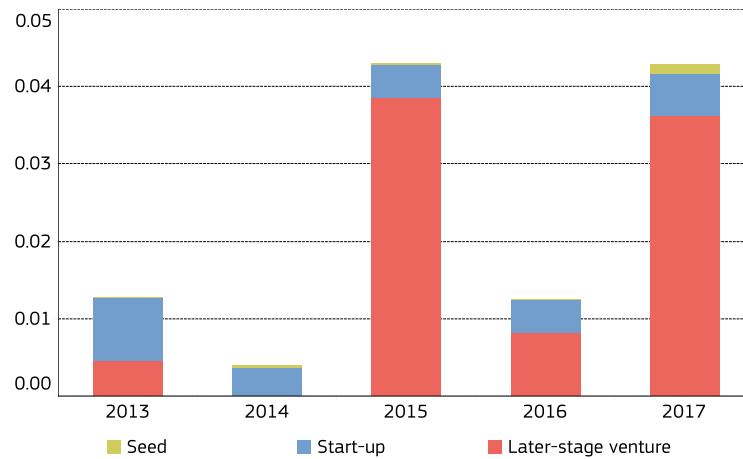


- The average share of HGEs in AT is about 7% in the business economy versus 11% in the EU 28.
- The highest shares of HGEs are found in knowledge intensive services (e.g. employment activities; computer programming, consultancy and related activities; information service activities; scientific research and development).
- The highest share of HGEs among active enterprises is concentrated in Vienna.



#### 4. Financing HGEs and start-ups: the role of venture capital

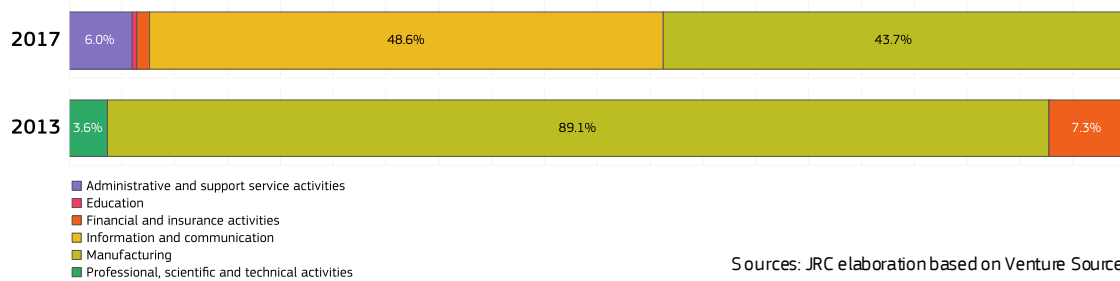
Venture capital by stage of financing (in % of GDP) | Austria | 2013-2017



Sources: JRC elaboration based on Venture Source.

- On average, over the last 5 years, venture capital investment only accounts for 0.02% in AT.
- There is a bias for finance for scale-up companies, rather than seed and start-up companies. Later stage investment as a percentage of GDP has increased substantially in 2015 and in 2017 (accounting for about 0.04% of GDP), whereas early stage venture capital investment as a percentage of GDP has remained fairly stable over the last five years.

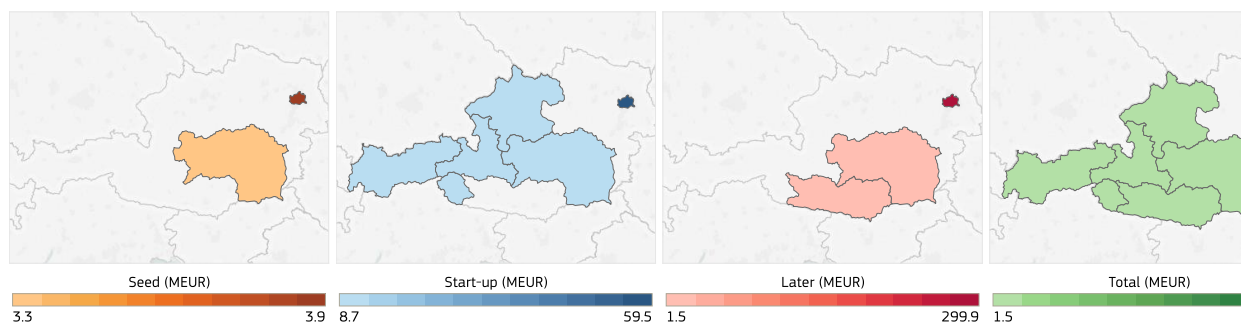
Sectoral distribution of VC investment (in %) | Austria | 2013 & 2017



Sources: JRC elaboration based on Venture Source.

- Compared to 2013, ICT firms tend to have the highest share of venture capital in 2017. In contrast, the share of VC-backed companies operating in manufacturing sector and in financial and insurance sectors has decreased from 89% to 44% and from 7% to 1% respectively.
- In formulating and executing their innovation strategies, HGEs cannot ignore the regional VC ecosystem in which they are embedded. In Austria, over the period 2013-2017, Vienna is the major hub for VC-backed companies (across all stages of financing).

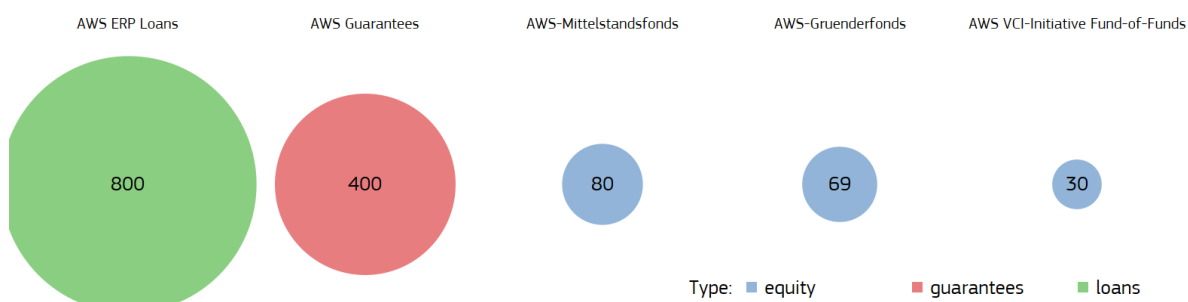
Regional distribution of VC investment by stage of financing (in MEUR) | Austria | 2013-2017



Sources: JRC elaboration based on Venture Source.

## 5. Finance-related policy measures

Financial instruments Austria (MEUR)



- In AT, there are a number of public support instruments targeting HGEs with a relevant emphasis on a direct policy support – R&D grants, loans and equity incentives – while indirect R&D tax credit schemes do not specifically focus on HGIEs.
- Notwithstanding a relatively wide range of HGIE public support tools in AT, only a handful of them is evaluated on a regularly basis. One study (the Evaluation of Aws guarantee programmes by Enichlmair et al. 2017<sup>†</sup>) suggests a more dynamic turnover increases of treated (supported) companies compared to the non-treated control group.
- HGEs needs a more supportive environment in terms of institutions and policies. Different stages in life-cycle should be financially supported and some sectors like healthcare should be less highly regulated in certain directions.

<sup>†</sup> Enichlmair C., Robubi A. and Ruhland S. (2017), Kontrollgruppenvergleich mittels Propensity Score Matching (PSM) auf Basis der Bilanzdatenbank (BDB). Presentation by Sascha Ruhland at Spring Meeting of the DeGeVal in Vienna on 19 May 2017.

## Annex: HGEs Indicator Framework details

Indicators	Details	Motivation
<b>HGEs indicators</b>		
HGE employment share	Percentage share of employees among HGEs in 50% 'most innovative' industries relative to total employment ( <a href="#">EIS; 2018</a> )	Measures contribution of HGEs to employment creation
HGE number share	Percentage share of HGEs of total enterprises with at least 10 employees ( <a href="#">Eurostat; 2016</a> )	Measures how many firms are HGEs
HGE average size	Average size of HGEs (employment definition); employees divided by number of HGEs ( <a href="#">Eurostat; 2016</a> )	Measures average size of HGEs, an indication for future job growth potential
SME innovators	Share of SMEs with product, process, marketing or organisational innovations or innovating in-house among all SMEs ( <a href="#">EIS; 2018</a> )	Existing SME innovativeness as predictor for future innovations
<b>Financing HGEs indicators</b>		
HGE availability of finance	Percentage of HGEs considering the availability of finance is not an investment barrier ( <a href="#">EIBIS; 2016-2018</a> )	HGEs access to finance is considered a precondition for the development of HGEs
Venture capital seed	Share of seed venture capital to GDP ( <a href="#">Venture Source; 2017</a> )	Venture capital is a relevant source of finance for potential HGEs
Venture capital start-up	Share of start-up venture capital to GDP ( <a href="#">Venture Source; 2017</a> )	Venture capital is a relevant source of finance for potential HGEs
Venture capital later stage	Share of later stage venture capital to GDP ( <a href="#">Venture Source; 2017</a> )	Venture capital is a relevant source of finance for potential HGEs
SME access to loans	EIF SME Access to Finance Sub-index for loans, comprising the use and cost of loans ( <a href="#">EIF; 2018</a> ).	SME access to loans is an important framework condition indicating the access to loans for HGEs
SME access to equity	EIF SME Access to Finance Sub-index for equity, comprising use of equity and the sophistication of the equity market ( <a href="#">EIF; 2018</a> )	SME access to equity is an important framework condition indicating the access to equity for HGEs
<b>HGEs framework conditions indicators</b>		
HGE human capital	Percentage of HGEs considering the availability of staff with the right skills is not an investment barrier ( <a href="#">EIBIS; 2016-2018</a> )	HGEs access to human capital is essential for the development of HGEs
HGE labour market regulation	Percentage of HGEs considering the labour market regulation is not an investment barrier ( <a href="#">EIBIS; 2016-2018</a> )	HGEs may be constrained by existing labour market regulation
HGE business regulation and taxation	Percentage of HGEs considering the business regulation (e.g., licences, permits, bankruptcy) and taxation is not an investment barrier ( <a href="#">EIBIS; 2016-2018</a> )	HGEs may be constrained by existing business regulation
Entrepreneurial skills	Percentage of 18-64 population who believe to have the required skills and knowledge to start a business ( <a href="#">GEM; 2018</a> )	HGEs may require entrepreneurial spirit, skills and knowledge
Innovative entrepreneurship	Ratio between improvement-driven and necessity-driven entrepreneurship ( <a href="#">EIS; 2018</a> )	Countries with high relative prevalence of improvement-driven opportunity, and entrepreneurship tend to be primarily innovation-driven, thus conducive for HGEs
Linkages among SME innovators	Innovative SMEs collaborating with others, public-private co-publications and private co-funding of public R&D expenditures ( <a href="#">EIS; 2018</a> ).	Quality of innovations increases with collaboration and provides information on sophistication of SME innovation ecosystem, thus related to HGEs.
Most innovative region	Relative performance of most advanced region in the Regional Innovation Scoreboard within each Member State vis-à-vis the best performing regions across all other Member States ( <a href="#">RIS; 2017</a> ).	HGEs innovation ecosystems tend to be concentrated in most innovative regions/centres.

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