

Kom
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Regional economic impact of spin-off companies

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Attractiveness of the region Twente for academic spin-offs

A study about the attractiveness of the region for academic spin-offs

(assumption: These are on average more innovative than other spin-offs and therefore offer more attractive workplaces, therefore contributing to a more attractive region)

Methodology

To find spin-offs and analyze them, data of the Dutch Chamber of Commerce was used.

– *No international spin-offs in the analysis!*

Lists of companies were acquired by:

- Interviewing business developers
- Using LinkedIn search terms (like Entrepreneur, founder, University of Twente etc.)
- Surveying students about student entrepreneurship

Classification of university of Twente spin-offs

		Individual status	
		researcher <i>(academic spin-off)</i>	student <i>(student spin-off)</i>
Nature of knowledge transferred	codified <i>(product-oriented spin-off)</i>	Type I	Type III
	tacit <i>(service-oriented spin-off)</i>	Type II	Type IV

Type I: Patent based
Type II: Research based
Type III: Ecosystem based
Type IV: Other

All started by staff and/or students/alumni less than 5 years after leaving the university.

Figure 1: A typology of University Spin-offs (Pirnay, Surlemont, & Nlemvo, 2003)

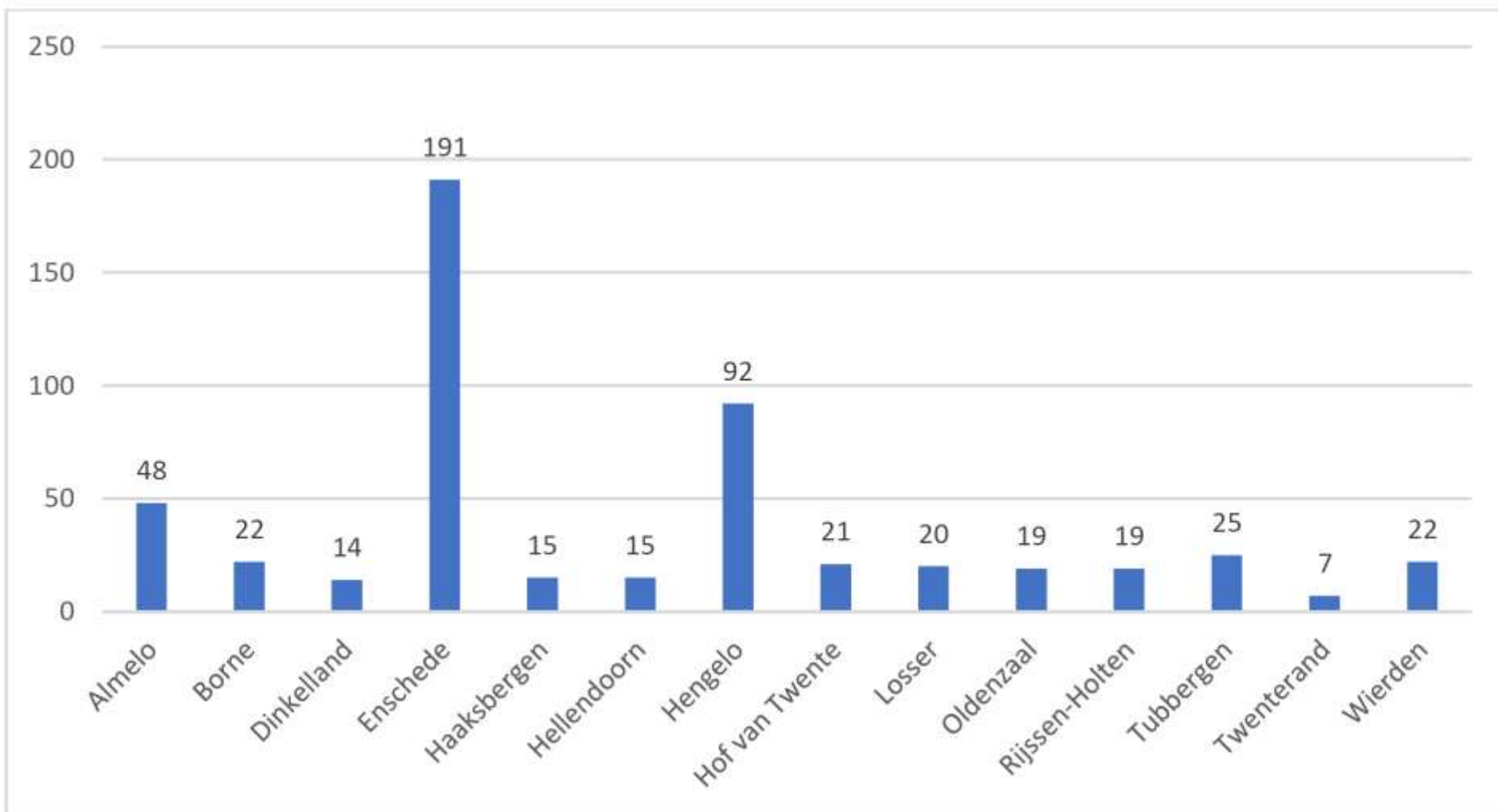
Spin-off types (University of Twente)

Spin-offs of the University of Twente, by type

Spin-off types	Total number of identified spin-offs	Active number of spin-offs (in 2017)
Type I	37	31
Type II	150	104
Type III	477	302
Type IV	515	385
<i>Total</i>	<i>1179</i>	<i>822</i>

Spin-offs of Saxion (2019)

Figure 2.6: Saxion spin-offs in the region Twente, number of spin-offs per municipality



Location of spin-offs

University Twente

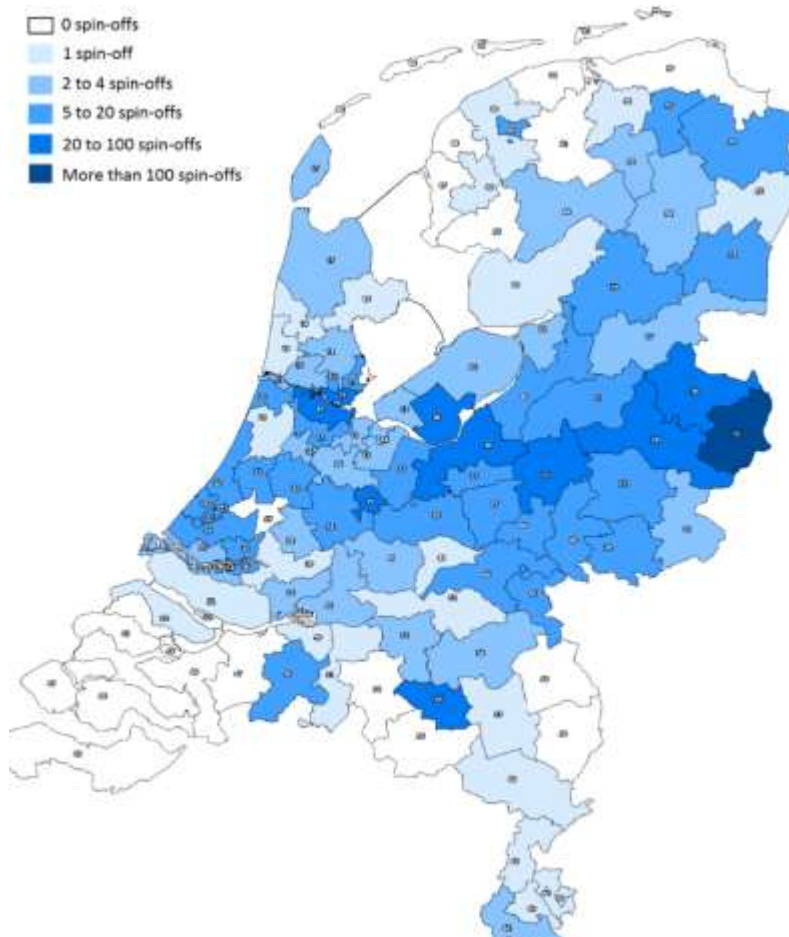


Figure 7: Map of the distribution of UT spin-offs over The Netherlands, per postal code area

Saxion UAS

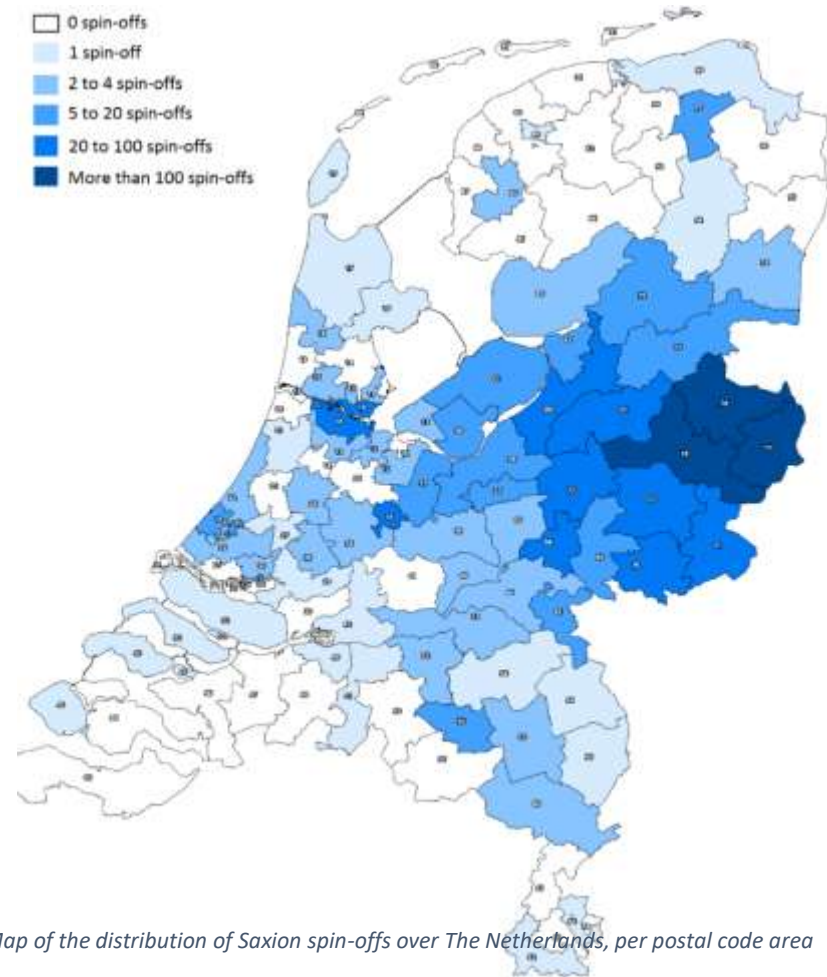


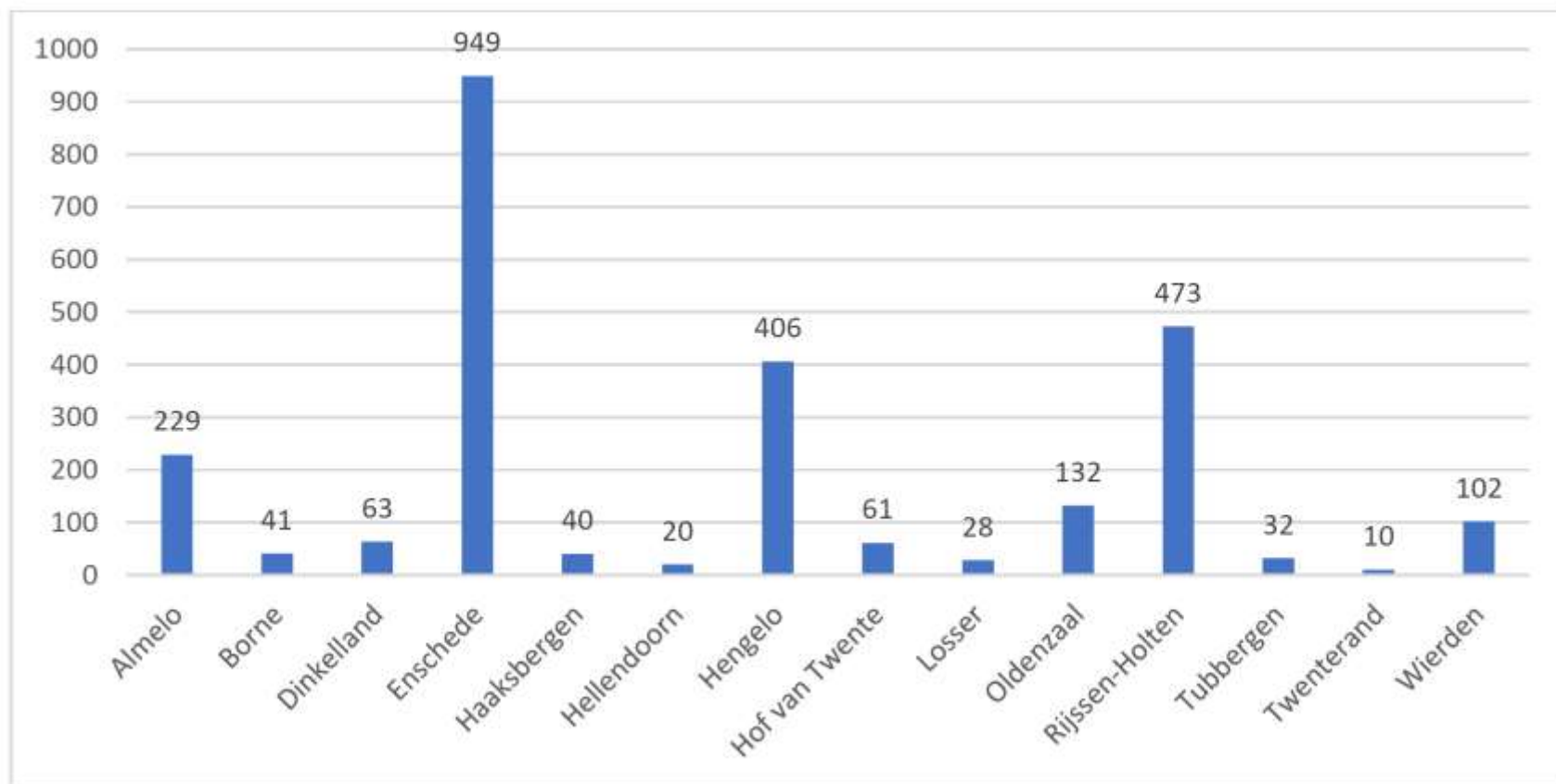
Figure 8: Map of the distribution of Saxion spin-offs over The Netherlands, per postal code area

Table: Employment in the different spin-off types of UT spin-offs in 2017

Spin-off types	Active number of spin-offs	Total amount of workplaces	Average number of workplaces
Type I	31	233	7.5
Type II	104	676	6.6
Type III	302	2985	9.9
Type IV	385	3941	10.5
<i>Total</i>	822	8078	9.0

Employment in Saxion spin-offs (2019)

Figure 2.13: Number of workplaces in spin-offs (in narrower sense) in municipalities in Twente



To move or not to move...

Percentages of staying / migrating spin-offs

Spin-off type	Established in Enschede or Twente region, still located there	Established in Enschede or Twente region, now outside the region	Established outside Enschede or Twente region, still located there	Established outside Enschede or Twente region, now located in Enschede or Twente
Type I	89%	11%	75%	25%
Type II	88%	12%	81%	19%
Type III	90%	10%	87%	13%
Type IV	86%	14%	98%	2%

To move or not to move (Saxion)

Table 5.1: Migration pattern of Saxion spin-offs, established from 2010 until 2014, during the first 5 years of existence (absolute numbers)

Region of origin	Location 5 years after establishment			Total
	Twente	Cleantech Region	Other regions	
Twente	183	5	28	216
Cleantech Region	2	36	7	45
Other regions	3	1	103	107

Table 5.2: Migration pattern of Saxion spin-offs, established from 2010 until 2014, during the first 5 years of existence (relative numbers)

Region of origin	Location 5 years after establishment			Total
	Twente	Cleantech Region	Other regions	
Twente	85%	2%	13%	100%
Cleantech Region	4%	80%	16%	100%
Other regions	3%	1%	96%	100%

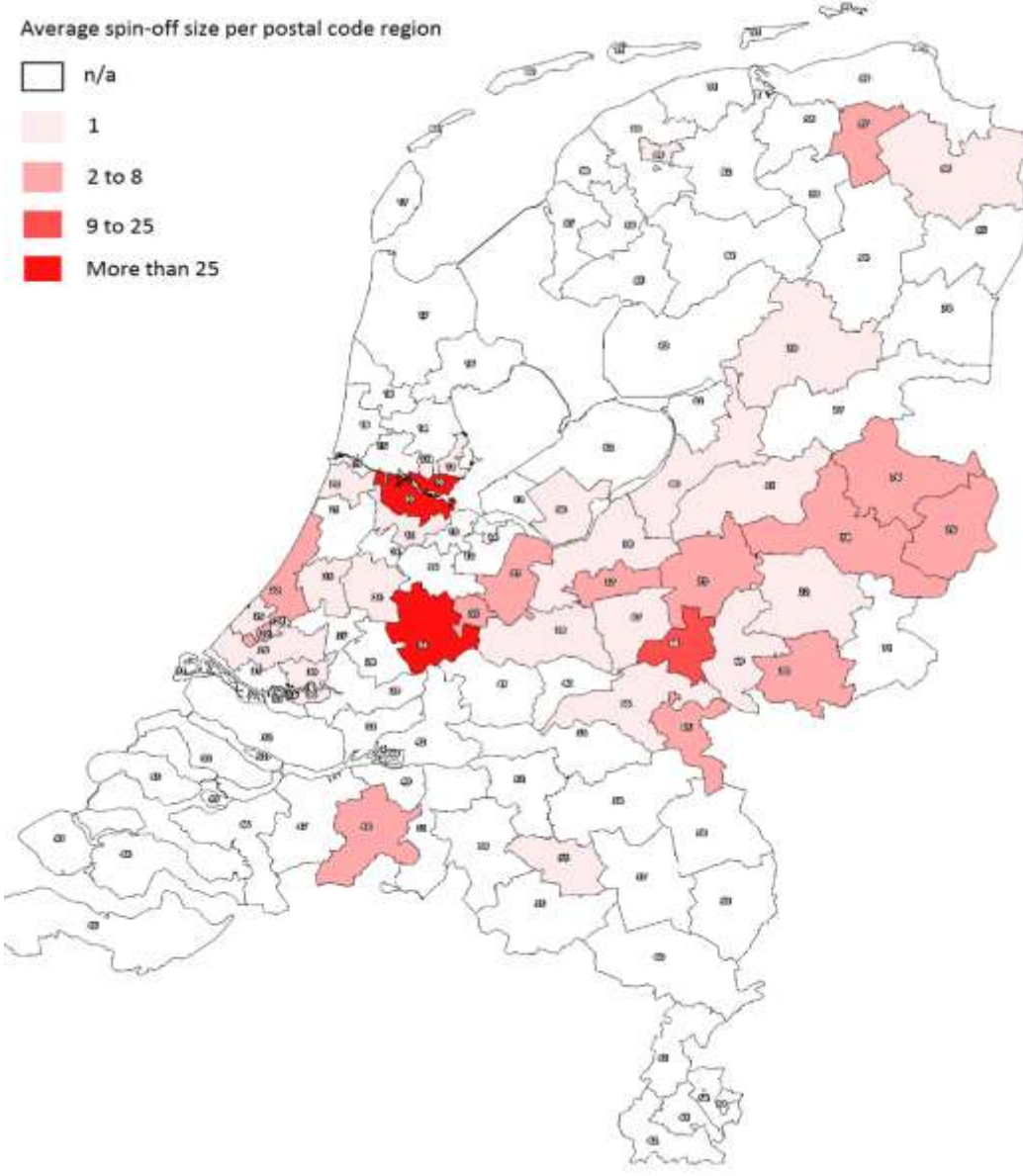
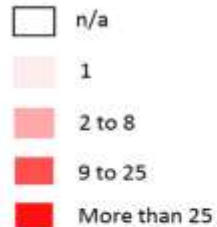
To move and grow...? University of Twente spin-offs

Spin-off size related to migration / staying

Average company size in number of workplaces	Established in Enschede or Twente, remained in the region	Established in Enschede or Twente, moved to any other region	Established in Enschede or Twente, moved to one of the Top 5 largest cities in NL	Established in any other region and remained there	Established in any other region, moved to Twente or Enschede
Average size the year before migration	N/A	4.3	7.3	N/A	2.3
Average size in 2017	8.2	14.2	32.7	11.2	7.3

Average size of spin-offs

Average spin-off size per postal code region

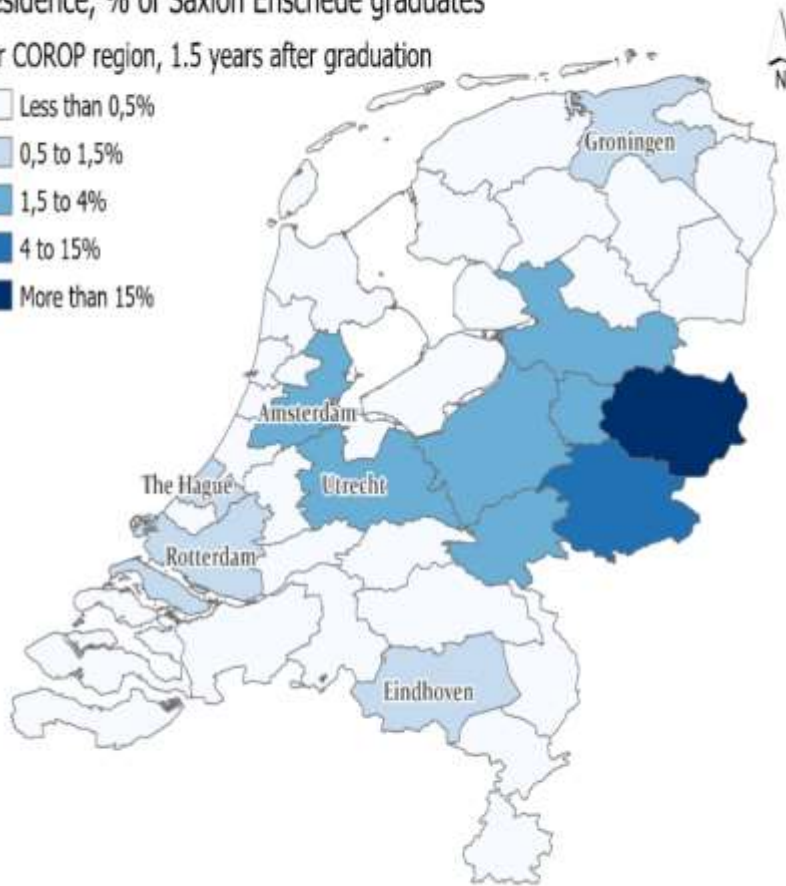
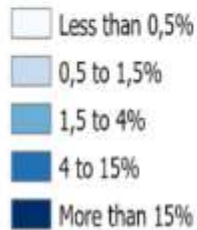


NB: Only regions with 5 or more spin-offs have been taken into account.

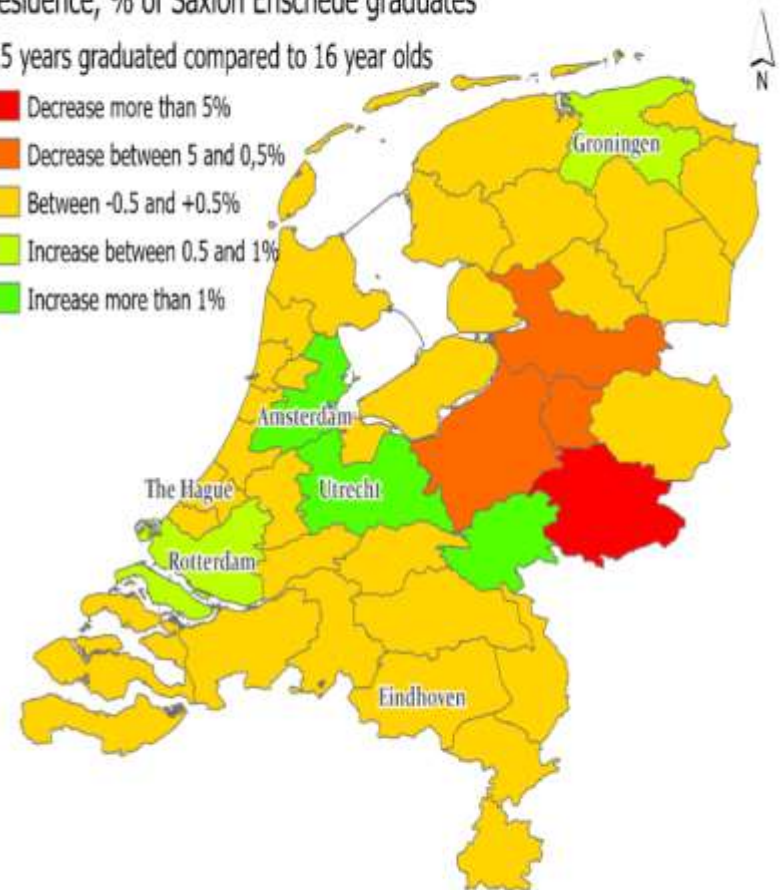
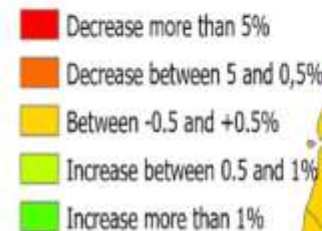
Brain drain or no brain drain...

Figure 5.7: Place of residence and migration of graduates of Saxion Enschede

Residence, % of Saxion Enschede graduates
per COROP region, 1.5 years after graduation



Residence, % of Saxion Enschede graduates
1.5 years graduated compared to 16 year olds



Conclusion

Conclusion of the study

- Spin-offs have a tendency to stay: But... The stayers are on average small.
- The companies that move to large cities are the ones that are growing into larger companies (in the case of the University of Twente for example Booking.com, Takeaway.com etc.)
- Ongoing work on reasons for leaving:
preliminary findings: Human Capital and better access to Venture capital.
- Ongoing work on attractiveness of regional clusters and knowledge relations on spin-offs.