Education and labour market in the security domain

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Explanation of figures

Empty cell	Figure not applicable
.	Figure is unknown, insufficiently reliable or confidential
*	Provisional figure
**	Revised provisional figure
2017–2018	2017 to 2018 inclusive
2017/2018	Average for 2017 to 2018 inclusive
2017/'18	Crop year, financial year, school year, etc., beginning in 2017 and ending in 2018
2015/'16–2017/'18	Crop year, financial year, etc., 2015/'16 to 2017/'18 inclusive

Due to rounding, some totals may not correspond to the sum of the separate figures.

Contents

1.

Introduction

The aim of this report is to shed light on nature and magnitude of the security domain in the labour force, in education and the link between the two of them within The Netherlands. This study was commissioned by The Hague Security Delta (HSD). HSD sees access to talent as a crucial prerequisite for improving security and growth of the security sector.

From this perspective HSD expressed the need for information on the number of people employed in security related occupations, the number of students enrolled in security related programmes and their labour market perspectives. Or, in more general terms, the demand and supply of competences in the security domain. This study addresses the following questions:

Regarding the labour force:
— How many persons are employed in a security related occupation?
— In which industries do they work?
— What is the educational background of these persons?

Regarding education and labour market:
— How many persons are enrolled in educational programmes in the field of security?
— Do they find jobs easily? In which industries do they find jobs?

And finally:
— Are there any signs for future discrepancies between education and the 'needs' of the labour market in the security domain?

These insights are important for both the educational institutes developing programmes, the employers in the security domain and future talent that orientate themselves on educational programmes and labour market opportunities. And so, for the overall development of the sector.

This study is the first time that the broad field of security from both education and labour market perspective in The Netherlands is analysed. It makes use of existing statistics and international classifications where possible, to make it reusable and scalable in the future.

Security domain

One of the first questions to be answered is: What belongs to the security domain? In this study security is defined rather broadly. It comprises the traditional forms of security expressed in occupations like armed forces, police officers and security guards. But it includes also more general security occupations like lawyers and judges and the corresponding educational programmes; occupations and programmes which contribute to 'security' at a more institutional level. Also, a large number of ICT-occupations and educational programmes are classified as related to security. More and more elements of these occupations and educational programmes are dedicated to security to guarantee the integrity of ICT-systems and protect against cybercrime and fraud. And finally, even occupations and programmes in the field of social work and town and traffic planning are included in the security domain. This kind of work also contains elements of security e.g. one of the perspectives of designing a city or a neighbourhood is (social) safety.

Summarizing, this study contains the security domain occupations and educational programmes which deliver security at executive level (as a service), at institutional level and as part of a technical and social function.

To give some detail in this broadly defined security domain, occupations and educational programmes are further classified as 'mainly security' and 'partly security'. This indicates if a large part of the occupation and education is dedicated to security or only a (very) small part. And occupations and educational programmes are detailed by type (Engineering, Organization and government, Security, Legal and Social work).

In the annexes of this publication the selected security programmes for tertiary education are presented in annex I (based on the CROHO-codes as used in the Dutch educational system) and the selected security programmes for vocational education in annex II (based on the CREBO-codes as used in the Dutch educational system). In annex III the selected security related occupations are defined (based on the ISCO 2008 classification) and in annex IV the security related fields of education as related to the labour force (based on the ISCED-F 2013 classification).

2.

Summary

Labour force size and type:

— In 2016 over one million employed persons or 13 percent were employed in a security related occupation. Over 10 percent of all employed persons worked in an occupation classified as partly security. The remaining little less than 3 percent worked in an occupation classified as mainly security.
— Compared to employed persons in other occupations, employed persons in security related occupations have more often a full-time job, are more often employee with a permanent contract, are somewhat older and are more often highly educated.

Relevant branches of industry:

— The number of employed persons in a security related occupation is relatively large in the Information and communication sector (49 percent of all employed persons in 2016) and in Public administration and services (48 percent).
— In 2016 44 percent of all security occupations were in the Health and social work activities (22 percent) and in Public administration and services (also 22 percent).
— Occupations classified as mainly security were concentrated in the Public administration and services (58 percent of these occupations) and in Renting and other business support (10 percent). Part of this latter branch are the private security firms and firms supplying facility management.

Background of employed persons:

— In 2016 60 percent of all employed persons in a security occupation had a security related education. In 2013 this was only 54 percent.
— In 2016 more than half (53 percent) of the employed persons in a security occupation classified as mainly security was educated at intermediate level.
— For the occupations classified as partly security 59 percent of the employed persons was educated at high level.
— In 2016 only 22 percent of all employed persons with a security related education did actually work in a security occupation.

Students in security related programmes:

— In school year 2016/'17 118.000 participants or 10 percent of vocational and tertiary education were enrolled in a security related programme.
— Over time the number of participants in a security related programme in Engineering increased at all levels of education.
— Overall the number of participants in security related programmes is growing at high professional and university level, but not at vocational level.

Work after study:

– From all the participants of school year 2013/'14 who ended their vocational education, in October 2014 77 percent had a paid job. For the participants in a security related programme this was 72 percent. This difference between all fields of education and security programmes was the largest in vocational education.
– The hourly wages for starters with a vocational level education in security are lower than average.
– 28 percent of the participants who found a job after ending their education in a security related programme in school year 2013/'14, found a job in the sector Renting and other business support. Second important sector was the Wholesale and retail trade (14 percent) and third the Other specialized business services (11 percent) and Public administration and services (11 percent).

Discrepancies:

– Based on this study discrepancies between education and the 'needs' of the labour market in the security domain cannot be concluded.
– If people specialise in a required area for a security related occupation experienced gaps may be filled.

3.

Main results

Paragraph 3.1 describes the number of persons employed in a security related occupation. In what branches of industry do they work? What are their characteristics? And what is their educational background? Paragraph 3.2 describes the number of security programmes in vocational and tertiary education. How many students participate in such programmes? And graduate? Paragraph 3.3 finally, describes the labour market status of participants in security programmes after ending their education. Do they easily find a job? And if so, where do they find jobs? And how are they doing compared to participants in other fields of education?

One should bear in mind that for drawing this picture different classifications had to be used. For the security related occupations, the International Standard Classification of Occupations 2008 is used (ISCO 2008, see annex III). Security related occupations are selected and distinguished in 'mainly security' and only 'partly security' and detailed by type. For the educational background of the actual labour force the International Standard Classification of Education is used (ISCED-F 2013, see annex IV). This is a more aggregated classification then is used for selecting the security programmes in vocational and tertiary education. The latter is more detailed and thus more precise (see annexes I and II).

So, although security occupations, educational background of the labour force and nowadays security programmes in education are selected from the same perspective – namely security related or not – they are not fully compatible. As said, partly because of differences in detail but also because there is not a straight line from a field of education to an occupation. Especially when people change jobs over time which is obviously the case within the labour force. Nevertheless, the picture drawn on the basis of these data gives an impression of nature and magnitude of the security domain within the labour force, education and the link between the two of them.

3.1   Employed persons in a security occupation

3.1.1 Employed persons in a security related occupation by branch of industry, 2016[1]

Partly security ■ Mainly security
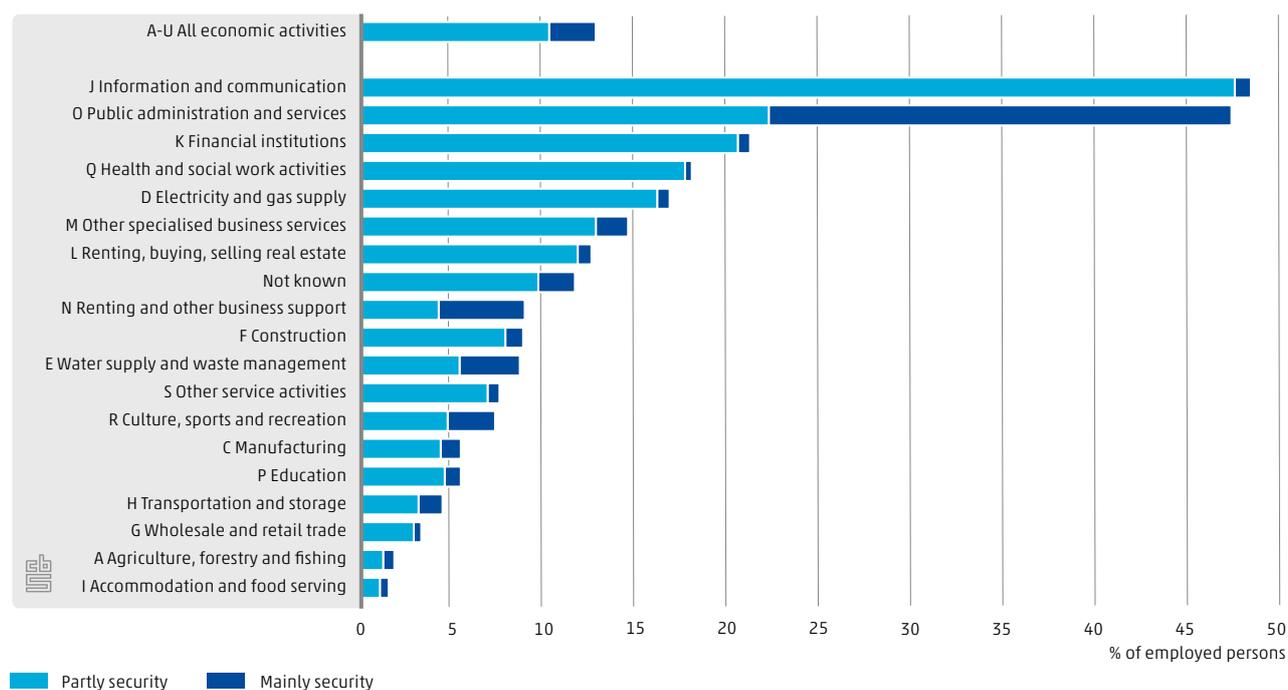
[1] B Mining and quarrying, T Activities of households and U Extraterritorial organisations are not shown separately because of a too small number of cases.

From all employed persons in 2016 over 1 million persons or almost 13 percent was employed in a security related occupation (see figure 3.1.1). Over 10 percent of all employed persons worked in an occupation classified as partly security. This means that only a part of the work is dedicated to security such as application developers or electronics engineers. The remaining little less than 3 percent worked in an occupation classified as mainly security such as policemen and security guards (see annex III for the selected occupations).

Over the period 2013–2016 these percentages were more or less stable (see table 6 for the detailed data).

Relatively most security jobs in Information and communication and Public sector

The number of employed persons in a security related occupation is relatively large in the Information and communication sector (49 percent of all employed persons in 2016) and in Public administration and services (48 percent). For the Information and communication sector the employed persons in a security occupation work almost entirely in an occupation classified as partly security. This is due to the fact that a security occupation is defined rather broadly. The majority of ICT-specialists for instance are adopted as partially security occupations (see annex III).

For the Public sector over half of the employed persons in a security occupation work in an occupation which is mainly security. This are for example police officers, fire-fighters and armed forces occupations, occupations which in general are part of the Public sector.

3.1.2 Distribution of employed persons in a security related occupation by branch of industry, 2016

Partly security   Mainly security
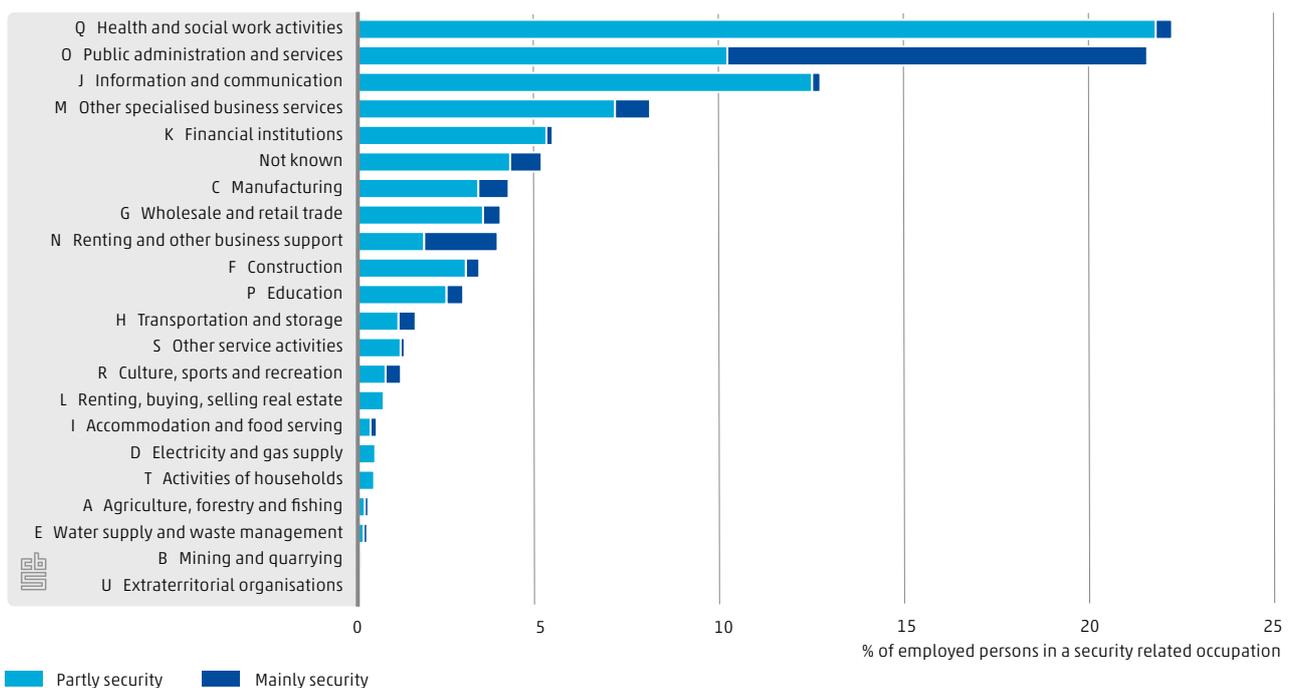
Another branch of industry with a relatively high number of persons occupied in a security job classified as mainly security, is Renting and other business support. Part of this branch are the private security firms and firms supplying facility management. Relevant occupations in this branch are for example protective security workers and security guards. Persons working in these occupations and employed by this kind of firms actually are hired by other firms in other branches of industry or the government, to provide security services. This troubles to a certain extent the insight where security services are actually provided.

Largest part of security occupations in Health and Public sector
Another way of looking at the employed persons in a security related occupation is their distribution over the branches of industry. Where are the security occupations concentrated in numbers? In 2016 44 percent of all security occupations were in the Health and social work activities (22 percent) and the Public sector (also 22 percent) (see figure 3.1.2).

So, although 18 percent of all employed persons in the Health sector work in a security related occupation – far behind the Information and communication and the Public sector (see figure 3.1.1) – it is together with the Public sector, the sector with the largest number of employed persons in a security occupation. This is because the Health sector is a very large sector.

Looking at the occupations classified as mainly security 58 percent of these occupations are concentrated in the Public sector and 10 percent in the Renting and other business support (see also table 6).

Characteristics of employed persons in a security occupation
Compared to employed persons in other occupations, employed persons in security related occupations:
− have more often a full-time job;
− are more often employee with a permanent contract;
− are somewhat older;
− are more often highly educated.

This last point goes especially for employed persons in a security occupation classified as partly security. More than half of the employed persons in a security occupation classified as mainly security is educated at intermediate level.

For more detailed characteristics of employed persons in a security occupation see table 7 in the annex.

Educational background of employed persons in security occupations

How many employed persons in a security related occupation have an education classified as security related? Again, a security related education is defined very broad, including a number of programmes only partly related to security (see annex IV). In 2016 60 percent of all employed persons in a security occupation had a security related education. For the employed persons in an occupation classified as partly security the largest part had a high level security related education (42 percent). For the employed persons in a security occupation classified as mainly security, the largest part had a security related education at intermediate level (30 percent) (see figure 3.1.3 and for more detailed data table 7).

In 2016 only 7 percent of the employed persons in a security occupation had a lower education (compared to 21 percent for all employed persons). On the other hand only a small minority of these lower educated persons in a security occupation had a security related education. For the intermediate and higher educated employed persons in a security occupation the majority did have a security related education. So, for the lower educated persons employed in a security occupation, their educational background seems less relevant compared to the intermediate and highly educated persons.

Compared to 2013 the part of the employed persons in a security related occupation having a security related education, increased from 54 to 60 percent.

3.1.3 Fulfillment of security related occupations by level and field of education, 2016

% of occupations

Legend:
- Security, low
- Security, intermediate
- Security, high
- Other, low
- Other, intermediate
- Other, high
- Not known
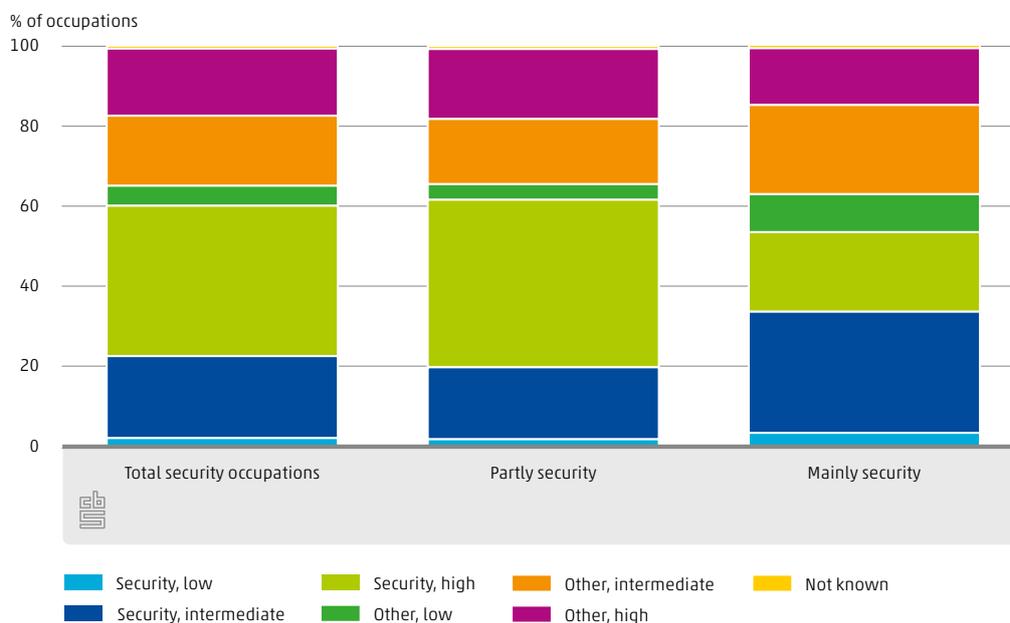
Engineering dominant type of security occupation

Looking at the type of security occupation 39 percent of all security occupations in 2016 were in Engineering followed by Social work (28 percent). The security occupations classified as mainly security were for 71 percent in the field of Security itself and for the other 29 percent in the field of Organization and government. This pattern was more or less stable in the period 2013-2016 (see table 7).

Occupation of persons with a security related education

How many persons with a security related education are actually employed in a security occupation? In 2016 only 22 percent of all employed persons with a security related education did work in a security occupation. By level of education this percentage was the highest for persons with a high level security related education (29 percent). By field of security education this percentage was the highest for Engineering (32 percent) and Social work (29 percent). One of the reasons that the majority of persons with a security related education does not work in a security occupation is that a security education is defined rather broadly. There are lots of opportunities to find another kind of job with this educational background. Besides this, these figures are related to the total labour force of which a large part works already for decades. Over the years the link between the last received education and the job actually occupied is not necessarily that compelling.

3.1.4 Persons with a security related education working in a security related occupation, 2016

% of persons with a security related education

Partly security   Mainly security
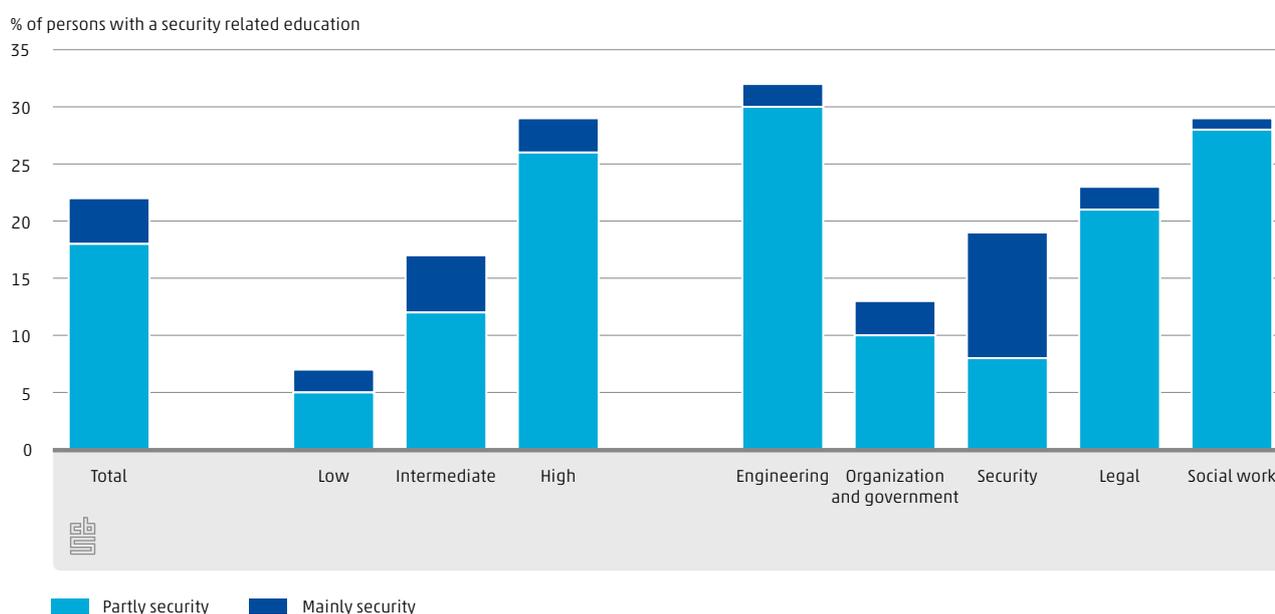
3.2 Vocational and tertiary education

In school year 2016/'17 over 118.000 participants of vocational and tertiary education were enrolled in a security programme (see annexes I and II). This is 10 percent of the total number of participants. Distinguished by level of education in vocational education (mbo) the share of participants enrolled in a security programme was 7 percent. The dominant security programmes at this level were Engineering and Security.

In high professional education (hbo) the share of participants in security programmes was 10 percent. The dominating security programmes at this level were Engineering and Legal. At university education level the share of participants in security programmes was 15 percent and the programme Legal was by far the most popular one (see figure 3.2.1 and table 1).

3.2.1 Participants in security related programmes in vocational and tertiary education, school year 2016/'17

number of participants (x 1,000)
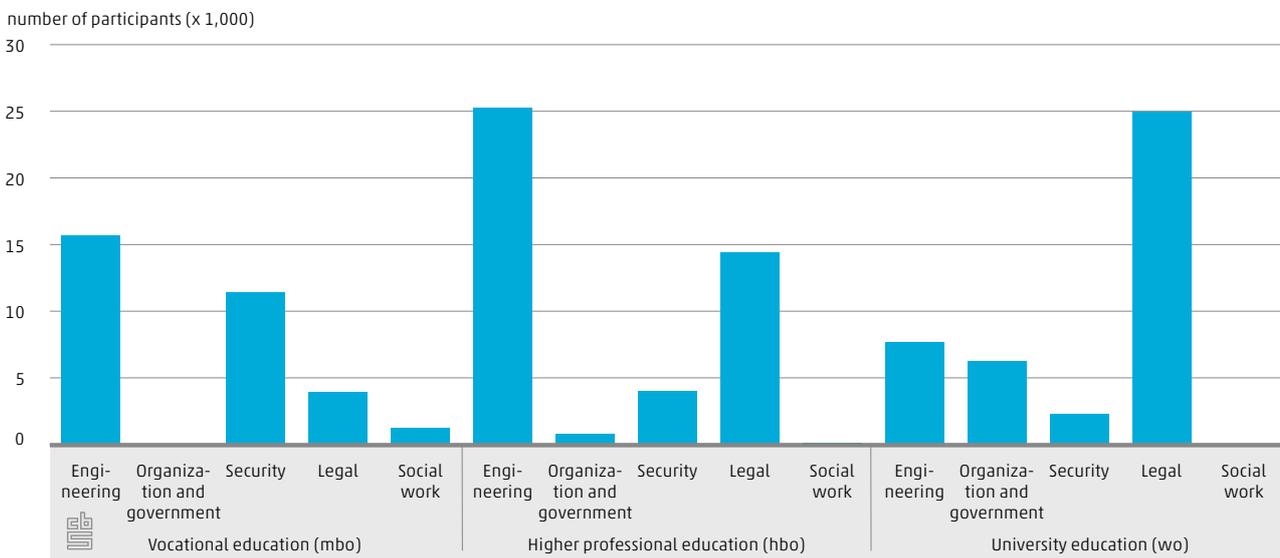
Looking at the type of security programme Engineering is predominantly offered at high professional education level (52 percent of all participants at all levels). Security is predominantly taught at vocational level (64 percent of all participants at all levels). Organization and government and Legal are taught at university education level. For Social work only very few security programmes were selected.

Over time the number of participants in the security programme Engineering increased at all levels of education. At high professional education this was realized especially at the cost of Legal. At vocational level the increase of Engineering went also at cost of Legal and Organization and government. Overall the number of participants in security programmes is growing at high professional and university level, but not at in vocational education (see table 1).

3.2.2 Graduates in security related programmes in vocational and tertiary education, school year 2015/'16

number of graduates (x 1,000)
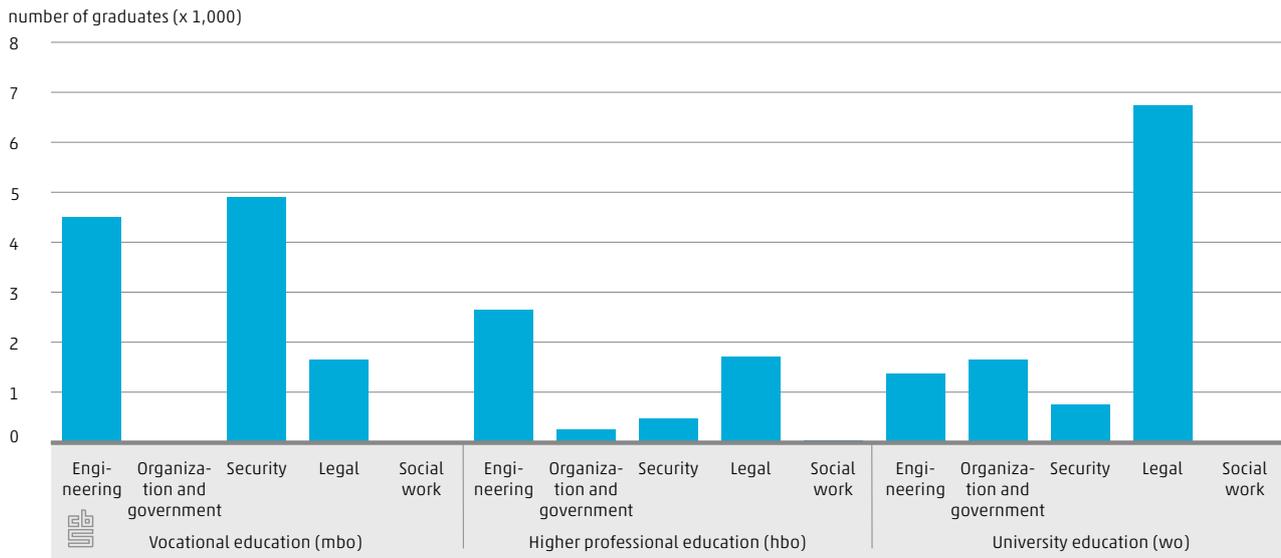
Graduates in security programmes

The number of graduates in security programmes shows the same pattern as the number of participants. Only the number of graduates is much lower because obviously it concerns only the number of students in their final school year while the number of participants concerns the overall number of students enrolled in security programmes regardless of their phase or school year.

For school year 2013/'14 a distinction is made between participants ending their education as a graduate and as a non-graduate (see table 3). For all fields of education at vocational level 63 percent of all participants ended their education as a graduate (security programmes: 61 percent). At high professional level these percentages were 60 percent and 51 percent respectively. And at university level 82 percent and 79 percent. So, at all levels of education the percentage graduates in security related programmes is lower compared to all fields of education with the largest difference at high professional level. On the other hand, especially at vocational level a large proportion of the participants who ended their education in a security related programme as a non-graduate, went back into education after one year (October 2015).

The non-graduated participants in security related programmes at vocational and high professional level ending their study, found less often a job compared to participants in all fields of education. At university level this was the other way around (see table 3).

Alike the developments in the number of participants in a security programme the number of graduates in Engineering is slowly but consistently growing. In school year 2015/'16 overall 9 percent of all graduates at all levels of education was in a security programme (see table 2).

3.3   Education and labour market

Do participants in security programmes find paid work easily after ending their education? In vocational education the difference between participants in a security programme and all participants in finding a job after ending – graduated and not graduated – their education, is the largest. From all the participants of school year 2013/'14 who ended their education, in October 2014 77 percent had a paid job. For the participants in a security programme ending their education in 2013/'14, this was 72 percent (see figure 3.3.1). For the high professional education and university education the differences are smaller, but also at the disadvantage of the participants in security programmes. For all categories goes that the employment one year after ending the education (October 2015) has increased and the difference between the employment of participants in a security programme and the overall participants has declined.

3.3.1 Employment of participants in security related programmes in vocational and tertiary education from school year 2013/'14, after ending their education

% of participants[1]

- All fields of education (October 2014)
- Security programmes (October 2014)
- All fields of education (October 2015)
- Security programmes (October 2015)
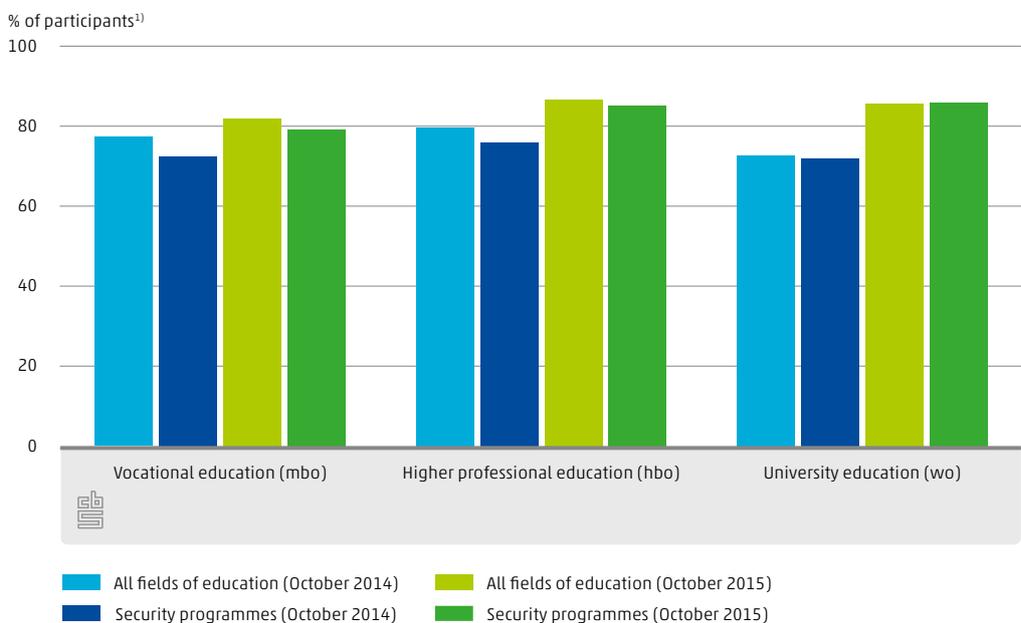
[1] Excluding participants who went back into education and participants not in the Personal Records Database (BRP) anymore.

After school year 2013/'14 the overall number of participants who ended their education without a diploma varied from 18 percent in university education via 40 percent in high professional education to 37 percent in vocational education. For participants in security programmes these percentages were 21 percent, 49 percent and 39 percent respectively (see table 3).

One year after ending their education in school year 2013/'14 from all participants of vocational education 11 percent returned back into education in October 2015. This percentage was (logically) higher for the participants who ended their education without graduation (14 percent) compared to the ones who ended their education as a graduate (9 percent). For the participants in a security programme these percentages were

18 percent and 11 percent respectively (overall 13 percent). So, a little bit above the percentages of all participants. At high professional and university education there is hardly any difference between the overall participants and the ones in security programmes (see table 6).

3.3.2 Employed participants in security related programmes in vocational and tertiary education from school year 2013/'14, after ending their education (October 2014), by branch of industry

Legend:
- Vocational education (mbo)
- Higher professional education (hbo)
- University education (wo)
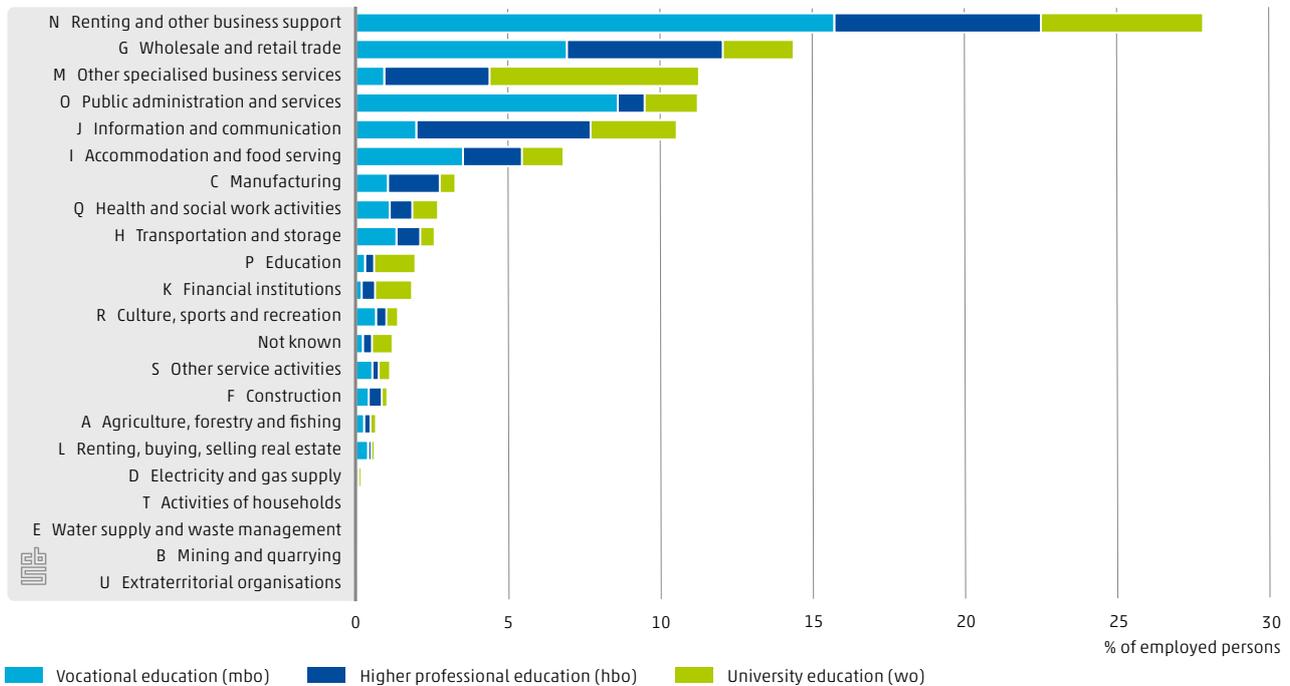
Education and branch of industry

Where do graduates (and non-graduates) find a job after ending their education? From the fields of education selected as security related (see annex I and II) 28 percent of the participants who found a job after ending their education, found a job in the sector Renting and other business support (see figure 3.3.2). As said before, this branch includes enterprises which supply security services to other branches of industry and the government. The majority of these employed persons just ended a vocational education in a security programme.

This distribution of the employed participants just ended their education and the distribution of the occupations classified as security over the branches of industry, differ a lot (see figure 3.1.2). Most security occupations were in the Health and Public sector. For the Public sector part of the explanation is that important education institutes as The Police Academy and the Royal Military Academy are not part of the institutional educational system as subsidized by the Ministry of Education, Culture and Science. So, their participants are not included in de data on education. These academies should be seen as internal education provided by the (future) employer. Nevertheless, they bridge an important gap between what is taught in regular education and what is found to be needed to become a police man or a military officer.

For the Health sector there seems to be a discrepancy between the number of security related occupations selected in the field of Social work and the number of security programmes selected in this field. In this field there are a lot of persons employed in an occupation recognized as security related but there is not a comparable number of security programmes recognized as such. One reason may be the fact that education in the field of Social work is too general described and therefore not recognized as being (partly) related to security. Another reason as mentioned before, is that there is not a straight line from an education to an occupation. Especially not within the total labour force where people change jobs and move away from what was their initial or last field of education received.

3.3.3 Hourly wage of employed participants (employee's) in security related programmes in vocational and tertiary education from school year 2013/'14, after ending their education

median hourly wage in euros

Legend:
- All fields of education (October 2014)
- Security programmes (October 2014)
- All fields of education (October 2015)
- Security programmes (October 2015)
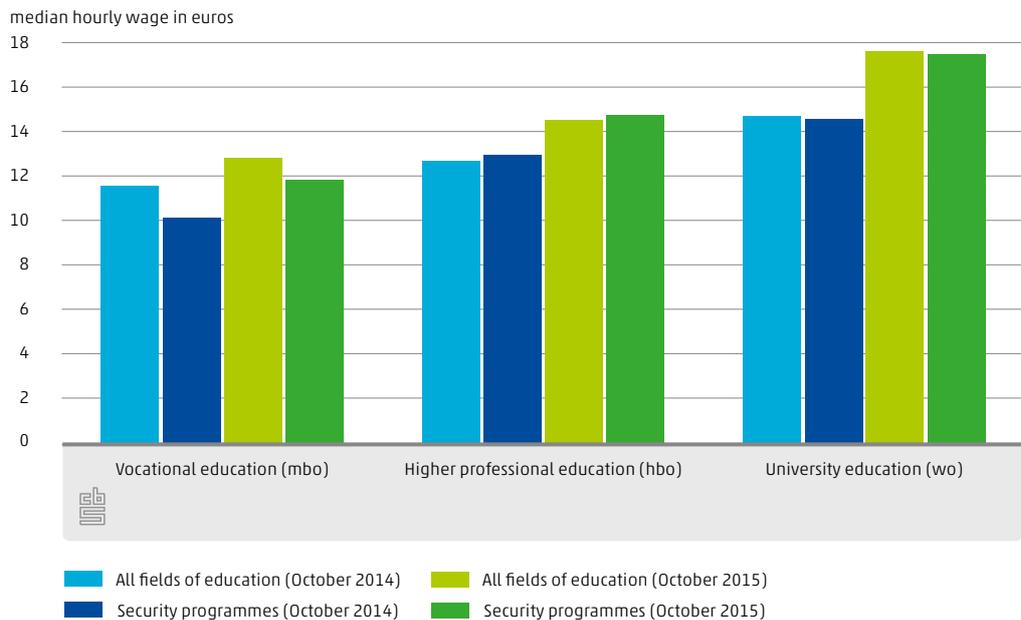
Figure 3.3.3 shows that at vocational level the hourly wage of participants in security programmes and in all fields of educations after ending their education, differ the most. And secondly, one year after ending their education (October 2015) the hourly wage is always higher than the year before. This is however not necessarily the same group of participants and the same group of employee's and jobs. Table 5 in the annex shows that is pays off to graduate. For every level of education the hourly wage of participants ending their education as a graduate is higher than for the non-graduates.

Overall picture

When the figures presented in chapter 3 are combined and presented in a comprehensive way, are there any signs for future discrepancies between education and the 'needs' of the labour market in the security domain?

Education and labour force by type of security

Of all employed persons, 13 percent works in a security related occupation and 10 percent of all participants in vocational and tertiary education is enrolled in a security related programme (see figure 4.1). Looking at the different fields of security occupations and programmes, the discrepancies are larger. For Social work for example 3,6 percent of all occupations is recognized as security related but only 0,1 percent of all participants in education. Compared to Social work the proportion of employed persons to participants in the field of Legal, is the other way around: relatively few employed persons (0,8 percent of all occupations) and much more participants in education (3,6 percent of all participants in education).

This does not necessarily mean that there is a mismatch or there will be a shortage of persons educated in 'security'. Both the occupations and the educations in the security domain are defined broadly. The majority of the security related occupations and educational programmes are defined as 'partly security'. This means that only a part of the occupation and education is dedicated to security. From all the employed persons with an educational background in the field of security 22 percent did actually work in a security related occupation. This seems a low percentage but it only underlines one can find other jobs or choose another career path with a security related education. On the other hand, 60 percent of all employed persons in a security related occupation has an educational background in security. This points at relevance of the educational programmes classified as 'security related' for security related occupations.

Paragraph 3.3 showed that, overall the participants ending a security related programme find jobs in the same degree as participants in all fields of education, except in vocational education where the participants in security programmes stay a little bit behind.

4.1 Security related occupations and programmes by type, 2016

% of all fields of education (participants)

% of all occupations (employed persons)
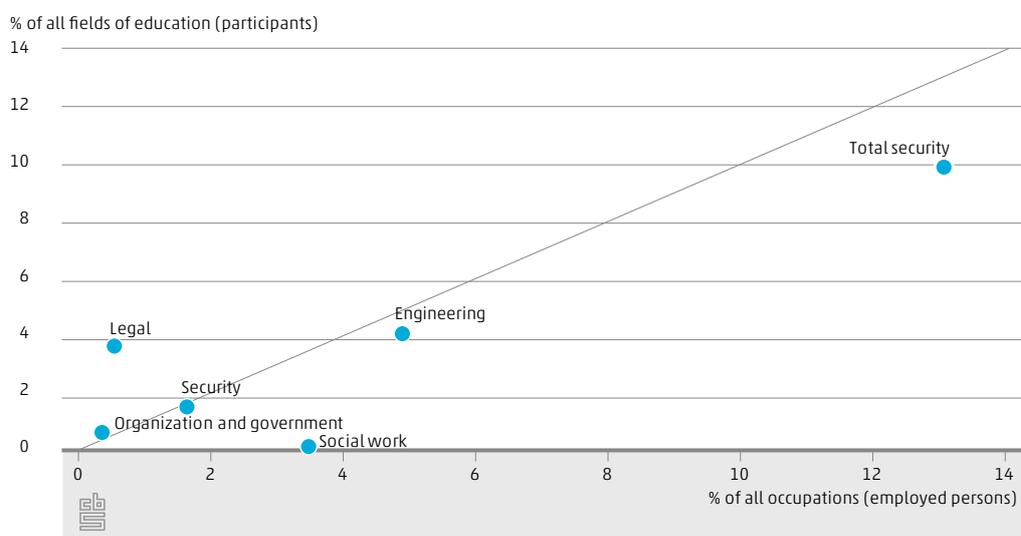
Education and labour force by branch of industry

The distribution of the participants in security related programmes who just ended their education (the new labour force) over the branches of industry is different from the distribution of the existing security related occupations. Most of the current employed persons in a security related occupation work in Public administration and services and Health and social work activities. Most of the participants in security related programmes find jobs in the Renting and other business support and the Wholesale and retail trade after ending their education (see figure 4.2).

Part of the Renting and other business support sector are the security firms who supply security services. Most of the security related occupations in this branch are classified as 'mainly security'. So, compared to other security related programmes there is a fairly straight line form participants of security programmes to occupations in this branch of industry; especially at vocational level.

Experience is not always necessary to the same degree for the different occupations. One can become a security guard relative shortly after ending ones' education but is takes more time to become a judge.

Another example of a branch where the distribution of employed participants of security related programmes after ending their education and the current security related labour force is not very well balanced, is Public administration and services. This is partly due to the fact that the institutional education system in The Netherlands as financed by the Ministry of Education, Culture and Science does not include programmes for police officers and armed forces. However, a substantial number of the security related occupations within the public sector are police officers and armed forces. So, institutional education does not provide programmes for all possible security related occupations. This gap is bridged by specific programmes provided by specific institutes like the Royal Military Academy and Police Academy.

4.2 Security related occupations (2016) and participants of security related programmes from school year 2013/'14, after ending their education (October 2014), by branch of industry
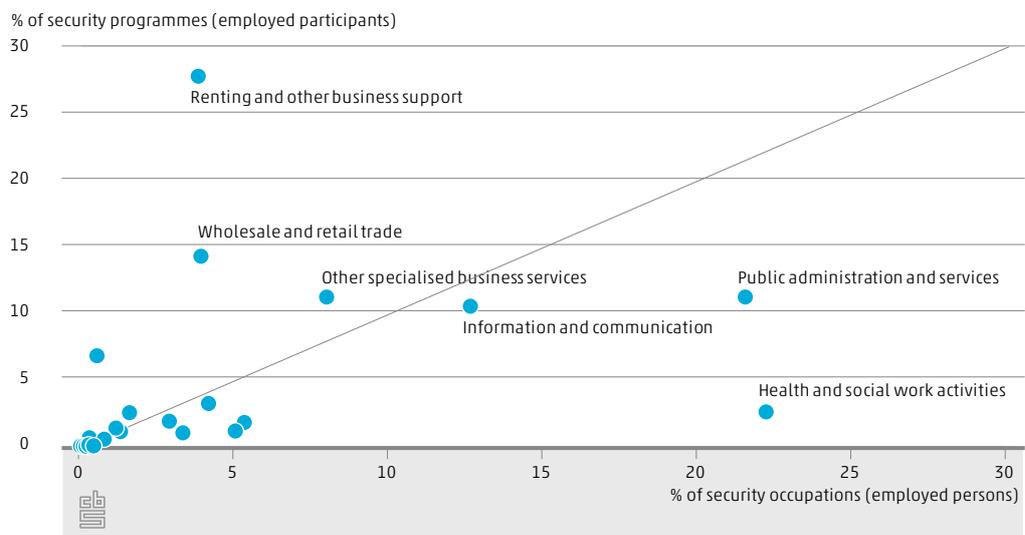
For the Health sector – as seen by the security programmes selected – the proportion is also a bit unbalanced. This may be due to the fact that there are relatively more occupations in the field of Social work recognized as security related compared to the educational programmes. Social work is a very broad field.

In general, the distribution of the current employed persons in security related occupations by branch of industry is the result of developments over a large number of years and does not necessarily has to be the same as the one for participants of a certain school year shortly after ending their education. Paragraph 3.1 showed that the dominant type of security occupation is in Engineering. The occupations classified as 'mainly security' are in the field of Security and Organization and government.

Are there discrepancies?

Based on this study discrepancies between education and the 'needs' of the labour market in the security domain cannot be concluded. Both the occupations and the educations in the security domain are defined broadly, and the majority is defined as 'partly security'. This means that only a part of the occupation and education is dedicated to security, people choose other occupations as well. If they specialise in a required area and choose for a security-related occupation experienced gaps might be filled.

5.

Annexes

Tables

1. Participants in security related programmes in vocational and tertiary education, school years 2013/'14–2016/'17

	School year			
	2013/'14	2014/'15	2015/'16	2016/'17
	number			
Vocational education (mbo), level 1				
All fields of education	20,853	14,463	13,237	13,083
Security related programmes	37	15	0	0
Security	37	15	0	0
Vocational education (mbo), level 2				
All fields of education	113,146	100,004	91,201	87,054
Security related programmes	12,179	11,178	10,550	9,187
Engineering	2,859	2,711	2,573	2,467
Organization and government	72	4	0	0
Security	9,248	8,463	7,977	6,720
Vocational education (mbo), level 3				
All fields of education	139,380	132,060	130,544	131,087
Security related programmes	10,004	9,292	9,262	8,815
Engineering	5,785	5,130	4,926	4,934
Security	4,213	4,162	4,336	3,881
Social work	6	0	0	0
Vocational education (mbo), level 4				
All fields of education	238,823	245,204	249,159	261,103
Security related programmes	14,398	15,151	15,447	14,279
Engineering	6,941	7,773	8,325	8,286
Organization and government	641	183	22	0
Security	443	447	283	844
Legal	6,361	6,747	6,498	3,910
Social work	12	1	319	1,239
Higher professional education (hbo), Bachelor				
All fields of education	428,693	434,470	430,498	434,640
Security related programmes	38,090	39,599	41,643	44,397
Engineering	18,707	20,399	22,933	25,238
Organization and government	1,523	1,326	897	692
Security	3,751	3,820	3,805	4,031
Legal	14,109	14,054	14,008	14,436
Higher professional education (hbo), Master				
All fields of education	11,600	11,964	12,096	11,964
Security related programmes	166	176	170	175
Organization and government	62	63	64	68
Social work	104	113	106	107
University education (wo), Bachelor				
All fields of education	159,254	161,761	162,245	166,262
Security related programmes	25,228	26,379	27,103	28,216
Engineering	3,040	3,456	4,036	4,710
Organization and government	4,057	4,142	4,221	4,349
Security	1,220	1,297	1,310	1,356
Legal	16,911	17,484	17,536	17,801
University education (wo), Master				
All fields of education	90,932	93,900	98,924	101,652
Security related programmes	11,329	11,899	12,584	12,950
Engineering	2,180	2,326	2,689	2,985
Organization and government	1,214	1,364	1,530	1,869
Security	770	827	940	951
Legal	7,165	7,382	7,425	7,145

Source: Statistics Netherlands, Statistics on education.

2. Graduates in security related programmes in vocational and tertiary education, school years 2013/'14 - 2015/'16

	School year		
	2013/'14	2014/'15	2015/'16
	number		
Vocational education (mbo), level 1			
All fields of education	16,735	11,679	10,458
Security related programmes	24	12	0
Engineering	0	0	0
Organization and government	0	0	0
Security	24	12	0
Legal	0	0	0
Social work	0	0	0
Vocational education (mbo), level 2			
All fields of education	50,648	45,219	39,283
Security related programmes	5,230	4,738	4,481
Engineering	1,142	1,122	1,037
Organization and government	65	8	0
Security	4,023	3,608	3,444
Legal	0	0	0
Social work	0	0	0
Vocational education (mbo), level 3			
All fields of education	46,901	46,049	42,260
Security related programmes	3,470	3,239	3,096
Engineering	2,061	1,799	1,643
Organization and government	0	0	0
Security	1,405	1,440	1,453
Legal	0	0	0
Social work	4	0	0
Vocational education (mbo), level 4			
All fields of education	63,892	64,843	62,372
Security related programmes	3,683	3,681	3,496
Engineering	1,652	1,801	1,827
Organization and government	420	134	16
Security	21	11	0
Legal	1,586	1,735	1,653
Social work	4	0	0
Higher professional education (hbo)			
All fields of education	65,903	69,432	70,908
Security related programmes	4,488	4,879	5,085
Engineering	2,258	2,470	2,639
Organization and government	244	233	244
Security	453	523	474
Legal	1,516	1,627	1,697
Social work	17	26	31
University education (wo), Bachelor			
All fields of education	32,865	34,811	34,321
Security related programmes	4,810	5,240	5,214
Engineering	400	492	601
Organization and government	780	867	876
Security	252	319	263
Legal	3,378	3,562	3,474
Social work	0	0	0
University education (wo), Master			
All fields of education	38,655	40,656	41,204
Security related programmes	4,590	5,147	5,301
Engineering	671	660	766
Organization and government	595	704	776
Security	421	440	495
Legal	2,903	3,343	3,264
Social work	0	0	0

Source: Statistics Netherlands, Statistics on education.

Total outflow of participants

| | situation per October 2014 | | | | | situation per October 2015 | | | |
| | employed | | | | | employed | | | |
		employee	self-employed	employee and self-employed	back into education		employee	self-employed	employee and self-employed
	number								
Vocational education (mbo)									
All fields of education	135,730	101,940	97,580	2,270	2,090	14,620	95,160	89,360	3,150	2,650
Not graduated	49,770	29,980	28,630	870	490	7,120	27,120	25,340	1,140	630
Graduated	85,960	71,960	68,950	1,410	1,600	7,500	68,050	64,020	2,010	2,010
Security related programmes	9,020	6,430	6,230	90	110	1,210	6,000	5,750	140	110
Not graduated	3,470	1,920	1,840	50	30	610	1,720	1,610	70	40
Graduated	5,540	4,510	4,390	40	80	600	4,280	4,140	70	70
Higher professional education (hbo)									
All fields of education	77,710	56,570	51,550	2,820	2,190	9,170	52,440	46,390	3,120	2,940
Not graduated	31,260	20,120	18,700	910	510	7,150	15,830	14,290	950	590
Graduated	46,450	36,450	32,850	1,920	1,690	2,010	36,610	32,100	2,170	2,340
Security related programmes	6,010	4,310	4,050	130	130	790	4,090	3,800	130	150
Not graduated	2,930	1,750	1,630	80	40	660	1,460	1,340	80	50
Graduated	3,080	2,560	2,410	60	90	140	2,630	2,470	60	110
University education (wo)									
All fields of education	52,960	32,060	29,260	1,640	1,160	5,970	31,250	28,110	1,590	1,550
Not graduated	9,560	3,980	3,530	300	140	2,370	2,910	2,490	300	130
Graduated, Bachelor	9,480	4,950	4,410	360	190	3,320	3,240	2,730	310	200
Graduated, Master	33,930	23,130	21,320	980	830	290	25,100	22,890	990	1,230
Security related programmes	6,340	3,830	3,490	200	140	670	3,850	3,490	200	160
Not graduated	1,360	630	560	50	20	350	450	380	40	20
Graduated, Bachelor	990	570	500	50	30	300	440	380	40	20
Graduated, Master	3,990	2,630	2,430	110	100	20	2,960	2,730	110	120

Source: Statistics Netherlands, Education and labour market.

4. Employed participants in security related programmes in vocational and tertiary education from school year 2013/'14, after ending their education (October 2014), by branch of industry

	Vocational education (mbo)			Higher professional education (hbo)			University education (wo)			
	security related pro-grammes	not gradu-ated	gradu-ated	security related pro-grammes	not gradu-ated	gradu-ated	security related pro-grammes	not gradu-ated	gradu-ated, Bachelor	gradu-ated, Master
Branch of industry	number									
A-U All economic activities	6,430	1,920	4,510	4,310	1,750	2,560	3,830	630	570	2,630
A Agriculture, forestry and fishing	40	10	30	30	20	10	20	10	0	10
B Mining and quarrying	0	0	0	0	0	0	0	0	0	0
C Manufacturing	150	50	100	250	100	150	70	10	10	50
D Electricity and gas supply	0	0	0	10	0	10	10	0	0	10
E Water supply and waste management	0	0	0	0	0	0	0	0	0	0
F Construction	60	20	40	60	20	40	20	10	0	10
G Wholesale and retail trade	1,010	380	630	740	430	310	330	100	60	180
H Transportation and storage	190	70	130	110	70	40	60	20	10	40
I Accommodation and food serving	510	250	260	280	210	80	190	80	40	80
J Information and communication	290	60	230	830	130	700	410	50	60	290
K Financial institutions	30	10	20	60	20	50	170	10	20	140
L Renting, buying, selling real estate	60	10	50	20	10	10	10	0	0	10
M Other specialised business services	140	50	90	500	100	400	1,000	70	110	820
N Renting and other business support	2,280	740	1,540	990	470	520	770	170	130	460
O Public administration and services	1,250	150	1,100	130	40	90	250	20	30	200
P Education	40	10	30	40	10	40	190	20	30	150
Q Health and social work activities	160	30	130	110	40	60	120	20	20	80
R Culture, sports and recreation	100	40	60	50	30	20	50	20	10	30
S Other service activities	80	30	50	30	20	10	50	0	10	30
T Activities of households	10	10	0	10	10	0	0	0	0	0
U Extraterritorial organisations	0	0	0	0	0	0	0	0	0	0
Not known	30	20	20	40	30	20	90	20	20	50

Source: Statistics Netherlands, Education and labour market.

5. Hourly wage of employee's of participants in security related programmes in vocational and tertiary education from school year 2013/'14, after ending their education

Outflow of participants

	situation per Occtober 2014 median hourly wage	situation per October 2015 median hourly wage
	euro	
Vocational education (mbo)		
All fields of education	11.57	12.83
Not graduated	10.53	11.77
Graduated	12.10	13.30
Security related programmes	10.11	11.82
Not graduated	9.80	11.40
Graduated	10.26	11.98
Higher professional education (hbo)		
All fields of education	12.69	14.52
Not graduated	10.96	12.27
Graduated	13.70	15.44
Security related programmes	12.95	14.76
Not graduated	11.00	12.26
Graduated	13.95	15.66
University education (wo)		
All fields of education	14.69	17.63
Not graduated	12.16	14.41
Graduated, Bachelor	12.47	15.43
Graduated, Master	15.62	17.91
Security related programmes	14.58	17.48
Not graduated	12.21	14.45
Graduated, Bachelor	12.94	16.18
Graduated, Master	15.36	17.75

Source: Statistics Netherlands, Education and labour market.

6. Employed persons in a security related occupation, by branch of industry

| | 2013 | | | | 2014 | | | | 2015 | | | | 2016 | | | |
| | Total | Security related occupations | | Other occupations | Total | Security related occupations | | Other occupations | Total | Security related occupations | | Other occupations | Total | Security related occupations | | Other occupations |
		Partly security	Mainly security			Partly security	Mainly security			Partly security	Mainly security			Partly security	Mainly security	
number (x 1 000)																
Branch of industry																
A Agriculture, forestry and fishing	162	3	1	1	160	174	2	1	1	172	178	2	1	1	176	176	3	2	1	173
B Mining and quarrying	12	1	1	0	10	10	1	1	0	9	14	2	1	1	12	11	2	1	1	10
C Manufacturing	787	45	33	12	743	777	43	33	11	734	805	44	33	11	761	816	45	36	9	772
D Electricity and gas supply	32	5	5	0	27	28	5	4	1	23	28	3	3	0	25	33	6	5	0	27
E Water supply and waste management	36	4	3	1	32	33	3	2	1	30	31	2	2	1	29	34	3	2	1	31
F Construction	427	32	28	4	394	404	32	28	4	372	410	30	27	3	379	404	36	32	4	368
G Wholesale and retail trade	1,259	36	31	5	1,223	1,269	41	35	6	1,228	1,284	40	36	4	1,244	1,280	42	37	5	1,238
H Transportation and storage	376	18	10	8	358	365	16	10	6	349	365	17	12	5	348	383	17	12	5	366
I Accommodation and food serving	325	5	2	2	321	335	6	3	2	329	370	8	4	3	363	374	6	4	2	368
J Information and communication	268	116	113	3	152	256	120	117	3	136	265	127	125	3	138	280	136	134	2	144
K Financial institutions	280	57	55	1	223	286	58	56	2	228	276	54	52	2	222	270	57	56	2	213
L Renting, buying, selling real estate	64	7	7	0	57	64	8	7	1	57	69	8	7	1	61	66	8	8	0	58
M Other specialised business services	604	87	74	13	518	598	85	75	10	513	600	87	76	10	513	591	86	76	10	505
N Renting and other business support	408	40	16	24	368	430	44	19	25	386	444	41	18	23	403	462	41	20	22	421
O Public administration and services	510	234	110	124	276	494	225	108	117	269	493	232	112	121	261	489	232	109	123	256
P Education	560	30	23	6	530	552	29	25	4	523	570	30	26	4	541	572	31	26	5	541
Q Health and social work activities	1,368	253	246	7	1,115	1,322	234	229	6	1,088	1,326	231	225	6	1,095	1,327	240	235	5	1,087
R Culture, sports and recreation	165	12	9	3	153	163	12	8	4	152	174	12	7	5	162	174	13	8	5	161
S Other service activities	191	14	12	2	177	188	12	11	1	176	186	14	12	1	172	183	14	13	1	169
T Activities of households	14	3	3	0	11	15	4	4	0	11	10	3	3	0	7	11	5	5	0	6
U Extraterritorial organisations	1	0	0	0	1	1	0	0	0	1	2	1	0	0	1	2	1	0	0	1
Not known	417	43	35	8	375	449	42	34	8	407	393	41	35	7	351	464	54	45	9	410
A-U All economic activities	8,266	1,045	820	224	7,222	8,214	1,021	810	211	7,193	8,294	1,029	817	211	7,265	8,403	1,078	864	214	7,325

Source: Statistics Netherlands, Labour Force Survey (EBB).

7. Employed persons in a security related occupation, characteristics

	2013				2014				2015				2016			
		Security related occupations				Security related occupations				Security related occupations				Security related occupations		
	Total	Partly security	Mainly security	Other occupations	Total	Partly security	Mainly security	Other occupations	Total	Partly security	Mainly security	Other occupations	Total	Partly security	Mainly security	Other occupations
number (x 1 000)																
Working time																
Part-time	4,037	393	336	57	3,644	3,996	385	331	54	3,611	4,046	384	334	50	3,663	4,076	403	345	58	3,673
Full-time	4,229	651	484	167	3,578	4,218	636	479	157	3,582	4,248	645	483	162	3,602	4,327	675	519	156	3,652
Age																
15 to 25 year	1,225	80	60	21	1,145	1,202	68	50	18	1,134	1,245	70	54	15	1,175	1,256	73	55	18	1,184
25 to 45 year	3,570	542	442	99	3,028	3,502	520	432	89	2,982	3,469	521	430	91	2,948	3,479	548	456	92	2,931
45 to 75 year	3,471	423	318	105	3,048	3,510	433	328	104	3,077	3,580	438	333	106	3,142	3,668	457	353	104	3,211
Level and field of education																
Low																
security related programmes	309	19	12	7	290	307	20	12	7	288	306	20	13	8	285	306	22	15	7	284
other fields of education	1,508	62	36	25	1,446	1,461	56	34	21	1,405	1,473	51	31	21	1,421	1,465	54	34	20	1,410
Intermediate																
security programmes	1,136	200	141	60	935	1,241	211	146	65	1,030	1,247	212	146	65	1,036	1,264	221	156	65	1,044
other fields of education	2,370	210	150	60	2,160	2,260	185	133	52	2,075	2,247	176	127	49	2,071	2,266	188	141	48	2,077
High																
security related programmes	1,253	350	313	37	903	1,332	371	332	39	961	1,387	384	343	41	1,003	1,414	405	362	43	1,009
other fields of education	1,550	192	160	32	1,359	1,532	174	149	25	1,358	1,561	181	155	26	1,380	1,589	182	151	30	1,408
Not known																
other fields of education	141	12	9	3	129	81	6	4	2	75	73	5	3	2	68	98	6	4	1	93
Employee's	6,947	930	723	208	6,017	6,860	902	703	199	5,958	6,909	916	718	199	5,993	7,000	961	758	203	6,039
permanent contract	5,309	795	618	177	4,514	5,172	767	597	170	4,405	5,143	782	610	172	4,361	5,158	811	639	172	4,348
temporary contract	1,639	135	105	30	1,504	1,688	135	106	29	1,553	1,767	134	108	26	1,632	1,841	150	119	31	1,691
Self-employed	1,319	114	97	17	1,205	1,354	119	107	13	1,235	1,384	112	99	13	1,272	1,403	117	106	10	1,287
Security related occupation by type																
Engineering	371	371	371	0		379	379	379	0		395	395	395	0		416	416	416	0	
Organization and government	148	148	88	59		137	137	81	56		142	142	83	59		145	145	84	61	
Security	165	165	0	165		155	155	0	155		152	152	0	152		152	152	0	152	
Legal	55	55	55	0		56	56	56	0		56	56	56	0		64	64	64	0	
Social work	306	306	306	0		294	294	294	0		283	283	283	0		301	301	301	0	
No security related occupation	7,222				7,222	7,193				7,193	7,265				7,265	7,325				7,325

Source: Statistics Netherlands, Labour Force Survey (EBB).

8. Employed persons with a security related education, by level and field of security related education

| | 2013 | | | | 2014 | | | | 2015 | | | | 2016 | | | |
| | | Security related occupations | | | | Security related occupations | | | | Security related occupations | | | | Security related occupations | | |
	Total	Partly security	Mainly security	Other occupa-tions	Total	Partly security	Mainly security	Other occupa-tions	Total	Partly security	Mainly security	Other occupa-tions	Total	Partly security	Mainly security	Other occupa-tions
number (x 1 000)																
Level of security education																
Low	309	19	12	7	307	20	12	7	306	20	13	8	306	22	15	7
Intermediate	1,136	200	141	60	1,241	211	146	65	1,247	212	146	65	1,264	221	156	65
High	1,253	350	313	37	1,332	371	332	39	1,387	384	343	41	1,414	405	362	43
Field of security education																
Engineering	695	215	198	17	728	221	201	19	742	228	209	19	760	243	224	19
Organization and government	990	121	94	27	1,039	128	102	27	1,042	131	103	28	1,066	136	107	29
Security	424	77	29	48	475	88	36	51	493	93	39	54	491	94	41	54
Legal	295	69	62	7	326	74	65	8	350	76	68	8	355	82	74	9
Social work	293	87	83	4	312	91	86	5	314	87	84	4	313	92	88	4

Source: Statistics Netherlands, Labour Force Survey (EBB).

Classifications

Annex I   Selected security related fields of science in tertiary education

ISCED-F 2013 Detailed Field	CROHO-CODE	Description	Type of security related education						
			Engineering	Organization and government	Security	Legal	Social work	**Partly security**	**Mainly security**
0223	60504	m european law || m international and european law (socrates)				x		x	
0311	56833	b econometrie en operationele research || b econometrics and operations research		x				x	
0311	60056	m econometrics and mathematical economics || m mathematical economics and econometric methods		x				x	
0311	60057	m operations research and management sciences		x				x	
0311	60079	m econometrics and management science		x				x	
0311	60177	m econometrics		x				x	
0311	60307	m econometrics and operations research		x				x	
0311	60646	m econometrics, operations research and actuarial studies		x				x	
0311	66833	m econometrics and operations research		x				x	
0312	69314	m conflict resolution and governance		x				x	
0314	56469	b criminologie			x				x
0314	56838	b sociale geografie en planologie || b human geography and urban and regional planning		x				x	
0314	60669	m criminal law and criminology			x				x
0314	66469	m criminologie				x			x
0314	66724	m international crimes and criminology			x				x
0314	66725	m victimology and criminal justice				x			x
0411	34140	b fiscaal recht en economie				x		x	
0411	56827	b fiscaal recht || b tax law				x		x	
0411	75107	m fiscaal recht		x				x	
0413	50627	b internationale organisaties en internationale betrekkingen || b international relations and international organization		x				x	
0413	56461	b juridische wetenschappen || b recht en bestuur				x		x	
0413	66265	m technology and policy || m innovation sciences		x				x	
0413	66277	m technology management || m technology and operations management	x					x	
0413	66461	m juridische bestuurswetenschappen || m recht en bestuur		x				x	
0413	66995	m management of technology	x					x	
0416	70144	m facility and real estate management		x				x	
0421	34121	b hogere juridische opleiding || b laws				x		x	
0421	39205	b hbo - rechten || b laws				x		x	
0421	50017	b european law school				x		x	
0421	50620	b recht en ict				x		x	
0421	50700	b rechtsgeleerdheid || b law				x		x	
0421	50753	b recht en management || b business law				x		x	
0421	56475	b global law				x		x	
0421	56828	b notarieel recht || b notarial law				x		x	
0421	56829	b internationaal en europees recht || b international and european law				x		x	
0421	60017	m european law school				x		x	
0421	60069	m law and technology				x		x	
0421	60073	m international and european public law || m constitutional principles of international and european public law				x		x	
0421	60084	m rechtsgeleerdheid				x		x	
0421	60085	m bedrijfsrecht				x		x	
0421	60086	m financieel recht				x		x	

ISCED-F 2013 Detailed Field	CROHO-CODE	Description	Type of security related education						
			Engi-neering	Organi-zation and govern-ment	Security	Legal	Social work	**Partly security**	**Mainly security**
0421	60170	m globalisation and law			x			x	
0421	60171	m forensica, criminologie en rechtspleging || m forensics, criminology and law			x			x	
0421	60220	m publiekrecht || m public law				x		x	
0421	60223	m informatierecht || m information law				x		x	
0421	60224	m international and european law				x		x	
0421	60366	m information law (research)				x		x	
0421	60369	m public international law (research)				x		x	
0421	60418	m forensische criminologie			x			x	
0421	60419	m criminaliteit en rechtshandhaving			x				x
0421	60602	m european law				x		x	
0421	60605	m international law and the law of international organizations				x		x	
0421	60620	m recht en ict				x		x	
0421	60685	m law and politics of international security			x			x	
0421	60856	m public international law				x		x	
0421	66451	m nederlands recht				x		x	
0421	66456	m international criminal law				x			x
0421	66474	m jeugdrecht				x			x
0421	66828	m notarieel recht				x		x	
0421	66829	m internationaal en europees recht				x		x	
0421	75027	m advanced studies in public international law				x		x	
0421	80023	ad integrale handhaving omgevingsrecht || ad environmental law enforcement			x			x	
0421	81005	b hbo - rechten				x		x	
0421	81012	b rechten				x		x	
0512	34112	b forensisch onderzoek || b forensic science				x		x	
0512	60338	m forensic science			x			x	
0533	34268	b technische natuurkunde || b engineering physics	x					x	
0533	50206	b natuurkunde || b physics	x					x	
0541	66856	m business mathematics and informatics		x				x	
0612	30010	b information security management	x						x
0612	39250	b netwerk infrastructuur design || b network infrastructure design		x				x	
0612	60227	m system and network engineering || m system and network administration	x					x	
0612	60364	m computing science	x					x	
0612	80071	ad ict-beheer || ad ict-service management	x					x	
0613	30020	b hbo-ict	x					x	
0613	34479	b informatica || b information technology	x					x	
0613	50300	b informatica/kennistechnologie || b informatica/kennistechnologie/ict || b kennistechnologie || b knowledge engineering	x					x	
0613	55018	b data science (joint degree)	x					x	
0613	56842	b informatiekunde || b information science	x					x	
0613	56978	b informatica || b computing science	x					x	
0613	60055	m information management		x					x
0613	60228	m software engineering	x					x	
0613	60229	m information studies		x				x	
0613	60299	m grid computing	x					x	
0613	60453	m business information management		x				x	
0613	65015	m computational science (joint degree)	x					x	
0613	65018	m data science and entrepreneurship (joint degree)	x					x	
0613	66978	m informatica	x					x	
0613	70050	m informatics	x					x	
0613	80075	ad informatica || ad information technology	x					x	

Annex I   Selected security related fields of science in tertiary education   (End)

ISCED-F 2013 Detailed Field	CROHO-CODE	Description	Type of security related education						
			Engi-neering	Organi-zation and govern-ment	Security	Legal	Social work	**Partly security**	**Mainly security**
0619	56981	b kunstmatige intelligentie || b artificial intelligence	x					x	
0619	66981	m artificial intelligence	x						x
0713	34267	b elektrotechniek || b electrical and electronic engineering	x					x	
0714	30015	b advanced sensor applications	x					x	
0714	30026	b mechatronica || b mechatronics || b mechatronic engineering	x					x	
0714	34131	b embedded systems engineering	x					x	
0714	34475	b technische informatica || b computer science	x					x	
0714	50426	b computer science	x					x	
0714	60300	m computer science	x					x	
0714	60331	m embedded systems	x					x	
0714	60351	m computer engineering	x					x	
0714	60438	m computer science and engineering	x					x	
0714	65014	m computer science (joint degree)	x					x	
0714	80022	ad technische informatica || ad computer science	x					x	
0716	30018	b automotive	x					x	
0716	34262	b autotechniek || b automotive engineering	x					x	
0716	70104	m master of automotive systems	x					x	
0731	34133	b stedenbouwkundig ontwerpen || b urban design			x			x	
0731	34282	b ruimtelijke ordening en planologie || b urban and regional planning		x				x	
0731	44338	m stedebouw || m urbanism		x				x	
0731	56194	b technische planologie			x			x	
0731	70086	m master of urban and area development		x				x	
0731	70165	m master urban management		x				x	
0731	70179	m master of urban and area development (joint degree)		x				x	
0731	75060	m european postgraduate masters in urbanism		x				x	
0731	75108	m berlage master in architecture and urban design		x				x	
0923	44116	m social work					x	x	
0923	70184	m forensisch sociale professional	x					x	
1015	80031	ad eventmanager || ad event manager		x				x	
1032	30105	b security management		x					x
1032	39201	b integrale veiligheid || b applied safety & security studies			x				x
1032	39268	b integrale veiligheidskunde || b applied safety & security studies			x				x
1032	60417	m crisis and security management			x			x	
1032	75119	m veiligheidszorg, recht en bestuur				x		x	
Total number of selected fields of science			39	29	15	40	1	110	14

ISCED-F 2013 Detailed Field	CREBO-CODE	Description	Engineering	Organization and government	Security	Legal	Social work	Partly security	Mainly security
					Type of security related education				
211	22090	podium- en evenemententechniek (media en vormgeving)			x			x	
212	94790	human technology	x					x	
413	22161	juridisch medewerker (economie en administratie)				x		x	
413	90432	juridisch medewerker (openbaar bestuur)				x		x	
413	94892	juridisch medewerker (juridisch medewerker openbaar bestuur)				x		x	
421	94891	juridisch medewerker (juridisch medewerker zakelijke dienstverlening)				x		x	
612	10904	medewerker beheer ict vk	x					x	
612	10905	ict-beheerder mk	x					x	
612	10908	netwerkbeheerder sp	x					x	
612	22088	ict- en mediabeheer (media en vormgeving)	x					x	
612	22263	ict- en mediabeheer (informatie en communicatietechnologie)	x					x	
612	23089	ict- en mediabeheer	x					x	
612	23090	ict support	x					x	
612	25189	ict-beheerder	x					x	
612	25191	medewerker beheer ict	x					x	
612	90222	ict-beheerder (servicedesk)	x					x	
612	90230	medewerker beheer ict	x						x
612	93190	ict-beheer	x					x	
612	93191	ict-beheer (ict-beheerder)	x					x	
612	93192	ict-beheer (netwerkbeheerder)	x					x	
612	95070	ict-medewerker (medewerker beheer ict)	x					x	
612	95321	ict- en mediabeheer (ict-beheerder)	x					x	
612	95322	ict- en mediabeheer (mediaworkflowbeheerder)	x					x	
612	95323	ict- en mediabeheer (netwerkbeheerder)	x					x	
613	10907	applicatieontwikkelaar	x					x	
613	22094	ict-medewerker (informatie en communicatietechnologie)	x					x	
613	25192	medewerker ict	x					x	
613	90360	medewerker ict	x					x	
613	95060	ict-medewerker (medewerker ict)	x					x	
921	10742	sociaal pedagogisch werker 3 (spw 3); ovdb l o b					x	x	
921	10743	sociaal pedagogisch werker 4 (spw 4); ovdb l o b					x	x	
923	23185	sociaal werk					x	x	
1011	10891	facilitair medewerker bb		x				x	
1011	10892	facilitair leidinggevende mk		x				x	
1011	94170	facilitaire dienstverlener (facilitair medewerker)		x				x	
1011	94180	facilitaire dienstverlener (facilitaire leidinggevende)		x				x	
1015	25147	medewerker evenementenorganisatie			x			x	
1031	23164	veiligheid en vakmanschap			x				x
1031	95080	veiligheid en vakmanschap			x				x
1031	95081	veiligheid en vakmanschap (aankomend medewerker grondoptreden)			x				x
1031	95082	veiligheid en vakmanschap (aankomend medewerker maritiem)			x				x
1031	95090	veiligheid en vakmanschap			x				x
1031	95091	veiligheid en vakmanschap (aankomend onderofficier grondoptreden)			x				x
1031	95092	veiligheid en vakmanschap (aankomend onderofficier maritiem)			x				x
1032	10876	beveiliger bb			x				x
1032	10910	coördinator beveiliging vk			x				x
1032	25407	beveiliger			x				x
1032	25408	coördinator beveiliging			x				x

Annex II   Selected security related fields of education in vocational education   (End)

ISCED-F 2013 Detailed Field	CREBO-CODE	Description	Type of security related education						
			Engineering	Organization and government	Security	Legal	Social work	Partly security	Mainly security
1032	25409	handhaver toezicht en veiligheid			x				x
1032	25410	medewerker toezicht en veiligheid			x				x
1032	90540	beveiliger			x				x
1032	90541	beveiliger (beveiliger)			x				x
1032	90550	beveiliger (co+rdinator beveiliging)			x				x
1032	93270	toezicht en veiligheid (assistent toezicht en veiligheid)			x				x
1032	93280	toezicht en veiligheid (medewerker toezicht en veiligheid)			x				x
1032	94810	toezicht en veiligheid (handhaver toezicht en veiligheid)			x				x
1032	94850	particuliere beveiliging (beveiliger)			x				x
1041	10642	maritiem officier (zeevaart); stg lob t en l	x					x	
1041	95726	havenoperaties (manager havenoperaties)			x			x	
Total number of selected fields of education			24	5	23	4	3	38	21

Annex III   Selected security related occupations from ISCO 2008

ISCO 2008 Unit-group	Description	Type of security related occupation						
		Engineering	Organization and government	Security	Legal	Social work	Partly security	Mainly security
0000	Armed forces occupations			x				x
0110	Commissioned armed forces officers			x				x
0210	Non-commissioned armed forces officers			x				x
0310	Armed forces occupations, other ranks			x				x
1100	Chief executives, senior officials and legislators		x				x	
1110	Legislators and senior officials		x					x
1111	Legislators		x					x
1112	Senior government officials		x					x
1330	Information and communications technology service managers	x					x	
1346	Financial and insurance services branch managers					x	x	
1349	Professional services managers not elsewhere classified		x					x
2110	Physical and earth science professionals	x					x	
2111	Physicists and astronomers	x					x	
2150	Electrotechnology engineers	x					x	
2152	Electronics engineers	x					x	
2153	Telecommunications engineers	x					x	
2164	Town and traffic planners					x	x	
2356	Information technology trainers	x					x	
2422	Policy administration professionals		x				x	
2434	Information and communications technology sales professionals	x					x	
2500	Information and communications technology professionals	x					x	
2510	Software and applications developers and analysts	x					x	
2511	Systems analysts	x					x	
2512	Software developers	x					x	

ISCO 2008 Unit-group	Description	Type of security related occupation						
		Engineering	Organization and government	Security	Legal	Social work	**Partly security**	**Mainly security**
2513	Web and multimedia developers	x					x	
2514	Applications programmers	x					x	
2519	Software and applications developers and analysts not elsewhere classified	x					x	
2520	Database and network professionals	x					x	
2521	Database designers and administrators	x					x	
2522	Systems administrators	x					x	
2523	Computer network professionals	x					x	
2529	Database and network professionals not elsewhere classified	x					x	
2610	Legal professionals				x		x	
2611	Lawyers				x		x	
2612	Judges				x		x	
2619	Legal professionals not elsewhere classified				x		x	
2635	Social work and counselling professionals					x	x	
3112	Civil engineering technicians	x					x	
3155	Air traffic safety electronics technicians	x					x	
3257	Environmental and occupational health inspectors and associates			x				x
3314	Statistical, mathematical and related associate professionals	x					x	
3332	Conference and event planners		x				x	
3350	Regulatory government associate professionals		x				x	
3351	Customs and border inspectors		x				x	
3354	Government licensing officials		x				x	
3355	Police inspectors and detectives			x				x
3359	Regulatory government associate professionals not elsewhere classified		x					x
3410	Legal, social and religious associate professionals				x		x	
3412	Social work associate professionals					x	x	
3500	Information and communications technicians	x					x	
3510	Information and communications technology operations and user support technicians	x					x	
3511	Information and communications technology operations technicians	x					x	
3512	Information and communications technology user support technicians	x					x	
3513	Computer network and systems technicians	x					x	
3514	Web technicians	x					x	
5400	Protective services workers			x				x
5410	Protective services workers			x				x
5411	Fire-fighters			x				x
5412	Police officers			x				x
5413	Prison guards			x				x
5414	Security guards			x				x
5419	Protective services workers not elsewhere classified			x				x
7411	Building and related electricians	x					x	
	Total number of selected security occupations	30	11	13	5	4	45	18

Source: International Standard Classification of Occupations 2008 (ISCO 2008).

Annex IV   Selected security related fields of education of the labour force

ISCED-F 2013 Detailed Field	Description	Type of security related occupation						
		Engineer-ing	Organiza-tion and govern-ment	Security	Legal	Social work	**Partly security**	**Mainly security**
0211	Audio-visual techniques and media production		x				x	
0212	Fashion, interior and industrial design	x					x	
0223	Philosophy and ethics				x		x	
0311	Economics		x				x	
0312	Political sciences and civics		x				x	
0314	Sociology and cultural studies			x			x	
0411	Accounting and taxation				x		x	
0413	Management and administration		x				x	
0416	Wholesale and retail sales		x				x	
0421	Law				x		x	
0512	Biochemistry				x		x	
0533	Physics	x					x	
0541	Mathematics		x				x	
0612	Database and network design and administration	x					x	
0613	Software and applications development and analysis	x					x	
0619	Information and communication technologies (ICTs), other	x					x	
0713	Electricity and energy	x					x	
0714	Electronics and automation	x					x	
0716	Motor vehicles, ships and aircraft	x					x	
0731	Architecture and town planning		x				x	
0921	Care of the elderly and of disabled adults					x	x	
0923	Social work and counselling	x					x	
1011	Domestic services		x				x	
1015	Travel, tourism and leisure			x			x	
1031	Military and defence			x				x
1032	Protection of persons and property			x				x
1041	Transport services			x			x	

Sources

Labour force survey

The data on the employed persons comes from the Labour Force Survey (LFS). The LFS is a continuous survey with quarterly publications for a fixed set of labour market variables. Yearly estimates are published for these variables but also an additional set of variables is published yearly. Monthly estimates are only available for employment and unemployment by sex and three age classes. The target population is people aged 15 years and older who live in the Netherlands, except persons living in institutions. The data in these study however refer to people aged 15–75 year.

The survey is conducted using a rotating panel with five waves which produces estimates from the year 2003 onwards. Since the fourth quarter of 2012 all selected respondents are initially requested to participate via the internet. Part of the non-response is thereafter approached by face-to-face or telephone. The four panel interviews are done by telephone. In 2016, 145 thousand addresses were approached to participate via the internet, thereafter 24 non-responding addresses were approached face-to-face and 30 thousand addresses by telephone for the first wave.

Weighting of the respondents is done in two stages. In the first stage all respondents are assigned an inclusion weight. These inclusion weights are calculated in such a way that unequal inclusion probabilities that occur because of the sampling method are corrected. In the second stage final weights are determined. In this stage biases because of non-response are reduced. For this, information on gender, age, ethnic background, place of residence and some other regional classifications are used. In addition, administrative sources on income and registration at unemployment office are used. Also information on the correlation in the panel-overlap between subsequent quarters is used and all waves together are weighted in one step. Estimates from the LFS always have a margin of error.

Statistics on education

The number of students and graduates in vocational and higher education are based on the Basisregistratie Onderwijs (BRON) which is administered by the Dienst Uitvoering Onderwijs (DUO). This database contains all enrolments by level and field of education as far as financed by the Ministry of Education, Culture and Science, at 1 October each year. This means that participants in private universities and very specific educational institutes like the Police Academy and the Royal Military Academy, are not included in these data.

Education and labour market

To describe the labour market status of participants in education after ending their education Statistics Netherlands links several fiscal databases to detect if employee's and/ or self-employed persons had any income in a particular year. The income of employees is used to calculate the hourly wage. These databases contain also information on the branch of industry in which a person is employed.

These data are combined with the Personal Record Database (Basisregistratie personen (BRP)) to see if persons are still resident of the Netherlands and the Basisregistratie Onderwijs (BRON) to detect if persons are enrolled in education (again).

Vacancies

Statistics Netherlands does have information on the number of vacancies in the different branches of industry. This information however, is gathered from enterprises and therefore can only be detailed by characteristics of these enterprises e.g. branch of industry, size of the enterprises. At this point there is no information on the vacancy itself (occupation, level and field of education). So, these data cannot be linked to security related occupations and education in security programmes. In this study these data are not taken into account.

Classifications

The occupations in which the employed persons work are classified by the International Standard Classification of Occupations 2008 (ISCO 2008) at unit group level. From this list of occupations the security related occupations are selected. For this study they are further classified as 'mainly' or 'partly' security related and by type (Engineering, Organization and government, Security, Legal and Social work) (see annex III).

The security programmes in vocational and tertiary education are selected at the most detailed level, namely at the level of the individual programmes. For vocational education this is the list of CREBO-codes (see annex II). For tertiary education this is the list of CROHO-codes (see annex I). These selected security programmes are also further classified as 'mainly' and 'partly' security related and by type (Engineering, Organization and government, Security, Legal and Social work).

The educational background of the employed persons is classified according to the International Standard Classification of Education (ISCED-F 2013) at detailed field level. There is a link between the very detailed CREBO- and CROHO-codes and these detailed fields from the ISCED-F 2013. Based on this link all detailed fields where one or more CREBO- and/or CROHO-codes were selected as security related, are classified as security related. Again, for this study the security related educations are further classified as 'mainly' or 'partly' security related and by type (Engineering, Organization and government, Security, Legal and Social work) (see annex IV).

Glossary

Employee
A person who makes arrangements in a collective agreement for labour purposes and who is being paid in return.

Employed persons
People who have paid work.

Field of education
The fields of education as defined in the International Standard Classification of Education (ISCED-F 2013) and used to classify the educational background of the employed persons is based on the highest level of education attained.

Highest level of education attained
The highest level of education for which a certificate is obtained, or the highest level of education which is completed (but where a certificate is not applicable). Or, if an education is not yet completed, the level of education necessary to qualify for this education.

Level of education
Lower education: This includes primary education, pre-vocational education, junior general secondary education (first three grades of HAVO and VWO) and vocational education to the assistant level (mbo-1).
Intermediate education: This includes senior general secondary education (havo, vwo), the basic vocational (mbo-2), the vocational professional track (mbo-3) and the vocational middle-management and specialist track (mbo-4).
Higher education: This includes all education at the tertiary level, i.e. associate degree programmes, professional and academic bachelor and master degrees and programmes leading to the award of an advanced research qualification.

Median hourly wage
The hourly wage within a distribution for which half of the persons earn less and half of the persons earn more (the middle hourly wage). This is different from the average hourly wage.

Self-employed person

A person who works for his/her own account and risk in an own company or practice (self-employed entrepreneur), or as an owner-manager, or in the company or practice of a family member (contributing family worker), or as another self-employed person (for example in an independent profession).

Work

Work as an employee and/or self-employed.

Co-workers

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