Remuneration of medical specialists

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Remuneration of medical specialists

An international comparison

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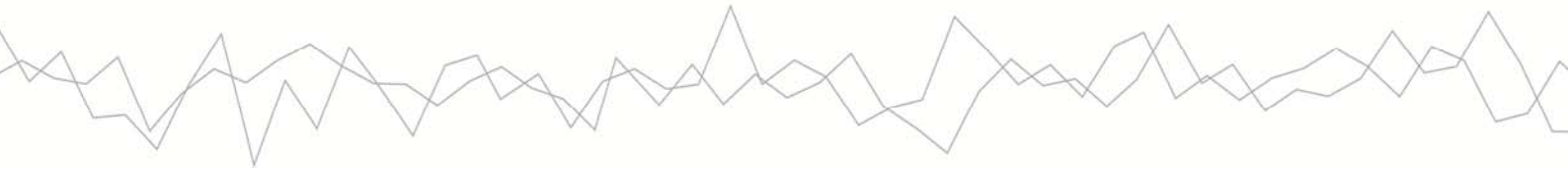

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Summary

The Ministry of Health, Welfare and Sport in the Netherlands wants to know how the incomes of medical specialists in the Netherlands compare with those of medical specialists in other European countries. To answer this question, the incomes of Dutch medical specialists were compared with those of their colleagues in five neighbouring countries that made recent OECD figures on the remuneration of medical specialists available: Belgium, Denmark, France, Germany and the United Kingdom (UK).

According to the OECD, the incomes of self-employed medical specialists in the Netherlands are among the highest in the world. A comparison based on the OECD figures is not reliable, however, as gross income measurements differ extensively by country. For this study, 2009 OECD figures were taken as a starting point and corrected for differences in measurement. These corrections were based on information and additional data provided by experts of renowned research institutes in the countries under investigation.

For the Netherlands, 2009 was a special year, because of the introduction of a new payment system. Therefore, an additional estimation has been made of the income of Dutch doctors in 2012.

Differences between countries

Payment systems

In four of the six countries under investigation (i.e. Denmark, England, France and Germany), all medical specialists working within hospitals are salaried. In Denmark and England, few medical specialists are self-employed (6% and 4%, respectively). They have a private practice outside the hospital. In Germany and France, a large number of medical specialists have a private practice outside the hospital (41% and 51% respectively).

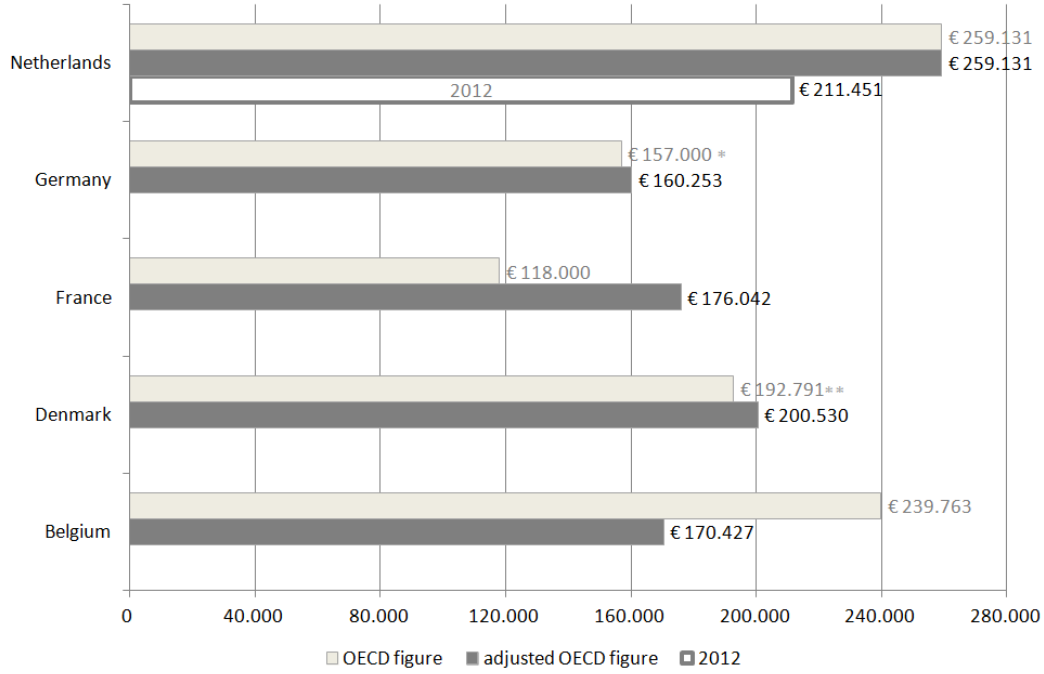
In the Netherlands and Belgium, a large number of medical specialists are self-employed, but, as opposed to the other countries, they are self-employed while they are working within the hospital. In Belgium, it is common to work as a self-employed medical specialist in the hospital. In the Netherlands, there is a mix of self-employed and salaried doctors in the hospital. In both countries, all medical specialists in academic hospitals are salaried. On the whole, 74% and 43% of medical specialists in Belgium and the Netherlands, respectively, are self-employed.

The difference between salaried and self-employed doctors is not clear. In England, around 50% of the salaried doctors also work in a private practice. In Belgium, 7% of medical specialists are both salaried and self-employed; in the Netherlands, this is 19%. They are included in the figures of salaried specialists. In France, self-employed doctors working outside the hospital also often work one day a week (on a salary) in the hospital.

Self-employed specialists

The figures for self-employed specialists deviate in various ways from the OECD definition. The French figure refers to net income, instead of gross income. In Belgium and France, income from extra billing above the regulated fees is excluded. In France, some self-employed specialists are also salaried; these salaries are not included in the income figures of the OECD. On the other hand, OECD figures for Belgium still include practice costs, whereas these are excluded in all other countries. Figure S.2 illustrates the OECD figures, as well as the figures corrected for the mentioned deviations from the OECD definition. For England, there are no figures on the income of the few doctors that only work in private hospitals.

Figure S.1 Gross income of self-employed specialists, per person per year, in 2009 Euros



*2007 **2008

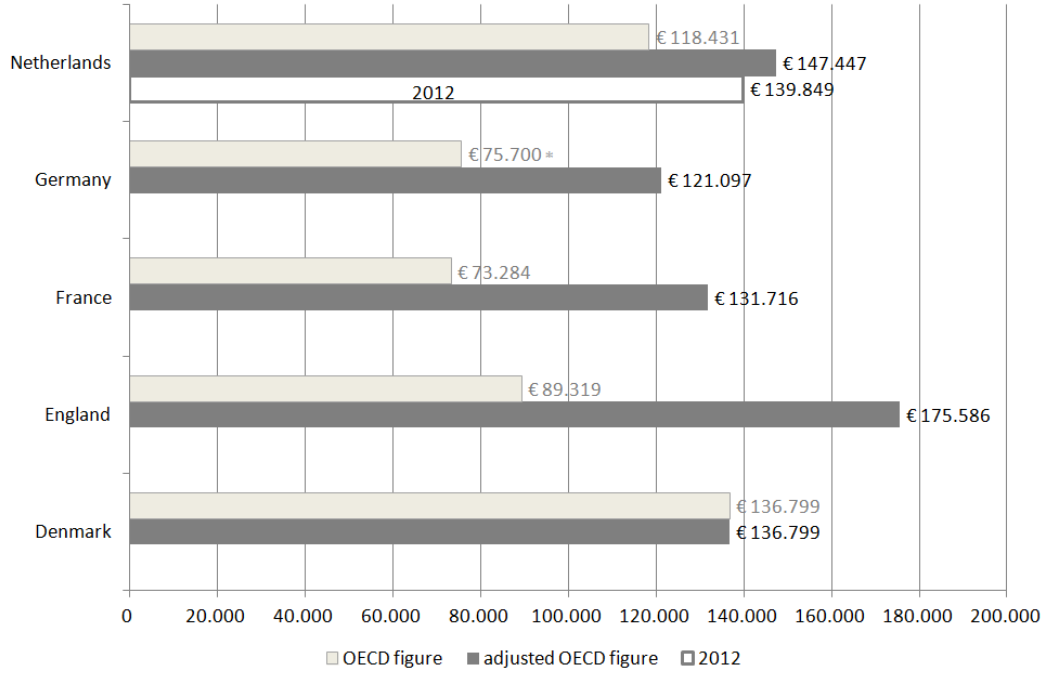
Figure S.1 illustrates that in 2009, Dutch doctors earn more than their colleagues in Germany, France, Denmark and Belgium. This is the case before and after the adjustment for deviations from the OECD definition. The income of the French doctors is adjusted upwards, from net to gross income, including extra billing and extra income from salaried work in hospitals. The income of the Belgian specialists is adjusted downwards by excluding practice costs and upwards by including extra billing.

For the Dutch, 2009 was a special year for self-employed doctors. Their income increased rapidly in 2008 and 2009 because of a change in the payment system. The government decreased the DRG-rates in 2010 and 2011 and introduced a revenue ceiling (a maximum budget) in 2012 to contain costs. The income of medical specialists in 2012 is estimated at around €211,500. As incomes in other countries will have risen from 2009 onwards, the income differences with the other countries will have narrowed.

Salaried specialists

For salaried specialists, the OECD figures for England and Germany include physicians in training. Therefore, the figures for these countries are underestimated. France and Germany include the salaries of GPs (General Practitioners) in their numbers. Moreover, the numbers for French specialists are net income instead of gross, also resulting in an underestimation. On top of this, England, Germany and the Netherlands do not include income from private practice. Figure S.1 presents the OECD figures and the figures adjusted for the mentioned deviations from the OECD definition. For Belgium, there is no figures about the gross income of salaried medical specialists.

Figure S. 2 Gross income salaried specialists, per full time equivalent per year, in 2009 Euros



*2006

Figure S.2 shows that the Danish and the Dutch salaried specialists earn much more than specialists in Germany, France and England, according to the OECD figures. Excluding specialists in training (England and Germany) and GPs (Germany), including taxes (France) and extra income from private practice (England, Germany and the Netherlands), it was determined that the English salaried specialists have the highest income. The reason for this is that they top up their salaries with income from work in the private sector.

The income of Dutch doctors will decrease to around €140,000 in 2012, because salaried doctors that also work in a private practice were confronted with a revenue ceiling for self-employed doctors in 2012.

Strong correlation between gross income and the number of doctors

There is a strong correlation between gross income (averaged over self-employed and salaried doctors) in countries and the number of doctors. More specifically, the more doctors there are,

the lower is their income. English and Dutch doctors earn more than the doctors in the other countries in the study. In England, there are 0.91 medical specialists per 1,000 inhabitants; in the Netherlands, it is 0.98. In Germany and Denmark, the countries with the lowest incomes for medical specialists, there are 2.4 and 2.3 medical specialists, respectively, per 1,000 inhabitants. Higher productivity explains part of the correlation. Doctors in the Netherlands work more hours than their colleagues in Denmark and are also most likely to be more productive per hour, because they are self-employed more often. German doctors work as many hours as Dutch doctors. They are also just as productive per hour as the Dutch doctors; however, they earn substantially less. Another explanation might be that a low number of doctors leads to a high negotiation power, and therefore, higher prices and associated incomes.

Other factors, such as the composition of the workforce, the gate keeping role of GPs, if the production of the physicians in training accrues to the hospital or the medical specialist, and differences in education, do not seem to have a significant influence on the earnings of medical specialists.

Differences within countries

Large differences in income exist between doctors within countries.

- Self-employed doctors earn more than salaried doctors. In the Netherlands, in 2009, self-employed doctors earned, on average, 1.8 times the average gross income of a (primarily) salaried doctor. If self-employed doctors pay more taxes and premiums than salaried doctors the differences in net income are smaller. In the Netherlands, self-employed doctors pay more premiums for disability insurance and old age pensions, but less taxes than salaried doctors. On the whole, the burden of taxes and premiums is about the same for self-employed and salaried doctors with the same gross income.
- Within the group of self-employed doctors, income differs with specialism. Radiologists and anaesthesiologists are the highest earners in most countries, while psychiatrists and paediatrics usually earn least. In France, a radiologist earns 3.5 times as much as a psychiatrist.
- Within the group of salaried doctors, income differs with the hierarchical level. Doctors on the highest level in Germany earn 3.1 times the income of doctors on the lowest level. In addition, large differences exist between salaried doctors that are also self-employed and those that only have an income from salary. In England, a medical specialist that also works in private practice earns 1.9 times the income of a doctor not working in the private sector.

Samenvatting

Het Ministerie van Volksgezondheid. Welzijn en Sport (VWS) in Nederland wil weten hoe de inkomens van Nederlandse medisch specialisten zich verhouden tot die van hun collega's in andere Europese landen. Om hierin inzicht te krijgen heeft SEO Economisch Onderzoek de inkomens van Nederlandse medisch specialisten vergeleken met die van hun collega's in vijf buurlanden waarvoor recente OESO cijfers beschikbaar waren: België, Denemarken, Frankrijk, Duitsland en het Verenigd Koninkrijk.

Volgens de OESO behoren de inkomens van Nederlandse vrijgevestigde medisch specialisten tot de hoogste ter wereld. De vergelijking op basis van de OESO-cijfers is echter niet betrouwbaar omdat de manier waarop het bruto-inkomen wordt gemeten in deze landen verschilt. Dit onderzoek neemt de OESO-cijfers als uitgangspunt en corrigeert vervolgens voor verschillen in de definities. De correcties zijn gemaakt op basis van informatie en aanvullende data geleverd door experts van gerenommeerde onderzoeksinstituten in de onderzochte landen.

Voor Nederland was 2009 een bijzonder jaar. Daarom is voor Nederland ook een schatting gemaakt van het inkomen van medisch specialisten in 2012.

Verschillen tussen landen

Bekostigingssystemen

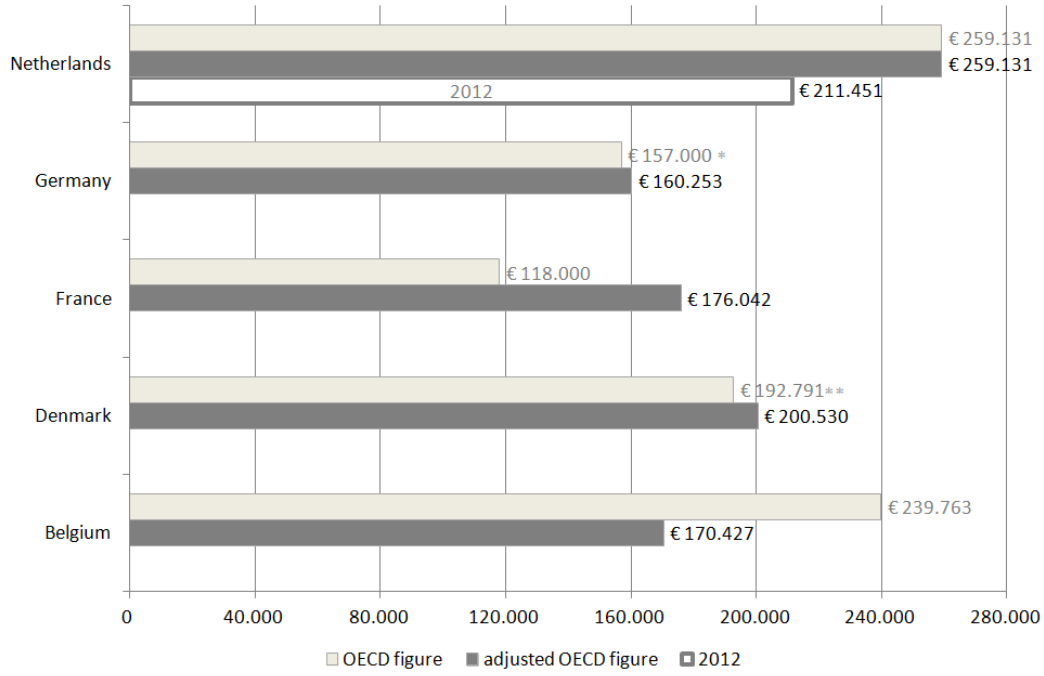
In vier van de zes landen (Denemarken, Engeland, Frankrijk en Duitsland) zijn alle specialisten die in een ziekenhuis werken in loondienst. In Denemarken en Engeland is slechts een klein deel van de medisch specialisten vrijgevestigd (respectievelijk 6% en 4%). Zij hebben een eigen praktijk buiten het ziekenhuis. In Duitsland en Frankrijk heeft een groot deel van de medisch specialisten een eigen praktijk buiten het ziekenhuis (respectievelijk 41% en 51%). Ook in Nederland en België is een groot deel van de medisch specialisten vrijgevestigd, maar, in tegenstelling tot de andere landen, werken zij vaak in het ziekenhuis. In België is het gebruikelijk om als vrijgevestigd medisch specialist in het ziekenhuis te werken. Nederland kent een mix van vrijgevestigden en artsen in loondienst in het ziekenhuis. In beide landen zijn de medisch specialisten in academische ziekenhuizen in loondienst. In totaal is 74% van de Belgische en 43% van de Nederlandse artsen vrijgevestigd.

Er is vaak overlap tussen loondienst en vrije vestiging. Zo heeft in Engeland ongeveer 50% van de artsen in loondienst ook een eigen praktijk. In België is 7% van de medisch specialisten zowel in loondienst als vrijgevestigd en in Nederland gaat het hier om 19% van de medisch specialisten. De inkomens van deze artsen zijn meegeteld bij de cijfers voor specialisten in loondienst. In Frankrijk werken vrijgevestigde artsen ook vaak één dag per week (in loondienst) in het ziekenhuis.

Medisch specialisten in vrije vestiging

De cijfers voor vrijgevestigde specialisten wijken op verschillende manieren af van de OESO-definitie. Het Franse inkomen betreft netto- in plaats van bruto-inkomen en in België en Frankrijk zijn de extra opbrengsten uit declaraties met tarieven boven de gereguleerde tarieven niet meegenomen. Daarnaast is in Frankrijk een aantal vrijgevestigde specialisten ook in loondienst. Deze salarissen zijn niet meegeteld in de inkomenscijfers van de OESO. Aan de andere kant zitten de praktijkkosten nog in het OESO-cijfer voor België, terwijl deze in de andere landen niet zijn meegenomen. Figuur 2 geeft de bruto-inkomens van vrijgevestigde specialisten zowel op basis van de oorspronkelijke OESO-cijfers als de cijfers gecorrigeerd voor bovenstaande afwijkingen. Voor Engeland zijn er geen cijfers over de inkomsten van het kleine aantal artsen dat alleen in private ziekenhuizen werkt.

Figuur S1 Bruto inkomen vrijgevestigde specialisten, per persoon per jaar, in 2009 euro's



*2007 **2008

Figuur 2 laat zien dat, zowel voor als na correctie voor afwijkingen van de OESO-definitie, de Nederlandse artsen in 2009 meer verdienden dan hun collega's in Duitsland, Frankrijk, Denemarken en België. De inkomsten van de Franse artsen zijn naar boven bijgesteld, van netto- naar bruto-inkomen, inclusief aanvullende declaraties en extra inkomsten uit arbeid in loondienst. Het inkomen van Belgische specialisten is naar beneden bijgesteld door aftrek van de praktijkkosten en naar boven vanwege de aanvullende declaraties. Hun uiteindelijke aangepaste inkomen is lager dan het OESO-cijfer.

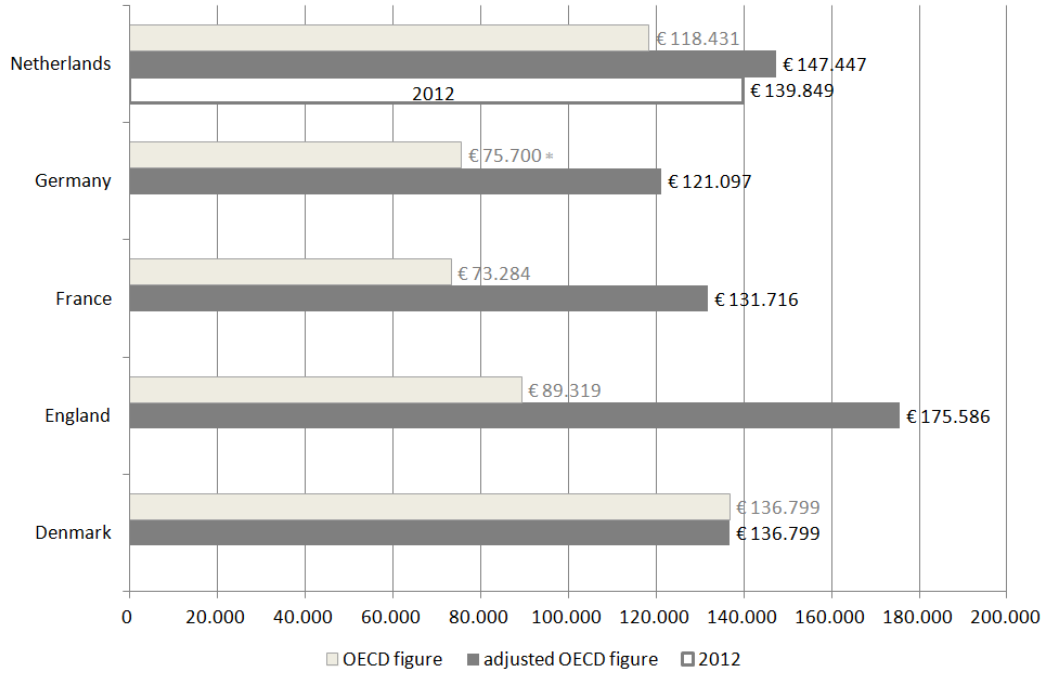
Voor Nederlandse artsen was 2009 een bijzonder jaar. Hun inkomen steeg in de jaren 2008 en 2009 sterk als gevolg van een verandering in het bekostigingssysteem. In 2010 en 2011 zijn de DBC-tarieven verlaagd en in 2012 is een omzetplafond ingesteld om de kosten te beheersen. Het inkomen van medisch specialisten in 2012 is naar schatting ongeveer € 211.000. Omdat de

inkomens in de andere landen vanaf 2009 waarschijnlijk zijn gestegen, zullen de inkomensverschillen tussen Nederlandse en buitenlandse specialisten kleiner zijn geworden.

Medisch specialisten in loondienst

De OESO-cijfers voor Engelse en Duitse artsen in loondienst bevatten ook artsen in opleiding. De inkomens van medisch specialisten in deze landen worden daarom onderschat. De cijfers voor Frankrijk en Duitsland bevatten ook de inkomens van huisartsen, die vaak minder verdienen dan medisch specialisten. De inkomens voor Franse specialisten zijn bovendien netto- in plaats van bruto-inkomen, wat ook een onderschatting geeft. Daarnaast zijn de inkomsten uit private werkzaamheden in Engeland, Duitsland en Nederland niet meegenomen. Figuur 1 toont de oorspronkelijke OESO-cijfers en de cijfers gecorrigeerd voor bovenstaande afwijkingen van de OESO-definitie. Voor België zijn er geen cijfers over het bruto-inkomen van medisch specialisten in loondienst.

Figuur S.2 Bruto inkomen specialisten in loondienst, per fte per jaar, in 2009



*2006

Figuur 1 laat zien dat op basis van de oorspronkelijke OESO-cijfers Deense en Nederlandse specialisten in loondienst veel meer verdienen dan specialisten in Duitsland, Frankrijk en Engeland. Als specialisten in opleiding (Engeland en Duitsland) en huisartsen (Duitsland) niet meegenomen worden en belastingen (Frankrijk) en extra inkomsten uit de eigen praktijk (Engeland, Duitsland en Nederland) wel, dan blijkt dat Engelse specialisten het hoogste inkomen hebben. Dit komt omdat zij hun salarissen aanvullen met werk in de particuliere sector.

De Nederlandse specialisten in loondienst die deels als vrijgevestigde werken zijn in 2012 ook geconfronteerd met het omzetplafond voor vrijgevestigde specialisten. Hun inkomen zal als gevolg van deze maatregel zijn gedaald tot naar schatting € 140.000 .

Sterke samenhang tussen bruto-inkomen en het aantal artsen

Er is een sterke samenhang tussen de bruto-inkomsten (gemiddeld over vrijgevestigden en artsen in loondienst) en het aantal artsen: hoe meer artsen, hoe lager het inkomen. De Engelse en Nederlandse artsen verdienen meer dan de artsen in de andere onderzochte landen. In Engeland zijn er 0,91 medisch specialisten per 1.000 inwoners, en in Nederland 0,98. In Duitsland en Denemarken, de landen met de laagste inkomens, zijn er respectievelijk 2,4 en 2,3 medisch specialisten per 1.000 inwoners. Een hogere productiviteit verklaart een deel van deze samenhang. Artsen in Nederland werken meer uren dan hun collega's in Denemarken en zijn waarschijnlijk ook productiever per uur omdat ze vaker vrijgevestigd zijn. De Duitse artsen werken echter net zoveel uren en zijn vermoedelijk net zo productief per uur als de Nederlandse artsen, maar verdienen veel minder. Een andere verklaring kan zijn dat artsen meer onderhandelingsmacht hebben in landen waar relatief weinig artsen zijn. Dit leidt tot hogere tarieven en hogere inkomens.

Andere factoren zoals de verdeling naar leeftijd en geslacht van specialisten, de poortwachterrol van de huisarts en verschillen in de opleiding lijken weinig invloed te hebben op het inkomen van medisch specialisten.

Verschillen binnen landen

Er zijn grote verschillen in inkomen tussen artsen binnen landen.

- Vrijgevestigde artsen verdienen meer dan artsen in loondienst. In Nederland was het bruto inkomen van vrijgevestigden in 2009 gemiddeld 1,8 keer meer dan het bruto inkomen van een arts die (voornamelijk) in loondienst was. Als vrijgevestigde specialisten meer belasting en premies betalen dan specialisten in loondienst dan zijn de verschillen in netto inkomens kleiner dan de verschillen in bruto inkomens. In Nederland is er weinig verschil in het bruto-netto traject tussen vrijgevestigden en specialisten in loondienst: vrijgevestigde artsen betalen meer premies maar minder belasting dan specialisten in loondienst.
- Binnen de groep vrijgevestigden verschilt het inkomen sterk tussen verschillende specialismen. Radiologen en anesthesisten zijn in de meeste landen degenen met het hoogste inkomen, terwijl kinderartsen en psychiaters juist het minst verdienen. In Frankrijk verdient een radioloog gemiddeld 3,5 keer zoveel als een psychiater.
- Binnen de groep van artsen in loondienst verschilt het inkomen met het hiërarchische niveau. In Duitsland verdienen artsen op het hoogste niveau gemiddeld 3,1 keer zoveel als artsen op het laagste niveau. Daarnaast zijn er ook grote verschillen tussen artsen die alleen in loondienst werken en artsen die ook deels als vrijgevestigde werken. In Engeland verdient een medisch specialist die ook in een eigen praktijk werkt 1,9 keer zoveel als een arts die alleen in loondienst werkt.

1 Introduction

The Ministry of Health, Welfare and Sport in the Netherlands wants to know how the incomes of medical specialists in the Netherlands compare to those of their colleagues in other European countries. To answer this question, the incomes of Dutch medical specialists are compared with those of their colleagues in five neighbouring countries: Belgium, Denmark, France, Germany and the UK.

To compare the incomes of medical specialists, the figures the OECD publishes about the gross income of medical specialists in 2009 are taken as a starting point. These figures, however, are measured in different ways and do not always represent total gross income. In addition, for salaried medical specialists, extra income from a private practice is not always included. For self-employed medical specialists, the figures sometimes refer to revenue instead of income. To correct for these differences, information has been gathered by national researchers in the countries under study. Subsequently, the OECD figures are adjusted to make them comparable.

The next chapter compares the incomes of medical specialists between countries. It presents the OECD figures and the adjusted figures. Information is also provided about working hours and the difference between gross and net income, to place the income differences in perspective. Chapter 3 describes the income differences within countries. Chapter 4 tries to explain the differences in income of the medical specialists between countries.

2 Income differences between countries

2.1 OECD definition

The OECD gathers data from OECD-countries on the remuneration of medical specialists. Medical specialists are defined as physicians who have specialised and work in areas other than general practice. Physicians in training should be excluded from the medical specialists category. In addition, the figures on remuneration should refer to the average *gross* annual income.

The medical specialist income figures should include:

- The value of any social contributions, (income) taxes etc., payable by the employee
- All gratuities, bonuses, overtime compensation and 'thirteenth month payments'
- Any supplementary income

And should exclude:

- For salaried medical specialists: social contributions payable by the employer
- For self-employed medical specialists: practice expenses
- Any physicians who are still in training to become a specialist
- Physicians who have specialised in general practice (GP)

The actual figures provided by the various countries depend on availability. Therefore, they often deviate from this OECD definition.

The next section describes the main features of the payment systems of medical specialists in the six countries. Section 2.3 provides the OECD figures and the adjusted figures for self-employed medical specialists and Section 2.4 does the same for salaried medical specialists. Section 2.5 summarises. Appendix A contains a detailed description of the adjustment procedure.

As the OECD figures for the UK refer only to England, all figures are only reported for England.

2.2 Payment systems

In four of the six countries under investigation (i.e. Denmark, England, France and Germany), all medical specialists working within hospitals are salaried. In Denmark and England, few medical specialists are self-employed (6% and 4%, respectively). They have a private practice outside the hospital. In Germany and France, a large number of medical specialists have a private practice outside the hospital (41% and 51% respectively).

In the Netherlands and Belgium, a large number of medical specialists are self-employed, but, as opposed to the other countries, they are self-employed while they are working within the hospital. In Belgium, it is common to work as a self-employed medical specialist in the hospital. In the Netherlands, there is a mix of self-employed and salaried doctors in the hospital. In both

countries, all medical specialists in academic hospitals are salaried. On the whole, 74% and 43% of medical specialists in Belgium and the Netherlands, respectively, are self-employed.

Self-employed medical specialists are paid fee for service. The service can be a Diagnosis Related Group (DRG), but can also be an activity (e.g. a visit or an operation).

The difference between salaried and self-employed doctors is not clear-cut. In England, around 50% of the salaried doctors also work in a private practice. In Belgium, 7% of medical specialists are both salaried and self-employed; in the Netherlands, this is 19%. As they work more than half time on a salary, they are included in the figures of salaried specialists. In France, self-employed doctors working outside the hospital also often work one day a week (on a salary) in the hospital to remain in contact with their colleagues.

Table 2.1 Payment systems and number of medical specialists in 2009

	Primarily salaried	Primarily self-employed	Total number of medical specialists
Netherlands	57%*	43%	16,210
Germany	59%	41%	187,825
France	49%	51%****	108,061*****
England	96%**	4%	47,008
Denmark	94%	6%	13,190
Belgium	26%***	74%	18,852

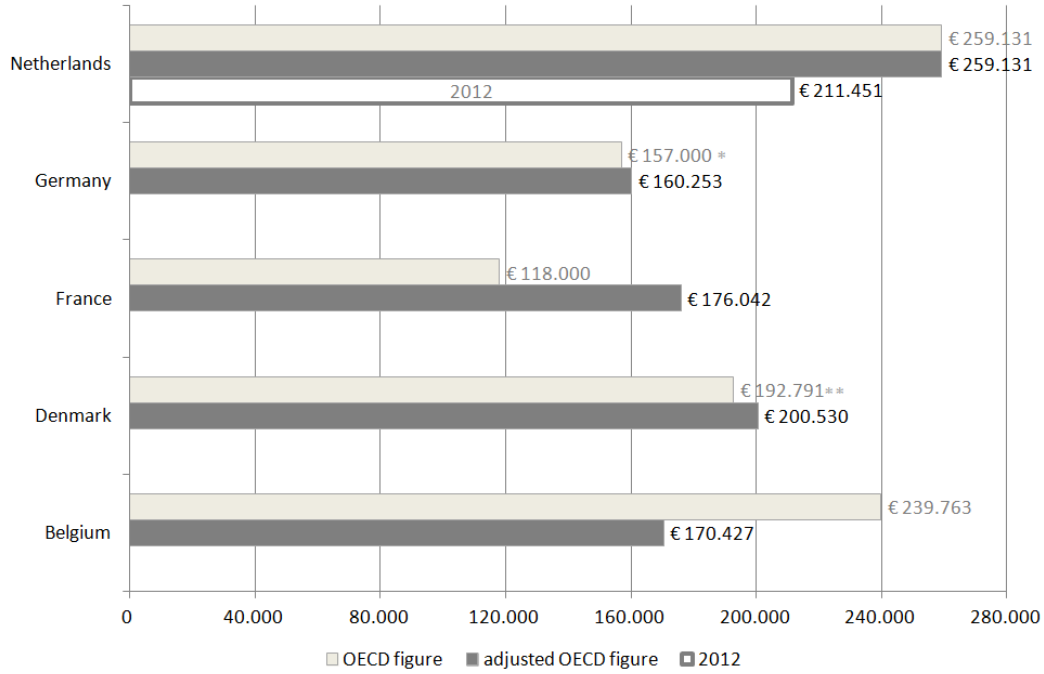
* including 19% of doctors which have income from both salary and fee for service
** including around 50%-60% of doctors which have income from both salary and fee for service
*** including 7% of doctors which have income from both salary and fee for service
**** including 11% of doctors which have income from both salary and fee for service
***** 2011
Sources: See Appendix B

2.3 Self-employed specialists: Dutch doctors earn the highest incomes

The figures for self-employed specialists deviate in various ways from the OECD definition. The French figure, once again, refers to net income instead of gross. In Belgium and France, extra billing is excluded. For Belgium, this means that supplemental income (e.g. for sleeping in a single room instead of a shared room) are excluded. In France, medical specialists in the so called "secteur 2" can set their own fees.[1] The part of the fee above the standard fee, which is not reimbursed by health insurance, is not included in the income figure. On the other hand, OECD figures for Belgium still include practice costs, whereas these are excluded in all other countries. In France, some self-employed specialists are also salaried. These salaries are not included in the income figures of the OECD.[2] Figure 2.1 shows the OECD figures as well as the figures corrected for the mentioned deviations from the OECD definition. For England, there are no figures on the income of the few doctors that only work in private hospitals.

1 Secteur 1 doctors apply the official rates negotiated with the social security system. Secteur 2 doctors, have signed an agreement with the national health insurance system but are free to set their own rates
2 http://www.ecosante.fr/DEPAFRA/343.html

Figure 2.1 Gross income of self-employed medical specialists, per person per year, in 2009 Euros



*2007 **2008
Sources: OECD 2012, calculations SEO Economic Research. See Appendix A for details.

Figure 2.1 illustrates that, before and after the adjustment for deviations from the OECD definition, Dutch doctors in 2009 earned more than their colleagues in Germany, France, Denmark and Belgium. The income of the French doctors is adjusted upwards, from net to gross income, including extra billing in 'secteur 2' and extra income from salaried work in hospitals. The income of the Belgian specialists is adjusted downwards by excluding practice costs and upwards by including extra billing.

For Dutch doctors, 2009 was a special year. Their income increased rapidly in 2008 and 2009, because of a change in the payment system. In 2007, they received a lump sum payment, independent of production. In 2008, performance pay was introduced; they received a payment dependent on the production of DRGs (in fact, the Dutch equivalent: DBCs: Diagnose Behandel Combinaties). Their income rose from €186,999 in 2006 and €205,059 in 2007 to €235,105 in 2008 and €259,131 in 2009. Errors in the DRG-rates, and more registered production, led to the rise in income. The government decreased the DRG-rates in 2010 and 2011 and introduced a revenue ceiling (a maximum budget) in 2012 to contain costs. The income of medical specialists in 2012 is estimated at approximately €211,500 (See Box 2.1).

Box 2.1 Estimation income for self-employed medical specialists in the Netherlands in 2012

Total revenue for self-employed medical specialists working in hospitals in the Netherlands was €2,239 billion in 2009. The revenue ceiling in 2012 is set on €1,939. This is a reduction of 13.4%[3]. The decreased income is 86.6% (100-13.4%) of the income in 2009. As the number of self-employed specialists rises, the decrease in total revenue is bigger: the smaller budget has to be divided by more doctors. The number of self employed specialists rose on average with 2% in the period 2006-2010, see Table below. Not all self-employed specialists fall under the revenue ceiling. It is assumed that the growth rate of the number of specialists under the revenue ceiling is equal to the growth rate of specialist not under the revenue ceiling.

	2006	2007	2008	2009	2010	Average growth rate 2006-2010
	number					
Salaried	5,310	5,615	5,910	6,210	6,765	
Self-employed	6,650	6,705	6,885	6,985	7,200	
Both salaried and self-empl.	2,930	2,925	2,895	3,015	3,040	
Total	14,890	15,245	15,690	16,210	17,005	
		Growth rate				
Salaried		1.06	1.05	1.05	1.09	1.06
Self-employed		1.01	1.03	1.01	1.03	1.02
Both salaried and self-empl.		1.00	0.99	1.04	1.01	1.01
Total		1.02	1.03	1.03	1.05	1.03

Source: Statistics Netherlands

If the number of specialists increases by 2% per year in the period of 2009-2012, this will lead to 6.12% more doctors in 2012 compared to 2009. The increase in doctors will lead to an extra decrease in income: 5.76% (1/1,0612). An extra decrease of 5.76% of 86.6% of the income in 2009 leads to an income of 81.6% of the original income. The total decrease is: 100%-81.6%=18.4%. It is assumed that practice costs are a fixed percentage of revenue. A total decrease of 18.4% of the income of €259,131 leads to an estimated income in 2012 of €211,451.

As incomes in other countries will have risen from 2009 onwards, the income differences with the other countries will have narrowed down. It is likely that the gross income of the Danish self-employed doctor will come close to the gross income of the other Dutch doctors. However, this is a very small group in Denmark. Moreover, the prices in Denmark are higher than in the Netherlands.

Table 2.2 shows that, when corrected for purchasing power, Danish doctors earn less than the doctors in other countries. However, Dutch doctors still have the highest income, even when taking into account the decrease in income of the Dutch doctors in 2012. Dutch doctors in 2009 earned 6.5 times the average wage in the Netherlands. This is far more than in other countries. Taking into account the decrease in income in 2012, the Dutch doctors (5.3 times the average wage) and the French doctors (5.4 times the average wage) earn approximately the same.

[3] Source: NZa 2011. The figure of €2,215 billion in this document (p.66) was based on figures from nearly all hospitals (see p. 68). After receiving information from the missing hospitals this figure is adjusted to €2,239 billion, according to the NZa (Dutch Healthcare Authority). The revenue ceiling is not equal to the total budget for all medical specialists (BKZ), see NZa 2011 p.68 and the Appendix in the same document, p. 46.

Table 2.2 Dutch self-employed doctors earn the highest income in 2009

	Gross income of self-employed specialists, per FTE per year, in PPP 2009 Euros	Self-employed gross income times average wage, 2009
Netherlands	259,131 (211,500 in 2012)	6.5 (5.3 in 2012)
Germany	167,540	5.0
France	170,474	5.4
Denmark	159,280	4.0
Belgium	166,751	4.4

PPP=purchasing power parity. The Netherlands =100
Source: figure 2.1 and stat.oecd.org

Do Dutch doctors work more hours for their higher income? The table below illustrates that this is the case. Danish doctors, on the other hand, earn less and also work less hours a week. German doctors work more than French doctors, but earn less. Thus, there is not a one to one relationship between hours worked and income.

Table 2.3 Working hours of primarily self-employed medical specialists: Dutch doctors work the most hours

	Year	
Netherlands	2001[4]	55
Germany	2010	52
France	2012	50
Denmark	2008	43
Belgium	2009	48

Sources: See Appendix B. Comparability is limited, due to differences in measurement.

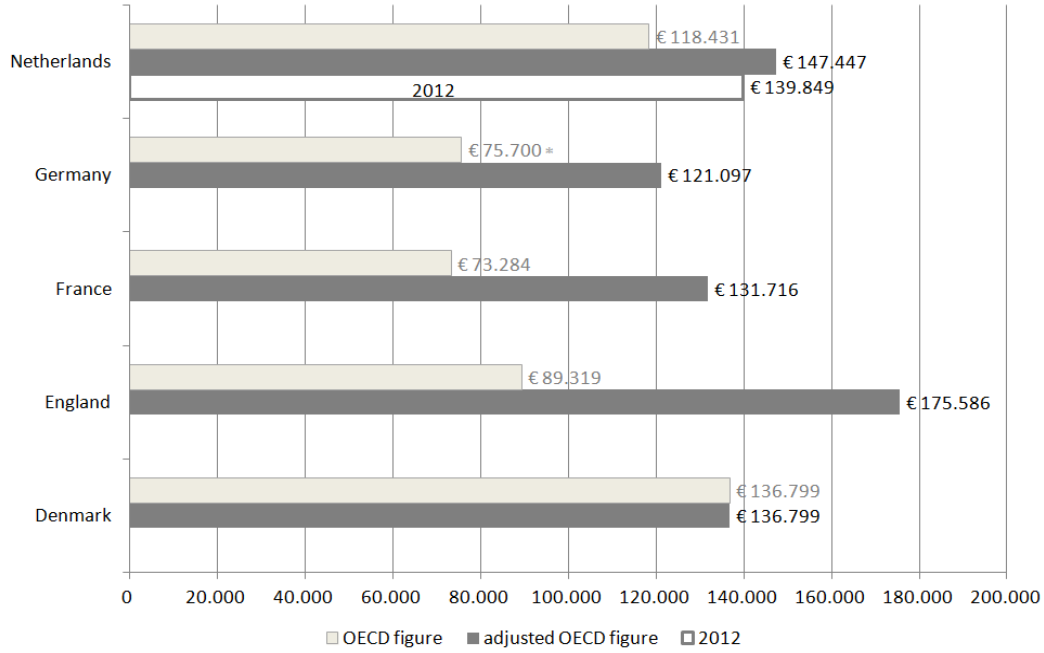
2.4 Salaried specialists: English doctors earn the most

For salaried specialists, the OECD figures for England and Germany include physicians in training (foundation/registrars and Ärzte, respectively). Therefore, the figures for these countries are underestimated. France and Germany's values include the salaries of GPs[5]. Moreover, the numbers for French specialists are net income figures instead of gross, also resulting in an underestimation. On top of this, England, Germany and the Netherlands do not include income from private practice. Figure 2.2 presents the OECD figures and the figures adjusted for the mentioned deviations from the OECD definition. For Belgium, there are no figures about the gross income of salaried medical specialists.

4 A survey in 2010 among doctors confirms the results from the survey in 2001. The median work hours in small hospitals is 50; in large hospitals, it is over 50 (Lagendijk, 2010).

5 OECD documentation (OECD, 2012) reports that for salaried physicians in Denmark, there is no distinction made between GP's and salaried specialists. However, this remark is irrelevant, since Danish GP's are never salaried and are therefore not included in the Danish income figure for salaried specialists.

Figure 2.2 Gross income salaried specialists, per full time equivalent per year, in 2009 Euros



*2006

Sources: OECD 2012, calculations SEO Economic Research. See Appendix A for details.

Figure 2.2 shows that, according to the OECD, the figures for the Danish and Dutch salaried specialists earn much more than specialists in Germany, France and England. By excluding specialists in training (England and Germany) and GPs (Germany) and including taxes (France) and extra income from private practice (England, Germany and the Netherlands), however, the English salaried specialists are found to have the highest income. This is because they top up their salaries with income from work in the private sector.

In the Netherlands Salaried doctors also working in private practice were confronted in 2012 with the revenue ceiling for self-employed doctors. This will have led to a decrease in income, with around €7,500 per year to €140,000 per year, averaged over all salaried doctors. In this figure, the wage increases from 2009-2012 have not been taken into account.

Do English doctors work more hours for their higher income? The table below shows that English doctors work more hours a week than the Dutch, French and Danish doctors. But the German doctors work more hours than English doctors and earn substantially less. The English doctors work 46 hours in the public NHS hospitals and 5 hours in private practice. However, 31% of their income comes from private practice.

Table 2.4 Working hours of primarily salaried full time medical specialists: German doctors work the most

	Year	Contractual hours	Actual hours worked
Netherlands	2001[6]	40-48	47
Germany	2010	40-42	55
France	2012	35	40
England	2006	40	51
Denmark	2008	37	44

Sources: See Appendix B. Comparability is limited due to differences in measurements.

Between countries, there are large differences in the standard of living. Denmark has, on average, a higher price level and higher average wages. Corrected for the purchasing power per Euro in the countries under study, Danish doctors earn less than the doctors in other countries (See Table 2.5). The Danish doctors earn 2.7 times the average wage, which is also less than in other countries. The English doctors earn the most, when salaries are corrected for purchasing power parity and compared with the average wage in the country.

Table 2.5 English salaried doctors earn 5.2 times the average wage in England

	Gross income salaried specialists, per FTE per year, in PPP 2009 Euros	Salaried gross income times average wage, 2009
Netherlands	147,447	3.7
Germany	126,604	3.8
France	127,550	4.0
England	201,331	5.2
Denmark	108,659	2.7

PPP=purchasing power parity. The Netherlands =100
FTE=Full time equivalent
Source: Figure 2.2 and stat.oecd.org

Large differences in the amount of taxes and premiums might cause differences in net income. Taxes and premiums for social insurance (including unemployment, sickness and disability insurance, but excluding pension contributions) together amount to about 37% in England, 40-44% in Belgium, France, and the Netherlands and 52% in Denmark. However, high tax rates also reflect more public facilities. If tax rates are high, this may reduce the need for private spending on, for instance, pensions and healthcare. They might also reflect higher future income (e.g. during unemployment periods) and a higher quality of life. Therefore, to compare the wealth of medical specialists across countries, it is better to compare gross income.

6 A survey in 2010 among doctors indicates that in 2010, the working hours of salaried medical specialists may be higher. The median work hours in non-academic hospitals is 45; in academic hospitals, it is more than 50 (Lagendijk 2010). As more than half of the salaried doctors work in academic hospitals, the average number of hours worked is probably higher than 47.

2.5 All medical specialists: differences are less pronounced

To compare incomes between countries, the income averaged over self-employed and salaried workers is calculated. The comparison of the incomes of primarily salaried doctors is hindered by the fact that there are a lot of doctors which combine a salaried position with working in private practice as self-employed. Therefore, salaried doctors are not quite comparable between countries; the same holds for self-employed doctors.

Table 2.6 illustrates the results. For Belgium, there were no figures available for salaried doctors. An estimated guess was that the difference between salaried and self-employed doctors in Belgium would be more or less the same as, on average, in Denmark, Germany and France. The Netherlands is excluded, because it is an outlier. This leads to an estimated gross income of salaried doctors in Belgium of €123,691.

Table 2.6 Average income in Euros per year

	Salaried	Self-employed	% salaried	Average
Belgium	(123,691)*	170,427	26	158,276
Denmark	136,799	200,530	94	140,623
England	175,586	n.a.	96	175,586
France	131,716	176,042	49	154,322
Germany	121,097	160,253	59	137,151
Netherlands	147,447 (139,849 in 2012)**	259,131 (211,451 in 2012)**	57	195,471 (170,638 in 2012)**

* The average fraction of the salaried income divided by the self-employed income of medical specialists in Denmark, France and Germany multiplied by the income of self-employed medical specialists in Belgium.

** Estimation

Source: See Figures 2.1 and 2.2

Comparing the incomes of all doctors shows that differences in income are less pronounced than when comparing only salaried or only self-employed doctors. The Dutch doctors are still the ones with the highest income, due to the high incomes of the self-employed doctors. Taking into account the decrease in income, with 18.4% from 2009, the average income of doctors in the Netherlands will decrease to €170,000, which is a bit lower than the English doctors.

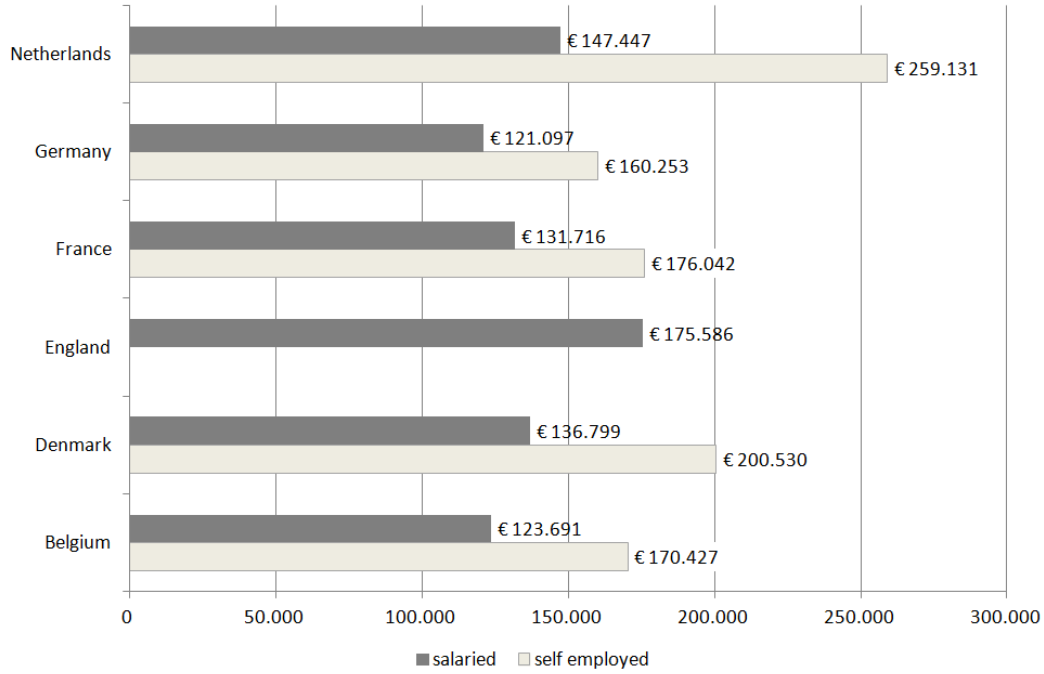
In all countries, self-employed medical specialists earn more than their salaried colleagues. Does this mean that in countries where more doctors are self-employed the average income is higher? The comparison illustrates that incomes are not systematically higher if a higher percentage of doctors is self-employed. The English doctors even earn more than doctors in most other countries, while the majority is salaried. However, a large part of the salaried doctors also work in a private practice; thus, they are partly self-employed. The Danish doctors, on the other hand, earn less than doctors in most other countries and are also almost all salaried. The proportion of salaried doctors in Germany and the Netherlands is about the same, but the Dutch doctors earn substantially more than the German doctors.

3 Income differences within countries

3.1 Self-employed medical specialists earn more than salaried

Comparing the gross incomes of salaried medical specialists with self-employed medical specialists within countries reveals that in all countries under study self-employed doctors earn more than salaried doctors (Figure 3.1).

Figure 3.1 Gross income of salaried and self-employed medical specialists, in 2009 Euros per year



In Germany, France and Denmark, self-employed doctors earn around 30% to 40% more than salaried doctors. In the Netherlands, self-employed doctors earned 76% more than their primarily salaried colleagues. Taking into account the income decrease in 2012 of self-employed doctors, and salaried doctors working also in a private practice, the income differences decrease to 50% (€211,451/€139,849, see Table 2.6).

Differences in working hours

A difference in working hours explains some of the differences between self-employed and salaried medical specialists. In France, self-employed doctors work around 20% more hours per week than salaried doctors. This explains more than half of the differences in gross income. In Germany and Denmark, self-employed medical specialists seem to work about the same number of hours as their salaried colleagues.

Table3.1 Working hours per week

	Year	Primarily salaried	Primarily self-employed
Netherlands	2001	47	55
Germany	2010	55	52
France	2012	40	50
England	2006	51	
Denmark	2008	44	43
Belgium	2009		48

Source: See Appendix B. Comparability is limited, due to differences in measurement. The figure for primarily salaried doctors in the Netherlands is probably underestimated, see Footnote 6.

Self-employed medical specialists produce more services per hour

Self-employed medical specialists work on a fee for service basis. Hence, they have a strong incentive to increase the number of services per hour (and decrease the time per service), whereas salaried medical specialists do not have this incentive. In empirical research, it is systematically found that doctors working on a fee for service basis are more productive than their salaried colleagues (Barro & Beaulieu, 2003). The differences stem from two causes. Not only does a fee for service payment system stimulate production, it also attracts more productive persons. So doctors who think of themselves as highly efficient and productive want to be rewarded for their higher production, and therefore, choose a fee for service position. Moreover, the fee for service payment schedule in and of itself induces higher productivity. If the payment system of salaried doctors is changed into a fee for service scheme, they become more productive (Barro & Beaulieu, 2003). The other way around is also the case: if the payment schedule of the self-employed is changed from fee for service to fixed payment (lump sum), then productivity decreases. If a revenue ceiling is introduced, they will not produce fewer services per hour, but will work fewer hours in order to increase their leisure time.

Differences in taxes and premiums: In the Netherlands on balance small differences

Differences between self-employed and salaried doctors may stem from differences in taxes and premiums. For the Netherlands, a comparison is made between the taxes and premiums of self-employed and salaried specialists with the same net income. On balance these differences appear to be small. In the Netherlands, salaried doctors do not pay a contribution for unemployment and disability insurance. Moreover, in non-academic hospitals, they pay only half of the premium for their old age pension; in academic hospitals, they pay even less (30%). The other part is paid by the hospital. Self-employed doctors have to pay themselves for disability insurance and old age pensions, leading to substantially higher costs. They also have costs due to the goodwill they paid for their practice.[7] On the other hand, self-employed doctors are entitled to tax benefits leading to a lower tax burden than salaried doctors. On balance self-employed doctors pay a little more taxes and premiums than salaried doctors with the same gross income. Table 3.2 illustrates this for a salaried doctor in the highest pay scale and a self-employed doctor with the same net income.[8]

7 The goodwill is the sum self-employed medical specialists in the Netherlands pay to buy a private practice.

8 The highest pay scale in non academic hospitals is € 10,565 gross per month. Including 15%, inconvenience pay and 8% holiday pay this amounts to € 158,000

Table 3.2 Taxes and premiums for salaried and self-employed doctors in the Netherlands in 2012 are about the same (Euros per year)

	Salaried	Self-employed
Gross revenue		**193,400**
Collective practice costs		–15,500
Individual practice costs		–12,000
Gross income	**158,000**	**165,900**
Pensions	–18,074	–34,300
Disability insurance		–10,500
Loss of interest goodwill		–2,625
Taxes an premiums	–66,125	–44,669
Net income	**73,801**	**73,806**

Source: calculations Hans Bénard (Kema van den Berk praktijkadviseurs). See Appendix C for details.

Table 3.2 also shows that in order to earn a net income of €73,806, a self-employed doctor needs a gross revenue of €193,400. Self-employed doctors pay collectively (the partnership of self-employed doctors) around 8% of their gross revenue to the hospital (€15,500 per doctor) to compensate the hospital for the practice costs of the partnership (such as the wage costs of the secretary). Individually, doctors pay around €12,000 practice costs, such as costs for conferences, professional literature, accounting and insurance. Thus, a gross revenue of €193,400 leads to a gross income of €165,900 and a net income of €73,806. On the other hand, for salaried doctors, the costs for the hospital are higher than the gross wage. The hospital pays several premiums on top of the gross wage, such as a part of the pension premium (€18,074), employer premiums for unemployment and disability (€4,500), the premium for health care insurance (€4.170) and other expenses like the costs of conferences (€5,500). So, in total, the hospital pays €32,670 on top of the gross wage. The total costs of a salaried doctor for the hospital amounts to €190,244 (€158,000+€32244). The total costs of a salaried doctor can be compared with the net revenue of a self-employed doctor. The collective practice costs are paid by the self-employed doctors to the hospital for costs like the secretary. Salaried doctors also use the services of the secretary. The net revenue of a self-employed doctor is €177,900 (€193,400-€15,500). This is lower than the total wage costs for salaried doctors with the same net income (€190,244).

The calculations in Table 3.2 are based on medical specialists with the same net income. As the gross income of self-employed medical specialists is substantially higher than the income of salaried doctors, their net income is also substantially higher. In Table 3.3, the net incomes of self-employed and salaried doctors are calculated based on the estimated gross income for 2012. For salaried doctors, the net income is calculated based on the income of doctors that do not have any income from a private practice. In 2009, they earned a gross income of €118,000 per year (See Table 2.4). Including a wage indexation of 3% per year, this will amount to a gross salary of €129,000 in 2012. The following table illustrates that a self-employed doctor earns a net income of about 50% more than a salaried doctor without extra income from a private practice.

Table 3.3 Net income for salaried and self-employed doctors in the Netherlands in 2012 (Euros per year)

	Salaried*	Self-employed
Gross revenue		**243,000**
Collective practice costs		–19,500
Individual practice costs		–12,000
Gross income	**129,000**	**211,500**
Pensions	–14,507	–43,300
Disability insurance		–14,000
Loss of interest goodwill		–3,173
Taxes an premiums	–52,900	–59,597
Net income	**61,594**	**91,430**

* Excluding salaried doctors that also work in a private practice

Source: calculations Hans Bénard (Kema van den Berk praktijkadviseurs). See Appendix C for details.

3.2 Income of self-employed specialists differs by specialism

The income of medical specialists differs between countries and between specialties. In general, psychiatry and paediatrics are among the lowest earning specialties. Anaesthesiologists and radiologists receive a much higher pay. Surgeons are usually also among the higher paid specialists, and in Denmark, they even earn more than anaesthesiologists. High earning specialties make about 2-3 times as much money as the lowest earning specialties in most countries. An exception is France, where radiologists earn 3.5 times the salary of psychiatrists. In Belgium and France, the difference between specialties with a lot of patient contact (psychiatry, paediatrics, internal medicine) and technical specialties, such as radiology and surgery, is striking. One explanation offered by van den Oever (2008) is that fees were never thoroughly revised. Since technical developments decreased time spent on medical acts, the income of specialists that perform a lot of technical procedures increased in comparison to other doctors.

Table 3.4 Self-employed radiologists are top earners. Gross income of self-employed medical specialists in 2009.

	Psychiatry	Paediatrics	General surgery	Anaesthesiology	Radiology
Belgium	€172,943	€177,474	€233,224	€276,456	€334,632
Denmark	€156,932	€177,977	€246,613	€210,788	n.a.
France*	€62,080	€71,060	€130,060	€187,300	€217,070
Germany	€122,486	€127,590	€142,900	n.a.	€233,744
Netherlands	€ 129,000	n.a.	n.a.	€353,000	€421,000

* Net income

Income figures are stated in 2009 Euros using the growth rate of average wages per country (stats.oecd.org).

Sources: Belgium: Swartenbroekx et al. (2012). Denmark: Danish Regions (2009). France: Bellamy (2011). Germany: Statistische Bundesamt (2009) Netherlands; Statistics Netherlands (2012).

In the Netherlands, radiologists and anaesthesiologists earned incomes high above the average income of medical specialists in 2009. In 2012, differences between specialists will have decreased due to the new payment system. In the new system, the maximum budget is set per hospital. Medical specialists themselves have to allocate the budget over the specialists. It seems that in a

lot of hospitals, medical specialists decided to base their allocation on productivity and disutility's. Traditional income differences that cannot be justified by high productivity or high disutility's disappeared in those hospitals.

3.3 Income salaried specialist differs per function

The difference in income between salaried medical specialists in the same country is not driven by their specialty, but by their function profile. An example is England, where consultants earn an average NHS (National Health Service) pay of €134,730 per year in 2009, whereas associate specialists earn €97,926 and staff grade doctors only earn €76,227, on average (own calculations, based on NHC IC 2009)[9]. Since consultants can earn an extra income as self-employed specialists outside the NHS, total earning differences are even larger. On average, consultants earned €60,628 outside the NHS, on average, in 2009 (See Appendix A). Since only 50% of NHS consultants have income from a private practice, this amounts to a €121,256 average extra income for NHS consultants who have an income from a private practice. Associate specialists and staff grade doctors are usually full specialists (meaning that they completed the full specialty education), but may not have been able to obtain consultant-level posts. This primarily occurs because the number of consultant-posts is limited. All non-consultant specialists are only allowed to practice in the NHS under the supervision of a consultant; they are not on any formal training programs.

Another country with a clear hierarchy of salaried specialists is Germany. Right after completing training, a specialist can become a Facharzt in a hospital. After a few years, he/she can continue as an Oberarzt. In this function, he/she is allowed to train young specialists and lead the other doctors. On the top of the pyramid is the Chefarzt. These are usually professors who are responsible for the coordination of work in an entire department of the hospital. The Chefarzt earns a much higher income (€257,000, on average, in 2010) than an Oberarzt (€113,000) or a Facharzt (€82,000) (Thurm, 2011).

In countries where the hierarchy is not so clear cut, there are differences in wages. For example, in the Netherlands, the starting (basic) salary of a specialist working in an academic hospital is €5,334 per month, whereas a professor in a leading function can earn as much as €12,307 (basic) salary per month in 2012. This excludes extra pay for work at nights and on weekends (CAO UMC 2011-2013).

3.4 Summary

Within countries, large differences in income exist between self-employed and salaried doctors. In Germany, France and Denmark, self-employed doctors earn around 30% to 40% more than salaried doctors. In the Netherlands, self-employed doctors earned 76% more than their salaried colleagues. Taking into account the income decrease in 2012 of self-employed doctors in the Netherlands and an income increase of salaried doctors, self-employed doctors in the Netherlands will still earn 50% more than salaried doctors. Differences in income can be

[9] Exchange rates used to express figures in pounds in Euros can be found at stats.oecd.org

explained partly by differences in working hours and productivity per hour. They may also be explained by differences in taxes and contributions. For the Netherlands, however, taxes and contributions do not differ much.

Within the groups of salaried and self-employed doctors, large differences in income exist. Within the group of self-employed doctors, earnings differ by specialism, where psychiatrists earn from €111,901 to €172,943 per year, which is relatively little, compared to radiologists, who earn up to €334,632 per year. Within the group of salaried specialists, earnings differ with the hierarchical level in the hospital. In Germany, a medical specialist of the highest level earns, on average, €257,000; on the lowest level, they earn €82,000.

4 Explanations for differences in income between countries

Fujisawa & Lafortune (2008) attempted to explain the remuneration of medical specialists according to differences in income between countries using the following factors:

- hours worked
- number of doctors per capita
- gate keeping role of GPs
- payment system (self-employed/mixed payment/fee for service payment)

All factors had the expected influence on the income of medical specialists. The more hours specialists worked, the more they earned. The fewer specialists there are per capita, the more they earned. A gate keeping role of general practitioners led to a lower income of medical specialists and self employment.[10] Fees for service or mixed payments led to higher incomes than salaries.

None of Fujisawa & Lafortune's (2008) conclusions were statistically significant. This was due to the limited number of countries for which data were available (only eight). Consequently, the authors stressed that remuneration of medical specialists may be influenced by other factors not included in the analysis.

The numbers of hours worked has been examined in the previous chapters. The Dutch and the English doctors work more hours than doctors in other countries (except Germany) and earn more. The Danish doctors work less hours than doctors in other countries and earn less.

In this chapter, some other factors will be examined. Indicators for the demand for healthcare are summarised in Section 4.1. Section 4.2 deals with the influence of the number of medical specialists and the characteristics of medical specialists by gross income. Section 4.3 examines if differences in payment systems can account for differences in gross income between countries; Section 4.4 does the same for differences in medical education. Section 4.5 goes into the influence of the role of the GP on the incomes of medical specialists. Section 4.6 concludes.

4.1 Healthcare utilisation and waiting lists

There are large differences in the use of healthcare between countries. Danish residents only visit a doctor (GP and medical specialist) 4.6 times per year, while Germans visit a doctor more than 8 times per year.

[10] In countries where GPs have a gate keeping role, patients do not have direct access to secondary care. They need a referral from their (primary care) GP to get access to a hospital or a specialist.

Table 4.1 Doctors visits per year per person (GPs and specialists)

	Doctor visits 2009
Belgium	7.6
Denmark	4.6
England	5.0
France	6.9
Germany	8.2
Netherlands	5.7

Source: OECD, Health at a glance 2011

This difference in doctors' visits might reflect differences in preferences, but might also reflect restrictions on the supply side. Waiting lists are indications of the latter. In Belgium, France, Germany and the Netherlands, there seems to be no supply side restrictions. In Belgium, there are no waiting lists. In France, Germany and the Netherlands, waiting lists are short. In the past, problems with waiting lists existed in the Netherlands, England and Denmark. In the Netherlands and England, policy has successfully reduced waiting lists. In Denmark, since 2007, the maximum waiting time from diagnosis to treatment is set at 1 month (2 months from 2002). If the patient cannot be guaranteed treatment within one month, he or she may choose to be treated at another hospital, including private hospitals and hospitals in other countries. However, the health system has had difficulties fulfilling the waiting time guarantees. It is unclear what percentage of patients is actually treated within one month (Olejaz et al. 2012). Thus, the low number of doctors' visits in Denmark might be due to supply side restrictions.

4.2 Numbers and characteristics of medical specialists

Table 4.2 illustrates that, in the Netherlands and England, the number of doctors per inhabitant is low. In Denmark and Germany, there are more than twice as many doctors per inhabitant when compared with the Netherlands and England. France and Belgium take an intermediate position. The percentage of female doctors is around 30%, as is the percentage of doctors aged 55 years and older. Exceptions include Belgium, where more doctors are female (39%), England, where doctors are younger (only 21% are aged 55 years and over), and Denmark, where doctors are relatively old (49% are aged 55 years and older). Female doctors are younger than male doctors. In Denmark, 33% of the female doctors were aged 55 years and older, as compared with 57% of male doctors being aged 55 years and older. Of the doctors aged 35-44, the majority (53%) are female.

Table 4.2 Number of medical specialists (excluding trainees)

	Total number of medical specialists	% female	% 55 years and older	Number of medical specialist per 1,000 inhabitants
Netherlands	16,210	33	29	0.98
Germany	187,825	44**	34***	2.29
France	108,061*	30	41	1.71
England	47,008	29	21	0.91
Denmark	13,190	35	49	2.39
Belgium	18,852	39	40***	1.75

* 2011
** including GPs and medical specialists in training (Assistenzärzte)
*** % 50 years and older
Sources: See Appendix B

In general, female doctors work less hours and earn less. Older doctors earn more when they are salaried. Age has no influence on the income of the self-employed. There is no clear relationship between characteristics and income. The two highest earning countries (The Netherlands and England) have a relatively young workforce. The English workforce is very young, because it is growing fast due to government policy to increase the number of medical students. Of the countries with the lowest incomes (Denmark and Germany), Denmark has a high proportion of elderly, but also has a large percentage of female doctors.

There is a clear relationship between the number of doctors and income. In countries with few doctors (the Netherlands and England), incomes are higher (See Figure 4.1). This is consistent with the previous study of Fujisawa & Lafortune (2008). In the UK, waiting lists in the NHS have led to an incentive for patients to buy healthcare in the private sector. As the private sector attracts wealthy patients, and as volumes are not budgeted by the government, doctors can earn a substantial extra income from private practice.

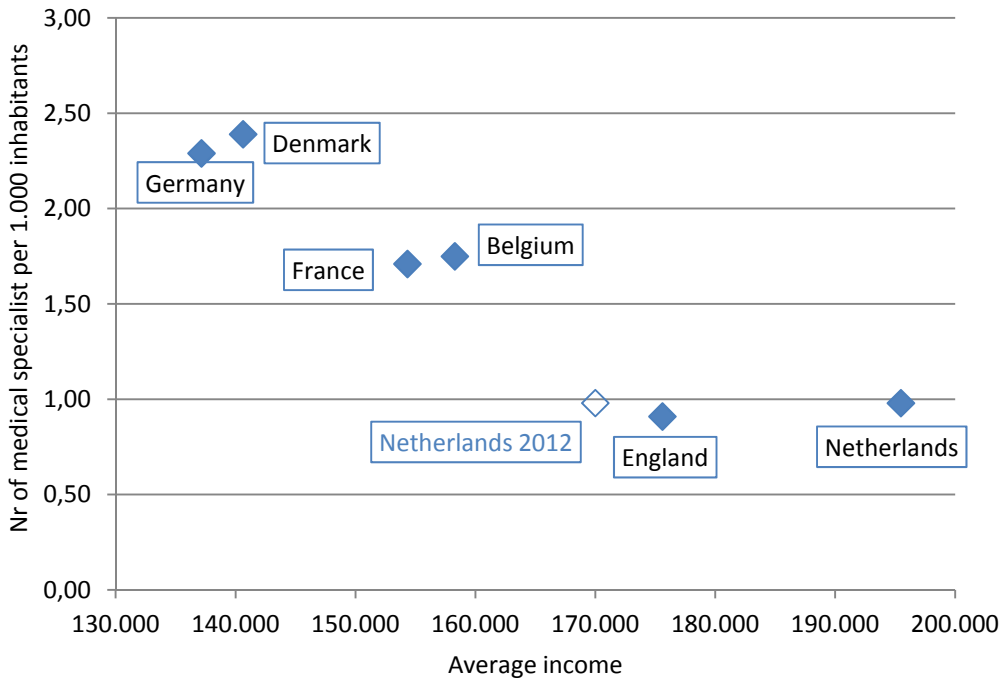
In the Netherlands, self-employed medical specialists received, until 2007, a lump sum payment. The lump sum payment was introduced in 1995, because costs increased rapidly. Before 1995, medical specialists worked on a fee for service, as they have since 2008. The result of the introduction of the lump sum payment was waiting lists. Since 2002, the government has released the budgets of hospitals and medical specialists in order to resolve the issue of waiting lists. As of 2008, the system is back to fee for service. The difference with the situation before 1995 was that, since 2008, DRGs are reimbursed, while before 1995, services like visits and operations were reimbursed. Because of the errors in the DRGs and an increase in registered production, the incomes of medical specialists increased rapidly. In 2010, DRG tariffs have been adjusted downwards; in 2012, a temporary budgeting system was introduced. History illustrates that as soon as budgets are released, the production of a medical specialist increases and so does their income.

In England, as in the Netherlands, cost containment strategies lead to waiting lists; resolving waiting lists leads to high incomes.

In Denmark and Germany, on the other hand, there are a large number of medical specialists. Even with the large number of doctors, Denmark had a problem with waiting lists. Danish

doctors work short weeks and are almost all salaried. Therefore, even in Denmark, the solution for waiting lists had to come from the private sector. However, the private sector has stayed small and incomes of specialists stayed relatively low, compared to other countries. In Germany, doctors work long hours and a large part of them are self-employed, which stimulates their productivity. Therefore, the pressure on the system is low. Correspondingly, incomes are relatively low.

Figure 4.1 Fewer doctors: higher incomes



A low number of doctors are thus associated with a high income. Does this mean that income differences can be explained by differences in productivity? It seems plausible that part of the differences in income between countries is explained by differences in productivity. However, there is no one-to-one relationship between income and the number of hours worked. Working hours in the Netherlands and England are higher than in Denmark, but not higher than in Germany. Productivity per hour might be lower in Denmark than in the Netherlands and England because the Danish doctors are all salaried, but of the German doctors, there are also a large number of them that are self-employed.[11] So there must be more to it than differences in productivity.

Another explanation might be that a low number of doctors leads to high negotiation powers. Therefore, there are higher prices and associated incomes are also higher.

[11] If the German doctors are as productive as the Dutch doctors, the German population must receive more than twice as much care from medical specialists than the Dutch population. After all, the number of doctors per inhabitant is more than twice as high in Germany as it is in the Netherlands. This is reflected in the number of hospital beds in Germany: 5.7 per 1,000 inhabitants, compared to 2.8 in the Netherlands. In addition, the occupancy rate of hospital beds in Germany is higher (Heida & Otter, 2012). This might mean the German system is less efficient. However, this subject goes beyond the scope of this report.

4.3 Differences in payment systems

Self-employed doctors earn more than salaried doctors in all countries where both systems exist side by side (See Chapter 3). However, English doctors earn, on average, more than doctors in other countries (except the Netherlands) and are almost all salaried. The English doctors responded on supply side restrictions by working in the private sector. As the private sector is not budgeted, it functions as an escape valve for the budgeted NHS. In countries where part of the workforce is self-employed, there is more flexibility in responding to higher demands by increasing the number of hours worked. In theory, it is possible to increase the production of salaried doctors by introducing pay for performance. However, in the countries in this investigation, hardly any performance pay has been introduced. In countries with two systems, this might not be necessary, because pressure on the system can be accommodated by self-employed doctors. However, in England and Denmark, there are hardly any performance pay measures for salaried workers. Therefore, waiting lists can occur and lead to a parallel private market. In Denmark, the private market is quite small, due to the relatively large number of salaried doctors. But in England, the number of doctors is low, leading to an increasing private sector. Therefore, the English government is now releasing severe entrance restrictions for medical education.

On the whole, the differences in payment systems do not seem to have a significant influence on the earnings of doctors.

4.4 Production by physicians in training

Part of the production of the Dutch and the Belgian doctors is produced by physicians in training. The Dutch and Belgian doctors work inside the hospital and are responsible for the education of physicians in training. In all other countries, self-employed doctors work outside the hospital, while physicians in training almost always are educated in the hospital. The revenues of the physicians in training by the Dutch and Belgian self-employed doctors is added to their revenue. This is a compensation for the time they invest in the training. However, the Belgian doctors pay the wages of the physicians in training, while the Dutch doctors do not. The wages are paid by a national fund. This might explain, to some extent, the higher incomes of the Dutch self-employed doctors. However, the English doctors do not get extra revenue from physicians in training and earn as much as the Dutch doctors.

4.5 Differences in education

The education of English doctors is 12 to 15 years in length and is longer than the education in the other countries. This might explain, to some extent, the high incomes of the English doctors. Since 2012, undergraduate students have paid a fee of a maximum £ 9,000 per year (on average £ 8,300). Existing doctors will have paid lower fees. Up to 2006, the maximum fee was £ 1,225. From 2006-2011, the maximum was £ 3,225 (Jongbloed & Dassen 2009).

The education of the Dutch doctors, on the other hand, is just as long as it is in France and Germany. The costs they pay are not much higher than in other countries and the salary in post graduate training is about the same as in most other countries.

In all countries, except Belgium, entrance to medical study is restricted by numerous clauses. In the Netherlands and the UK, the restrictions are more severe.

Table 4.3 Aspects of medical education

	France	UK	Germany	Belgium	Denmark	Nether-lands
Years of education	10-12	12-15	10-12	11-13	11-12	10-12
-undergraduate	6	5	6	7	6	6
-graduate	4-5	7-10	4-6	4-6	5-6	4-6
Costs for undergraduate students (per year)	€402	£ 8,300	€600 to €1000	€840	€0	€1,620
Yearly salary of students during (post graduate) training 2009	€18,000-€24,000	£22,400-£57,000	€55,000*	€50,000	n.a.	€42,000 - €53,700
Restricted entrance	Yes	Yes	Yes	No	Yes	Yes

* 2004

Sources: See Appendix B

4.6 Differences in roles of GPs

In the Netherlands, England and Denmark, the GP has a gate keeping role. In Belgium, France and Germany, the GP has no role as a gatekeeper, but in practice, most patients have a family doctor whom they generally consult first.

Fujisawa and Lafortune (2008) find that in countries where the GP is a gatekeeper, medical specialists earn less. They expected this relationship because the GP constrains the demand for medical specialists. But it might also be the other way around: if the GP is gatekeeper, the medical specialists only treat the more complex patients. The less complex patients will be treated by the GP and will not be referred to the medical specialists. This might partly explain the higher income of the specialists in the Netherlands and the UK. However, in both the Netherlands and the UK, the number of GPs is also relatively low. This is because of the restricted entrance to the medical education. On the whole, the role of the GP cannot explain differences in income between countries.

4.7 Conclusions

Income differences between countries are associated with differences in the number of doctors. In countries with a low number of doctors, incomes are high, whereas in countries with a high number of doctors, incomes are relatively low. The differences are partly explained by differences in working hours. A lower number of doctors might also lead to a high negotiation power of doctors, and therefore, higher prices and associated incomes.

Other factors, such as the composition of the workforce, the gate keeping role of GPs, differences in payment systems, whether the production of the physicians in training accrues to the hospital or the medical specialist and differences in education do not seem to have a significant influence on the earnings of medical specialists.

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Appendix A Adjustment OECD figures

Deviations from the OECD definition

The OECD gathers data from OECD-countries on the remuneration of medical specialists. Ideally, these figures should be the average *gross* annual income.
The figures should include:

- The value of any social contributions, (income) taxes, etc., payable by the employee
- All gratuities, bonuses, overtime compensation and 'thirteenth month payments'
- Any supplementary income

And should exclude:

- For salaried: social contributions payable by the employer
- For self-employed: practice expenses
- Any physicians who are still in training to become a specialist
- Physicians who have specialised in GPs

Earnings are given per FTE for salaried specialists and per specialist for the self-employed. The actual figures provided by the various countries depend on availability, and therefore, often deviate from this OECD definition. The deviations per country are provided in Table A.1

For salaried specialists, both England and Germany include physicians in training (foundation/registrars and Ärzte respectively). The figures for these countries are therefore underestimated. France and Germany include the salaries of GPs in their numbers[12]. Moreover, the numbers for French specialists are net income figures instead of gross, also resulting in an underestimation. England and Germany do not include income from private practice. On the other hand, France and the Netherlands only include those specialists that do not have any income from private practices, thereby possibly selecting a group of specialists that earns less, on average.

The figures for self-employed specialists also deviate in various ways from the OECD definition. The French figure once again refers to net income instead of gross. In Belgium and France, extra billing is excluded. For Belgium, this means that supplemental income (e.g. for sleeping in a single room instead of a shared room) are excluded. In France, medical specialists in the so called "secteur 2" can set their own fees. The part of the fee above the standard fee not reimbursed by health insurance is not included in the income figure. On the other hand, OECD figures for Belgium still include practice costs, whereas these are excluded in all other countries. In France, some self-employed specialists are also salaried. These salaries are not included in the income figures.[13]

12 OECD documentation (OECD, 2012) reports that for Danish salaried physicians, there is no distinction made between GP's and salaried specialists. However, this remark is irrelevant, since Danish GP's are never salaried and are, therefore, not included in the Danish income figure for salaried specialists.

13 http://www.ecosante.fr/DEPAFRA/343.html

Table A.1 OECD figures for incomes of medical specialists in 2009 Euros

	Belgium	Denmark	England	France	Germany	Netherlands
Gross income salaried		€136,799	€89,319	€73,284	€75,700*	€118,431
Includes specialists in training			X		X	
Includes GP's				X	X	
Net income instead of gross				X		
Excludes extra income as self-employed			X	Only salaried	X	Only salaried
Gross income self-employed	€239,763	€192,791***		€118,000	€157,000**	€259,131
Net income instead of gross				X		
Excludes extra billing	X			X		
Includes practice costs	X					
Excludes extra income from salary				X		

*2006 **2007 ***2008

Adjustments to the OECD figures

Belgium

The OECD only provides figures for the Belgian self-employed specialists. Figures are taken from the Institut national d'assurance maladie-invalidité (INAMI). These already include any patient contributions to the nationally set tariffs (20-25% of the tariff, on average). However, supplemental income that specialists can charge to the patients (e.g. for using a single room instead of a shared room) over and above the nationally set tariffs are excluded. On the other hand, the practice costs of specialists are still included in the figures, leading to an overestimation of income.

A study by the Belgian Healthcare Knowledge Centre (Swartenbroekx et al., 2012) provides more information on the income of self-employed specialists working in hospitals. This study gathers 2010 income figures from specialists in 13 hospitals in Belgium. This report not only presents income figures including practice costs and excluding supplemental income, but also lists income including supplemental income and/or excluding practice costs. In the report, income figures are separated by specialty. In order to determine the percentage of income that consists of supplemental income, and the percentage of income that is spend on practice costs, the specialty-specific income figures are combined with the number of specialists in each specialty according to the 'Federale Overheidsdienst Volksgezondheid'. From this, it is calculated that, on average, the supplemental income add an extra 13.50% to income (ranging from 0% for specialists working on intensive care to 35% for plastic surgeons). Extra earnings in terms of supplemental income are €239,763 * 13.50% = €32,378, on average. The income of Belgian specialists, including supplemental income is therefore €239,763 + €32,378 = €272,141.

In the same way, the percentage of income (including supplemental income) that the specialist pays to the hospital in order to cover practice expenses is determined. On average, 37% of gross wages (including supplemental income) are deducted as practice costs (ranging from 13% for oncologists to 81% for clinical biologists). Deductions on earnings in terms of practice costs are

€272,141 * 37% = €101,714, on average. Adjusted gross income (including supplemental income, excluding practice costs) are therefore €239,763 + €32,378 - €101,714 = €170,427 per medical specialist.[14] The final line of Table A.2 shows that the corrected gross wage is about 71% of the original OECD figure (€170,427 / €239,763 = 71%).

Denmark

The Danish figures both for self-employed and salaried specialists are in accordance with OECD definitions and therefore do not need to be adjusted. These are taken from the joint municipal payroll data office (FLD) for salaried specialists, and from a survey of the Danish Association of Practising Medical Specialists (FAPS) for self-employed specialists. For self-employed specialists, the most recent OECD figure is from 2008. Assuming that the income of specialists increases at the same rate as the average wage in Denmark between 2008 and 2009, the estimated income in 2009 is €200,530.[15]

England

The figures for England (data do not include Scotland, Northern Ireland and Wales) are taken from the NHS Information Centre for Health and Social Care (IC) Electronic Staff Record (ESR) data (IC NHS, 2009). Since nearly all English specialists are salaried, income of self-employed specialists is not available. Income figures are averages over all doctors, including those who are still in training to become specialists (foundation and registrars). When those are excluded, the average wage of a medical specialist becomes £ 112,111 or €125,720 in 2009 (exchange rates from stats.oecd.org are used throughout). This adds an extra €125,720 - €89,319 = €36,401 to the OECD figure. For the supplement income, we refer to research by Morris et al. (2008). They use a unique, anonymized, non-disclosive dataset derived from tax returns for a sample of 24,407 consultants (92.3% of the total) in England for the financial year 2003/4 and report that the ratio of mean private to NHS income for consultants was 0.45. According to data from the NHS Information Centre (IC NHS, 2009), consultants earn an average income of £ 120,145 or €134,730. Supplementary income then amounts to 0.45 * €134,730 = €60,628. This means consultants earn €195,358, of which 31% comes from private practices. Since consultants account for around 82% of the total specialist FTE, the mean supplementary income added is 0.82 * €60,628 = €49,866, which makes the total gross wage income of English salaried specialists equal to €125,720 + €49,866 = €175,586.

France

For France, the OECD figures for salaried specialists are based on administrative data from the French Statistical Office (INSEE). The figures do not make a distinction between salaried GP's and salaried medical specialists working in the hospitals. However, the majority of salaried doctors are medical specialists, and therefore, the figures provide a good indication of specialist income. The OECD figures are net income instead of gross. Income taxes and social

[14] The KCE report (KCE, 2012) calculates income figures per FTE. The OECD figures for self-employed specialists are calculated per specialist. Using KCE income figures, the weighted (country-wide) average income per FTE is €249.819 for self-employed specialists in hospitals. Since the 18.566 Belgian specialists represent 12.429 FTE (Health Systems in Transition, 2012), the average number of FTEs per specialist is 0,67. The KCE figures therefore imply an average income of €249.819*0,67=€167.242 per specialist in 2010. This is only slightly different from the adjusted OECD figure of €170.427 per specialist in 2009.

[15] Average income per year is obtained from stats.oecd.org

contributions are about 44% for these income groups.[16] This means that, approximately, the gross average income of salaried specialists is €131,716.

Figures on self-employed specialists are based on administrative data from the Système National Inter-Régimes (SNIR) and provided by DREES.[17] These refer to the fees that are reimbursed by the statutory health insurance. Again, the provided numbers refer to net income instead of gross and exclude social security contributions. DREES has also calculated average gross incomes based on the same data source, see Bellamy (2011). It is found that in 2009, self-employed medical specialists received, on average, €178,530 in fees. This number is used to estimate the average income.

The gross income of €178,530 still does not meet the OECD definition. First of all, practice costs are included. Unfortunately, no source is available on the average practice costs, and therefore, the difference between this figure and the OECD number is used: €60,530 (= €178,530 - €118,000). This is an overestimation, as this amount also includes social security contributions.

Sources of supplementary income are currently excluded and need to be added. First of all, French specialists in "secteur 2" can set their own fees. The part of their fee above the regular fee (Sécu-tariff) is paid directly by the patient. In 2011, this extra billing (in French "dépassements") amounted to €2.1 billion.[18] Divided by the approximately 50,000 self-employed specialists, this results in around €40,000 additional gross income. Next to this, some self-employed specialists also have a part-time job as a salaried medical specialist. They do this, among other reasons, to maintain relationships with the hospital or to keep up their medical knowledge. About 21% of self-employed specialists earn additional income through salaried work, referring to approximately 10,000 specialists.[19] Attal-Toubert et al. (2009) from DREES calculated the total revenue of medical specialists in 2005, taking into account the supplementary income earned through salaried work (but excluding extra billing). They found that medical specialists that work both as self-employed and as a salaried employee earn approximately the same as specialists that are solely self-employed. Furthermore, approximately 37% of their net income comes from salaried work. Based on this, we assume that the OECD figure of €118,000 contains the total income of medical specialists that work solely as self-employed and 63% of the total income of specialists that also work as salaried employees. The corrected average net income then becomes: €127,941 (=€118,000 x 49,817 self-employed medical specialists / (39,355 solely self-employed + 10,462 both self-employed and salaried x 63%). The additional net income is therefore €9,941. This means that the gross additional income is, on average, €17,867.

Adding extra income and excluding practice costs, the gross corrected income for French self-employed medical specialists is estimated to be €176,042. This is still an underestimation, as social contributions are excluded.

16 Source: interview and own calculations based on "charges sociales 2009" and "barême impôt 2009".
17 DREES: Direction de la Recherche, des Etudes, de l'Evaluation et des Statistiques (du Ministère du Travail, de l'Emploi et de la Santé)
18 See www.gourvernement.fr: "L'encadrement des dépassements d'honoraires et l'amélioration de l'accès aux soins" or http://www.lequotidiendumedecin.fr/actualite/24-milliards-de-depassements-en-2011-il-est-temps-d-agir-pour-marisol-touraine
19 http://www.ecosante.fr/FRANFRA/343.html

Germany

The OECD figures for salaried specialists in Germany come from a structure earnings survey of the Federal Statistic Office (Statistisches Bundesamt). This survey provides a general overview of income in various occupations, including doctors (Ärzte). Comparable to the English figures, no distinction is made between specialists who completed their training (Chefärzte, Oberärzte and Fachärzte) and specialists that are still in training (Ärzte). Unlike in England, separate figures for the various hierarchical levels of salaried specialists in German hospitals are not available from the Federal Statistic Office. We, therefore, use a different source to estimate the average income of German salaried specialists.

Thurm (2011) reports on a survey among salaried medical specialists in German hospitals. Reported income figures include any bonus and variable payments to the specialists, and also include income from the so-called 'Liquidationsrecht' for leading specialists (Chefärzte), which means they can treat private patients within the hospitals, and charge them directly for the treatment. From this survey, average income of German Chefärzte, Oberärzte and Fachärzte in 2010 are €257,000, €113,000 and €82,000, respectively. According to data from the Statistische Bundesamt (2012), there were 13,065 Chefärzte, 33,705 Oberärzte and 33,556 Fachärzte working in German hospitals in 2010. Taken together, these figures imply an average income of €123,471 for German specialists. Adjusting wages for the average wage increase in Germany between 2009 and 2010 provides an estimated income of €121,097 in 2010.[20] When specialists in training are included (68,370 trainees earning about €50,000 per year), earnings are only €89,689, on average, in 2010.

The reported German income for the self-employed is in accordance with the OECD definition. However, the figure refers to income earned in 2007, instead of 2009, and therefore, is corrected for the average wage increase between 2007 and 2009, in order to make the figures comparable between countries. This correction adds another €3,253 to the income of the self-employed for a total income of €160,253 in 2009.

Netherlands

The data on the income of Dutch specialists is taken from Statistics Netherlands. Specialists are identified by their registration in the BIG register as a medical specialists[21] and are working in the healthcare sector (van Hilten et al., 2011).

The income for salaried specialists is only based on those specialists who do not have any income from private practice. However, in the Netherlands, 57% of specialists are salaried: 38% only have income from their salary, whereas 19% also have income from private practice. Those that have income from private practice had an average wage of €81,599 in 2009 and an average income from private practice of €123,881, for a total of €205,480 per specialist.[22] The average wage of salaried specialists is therefore a weighted average of €118,431 and €205,480: (0.38 * €118,431 + 0.19 * €205,480)/ (0.38+0.19) = €147,447.

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20 Average income per year is obtained from stats.oecd.org

21 Medical specialists can only register in the BIG after completing their full education. The BIG-register uses the registration of the Medical Specialists Registration Committee (MSRC) to identify a person as a medical specialist.

22 Data acquired from Statistics Netherlands.

The Dutch figures for self-employed specialists are in accordance with OECD definitions and therefore do not need to be adjusted. For the self-employed, only those who obtain their full income from profit are included. The income reported is gross profit excluding any practice costs.

Table A.2 Calculated gross income medical specialists in 2009 Euros

	Belgium	Denmark	England	France	Germany	Netherlands
(Gross) income salaried without corrections		**€136,799**	**€89,319[3]**	**€73,284**	**€89,689[1]******	**€118,431**
Excluding specialists in training			€36,401		€33,782	
Excluding GP's				not available		
Income taxes and social charges				€58,432		
Extra income as self-employed			€49,866		None	€29,016
'Inflation' correction					-€2,374	
Gross income salaried with corrections		**€136,799**	**€175,586**	**€131,716**	**€121,097**	**€147,447**
Income OECD figure		€136,799	€89,319	€73,284	€75,700*	€118,431
Correction in%*****		100%	197%	180%	-	100%
Gross income self-employed without corrections	**€239,763**	**€192,791*****		**€178,530[2]**	**€157,000****	**€259,131**
Excluding GP's						
Including extra billing	€32,378			€40,175		
Excluding practice costs	-€101,714			€60,530		
Including extra income as employee				€17,867	None	
'Inflation' correction		€7,739			€3,253	
Gross income self-employed with corrections	**€170,427**	**€200,530**		**€176,042**	**€160,253**	**€259,131**
Income OECD figure	€239,763	€192,791		€118,000	€157,000	€259,131
Correction in%*****	71%	100%		149%	100%	100%

*2006 **2007 ***2008 ****2010 ***** without inflation correction

Source: [1]Thurm (2010) [2]Bellamy (2011) [3]NHS IC (2009). All other income figures from OECD Health Database.

Corrected OECD income figures from 2006-2009

Table A.3 provides an overview of the corrected OECD income figures from 2006-2009 (if available). These corrected figures are calculated by multiplying the ratio between uncorrected OECD figures and the corrected gross income figures for the year 2009 (given in Table A.2) with the uncorrected OECD figures in all years. For the Netherlands, we know the average income of those salaried specialists that have income from a private practice (data acquired from Statistics Netherlands) and we know the proportion of salaried specialists that have income from a private practice for all years 2006-2009. This implies that the use of a correction factor for the Netherlands is unnecessary. The Dutch figures are therefore exact for all years.

Table A.3 Corrected OECD income figures of medical specialists 2006-2009 in Euros

	Belgium	Denmark		England		France	Germany	Netherlands
Gross income salaried with corrections								
	€	€	DKK	€	£	€	€	€
2006		116,637	870,129			128,303		128,072
2007		120,968	901,286	215,272	147,251	135,996		133,507
2008		129,154	964,502	192,484	153,374	140,214		137,924
2009		136,799	1,018,783	175,586	156,578	131,716	121,097	147,447
Gross income self-employed with corrections								
2006	147,237					165,748		186,999
2007	152,975					169,925	157,000	205,059
2008	161,122	192,791	1,439,738			174,252		235,105
2009	170,426	200,530	1,497,532			176,042	160,253	259,131

Source: calculations SEO Economic Research

Appendix B Sources

Sources total number of medical specialists:

Netherlands: CBS (2012). Medisch geschoolden; arbeidspositie, positie in de werkkring, naar beroep. Available from statline.cbs.nl. Data over 2009

Germany: Bundesärztekammer (2009). Abbildung 3: Berufstätige Ärztinnen und Ärzte nach Arztgruppen zum 31. 12. 2009. Available from http://www.bundesaerztekammer.de/downloads/Stat09Abb03.pdf. Data over 2009

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Appendix C Taxes and premiums in the Netherlands

Assumptions Table C.1

Salaried

- Wage: highest pay scale in AMS system (non academic wage scale) with an income of €158.000, - euro (step 6 with 15% disutility and 8% holiday pay)
- Pension contribution is based on: accrual rate 1,95% per year, starting age of 35 years, retirement age of 65, a franchise of over €10.000, -. This leads to a pension at retirement of €85.000, excluding the state pension (AOW).

Self-employed

- Collective practice costs are costs which are made for the common practice. This could include, wages and salaries secretary, doctors not in training (anions) and other support personnel, depreciation of tangible assets, audit fees, liability insurance costs charged by the hospital, collection and administration etc.. Costs are estimated at 8% of gross revenue.
- Individual practice costs are costs of an accountant €3.000, -, congress fees, literature, subscriptions, telephone etc. approximately €7.000, - per year, insurance €2.000, - per year.
- Pension premium: to reach €85.000 retirement benefits a total pension premium of €34.300 is needed.
- The premium disability insurance is calculated on an insured daily amount from €310, - which gives a coverage of €110.000, - i.e. 70% of the salaried income. Details:
  - minimum age 35 years
  - until age of 65 years
  - own risk period 1 month
  - indexed benefits
- As a self-employed in most cases has had to pay a goodwill sum there has been a loss of interest on the invested capital. It is assumed the goodwill sum is equal to the gross income and a net return of 1.5% = gross yield of 2.7% minus 1.2% tax Box 3.

Additional assumptions Table C.2

Salaried

- Wage: Average wage of €118,000 of salaried medical specialists not working also in private practice (see figure 2.2), indexed with 3% per year for the period 2009-2012.

Self-employed

- Revenue: derived from gross income: see Box 2.1
- The supplementary pension is calculated on the basis of what would be paid be built with an equal amount of net income. A net income of employed €91.430, - means a gross salary of €200.000, -
- The premium disability insurance, in addition to the note above assumptions, calculated on a insured daily amount of €404, - which coverage of €148.000, - i.e. 70% of gross income.

Table C.1 Taxes and premiums for salaried and self employed doctors with the same net income

	Self employed				Salary			
Gross revenu	€	193,400						
Collective practice costs		15,500						
Net revenue	€	177,900						
Total wage costs					€	190,244		
Individual practice costs	€	12,000						
Gross income	€	165,900						
Employers costs								
Contribution health insurance					€	4,170		
Contribution social insurance					€	4,500		
Pension contribution					€	18,074		
Other expenses					€	5,500		
Gross wage					€	158,000		
		Fiscal		*Cashflow*		*Fiscal*		*Cashflow*
Gross income	€	165,900	€	165,900	€	158,000	€	158,000
Employers contribution health insurance					€	4,170	€	4,170
					€	162,170	€	162,170
Employees pension contribution					€	18,074	€	18,074
					€	144,096	€	144,096
Pension contribution (SPMS)	€	28,300	€	28,300				
Pension supplement	€	6,000	€	6,000				
Totaal	€	34,300	€	34,300				
Profit	€	131,600						
Tax exemption MKB	€	15,792						
Tax exemption self employed	€	7,280						
Disability insurance	€	10,500	€	10,500				
Taxable income	€	98,028			€	144,096		
Tax	€	43,011			€	66,697		
Tax credit	€	3,442			€	3,442		
Total taxes			€	39,569			€	63,525
Contribution health insurance								
-Not income dependent			€	2,600			€	2,600
-Income dependent			€	2,500			€	4,170
Total charges			€	89,469			€	70,295
Interest loss goodwill			€	2,625			€	
Net income			€	73,806			€	73,801

Source: calculations Hans Bénard (Kema van den Berk praktijkadviseurs).

Table C.2 Taxes and premiums for salaried and self employed based on the estimated gross income in 2012

	Self employed		Salary	
Gross revenu	€ 243,000			
Collective practice costs	19,500			
Net revenue	€ 223,500			
Total wage costs			€ 157,677	
Individual practice costs	€ 12,000			
Gross income	€ 211,500			
Employers costs				
Contribution health insurance			€ 4,170	
Contribution social insurance			€ 4,500	
Pension contribution			€ 14,507	
Other expenses			€ 5,500	
Gross wage			€ 129,000	
	Fiscal	*Cashflow*	*Fiscal*	*Cashflow*
Gross income	€ 211,500	€ 211,500	€ 129,000	€ 129,000
Employers contribution health insurance			€ 4,170	€ 4,170
			€ 133,170	€ 133,170
Employees pension contribution			€ 14,507	€ 14,507
			€ 118,663	€ 118,663
Pension contribution (SPMS)	€ 28,300	€ 28,300		
Pension supplement	€ 15,000	€ 15,000		
Totaal	€ 43,300	€ 43,300		
Profit	€ 168,200			
Tax exemption MKB	€ 20,184			
Tax exemption self employed	€ 7,280			
Disability insurance[c]	€ 14,000	€ 14,000	€	
Taxable income	€ 126,736		€ 118,663	
Tax	€ 57,939		€ 53,742	
Tax credit	€ 3,442		€ 3,442	
Total taxes		€ 54,497		€ 50,300
Contribution health insurance				
-Not income dependent		€ 2,600		€ 2,600
-Income dependent		€ 2,500		€ 4,170
Total charges		€ 116,897		€ 57,070
Interest loss goodwill		€ 3,173		€
Net income	€	€ 91,430		€ 61,594

Source: calculations Hans Bénard (Kema van den Berk praktijkadviseurs).

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