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See CPB (2010a) for an earlier report on Dutch labour market developments in response to the economic crisis of 2008/2009.

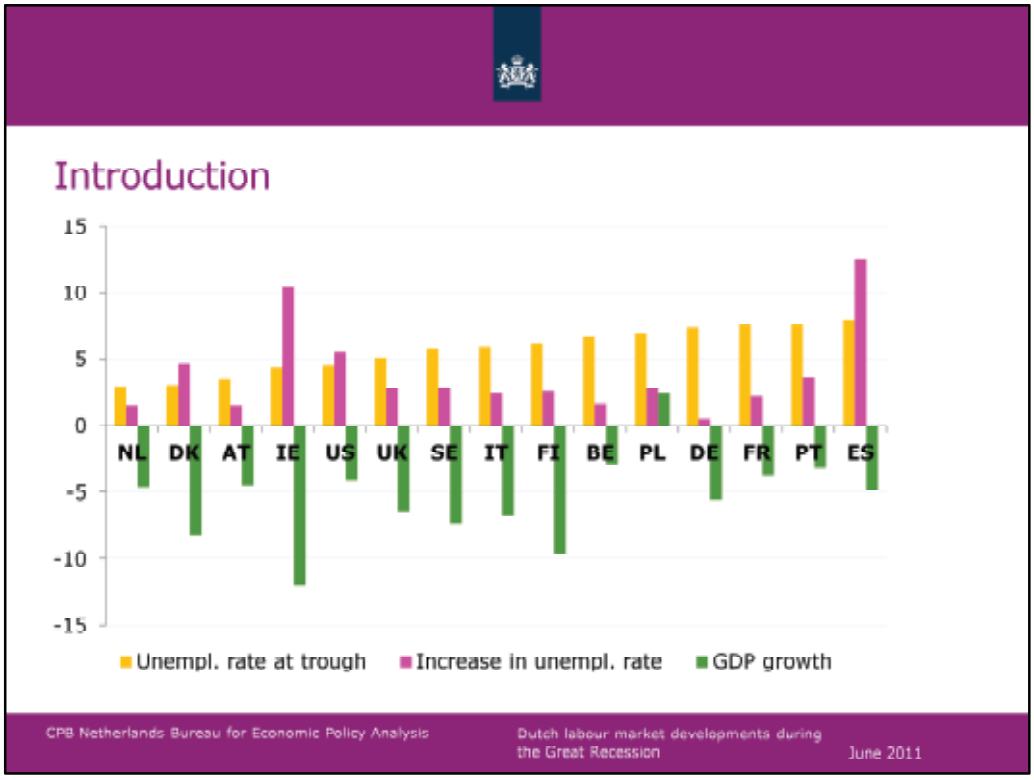
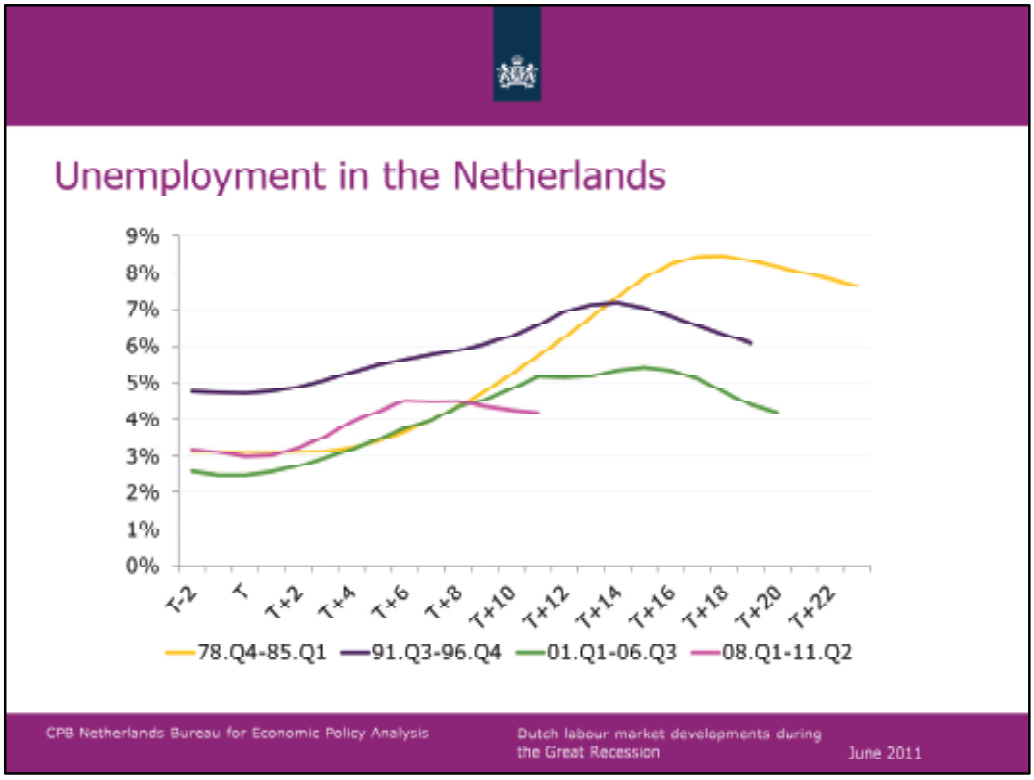


Chart: GDP growth is cumulative growth in 6 quarters with lowest growth rates (q-o-q). Unemployment at trough shows the lowest level of the unemployment rate just before the Great Recession.

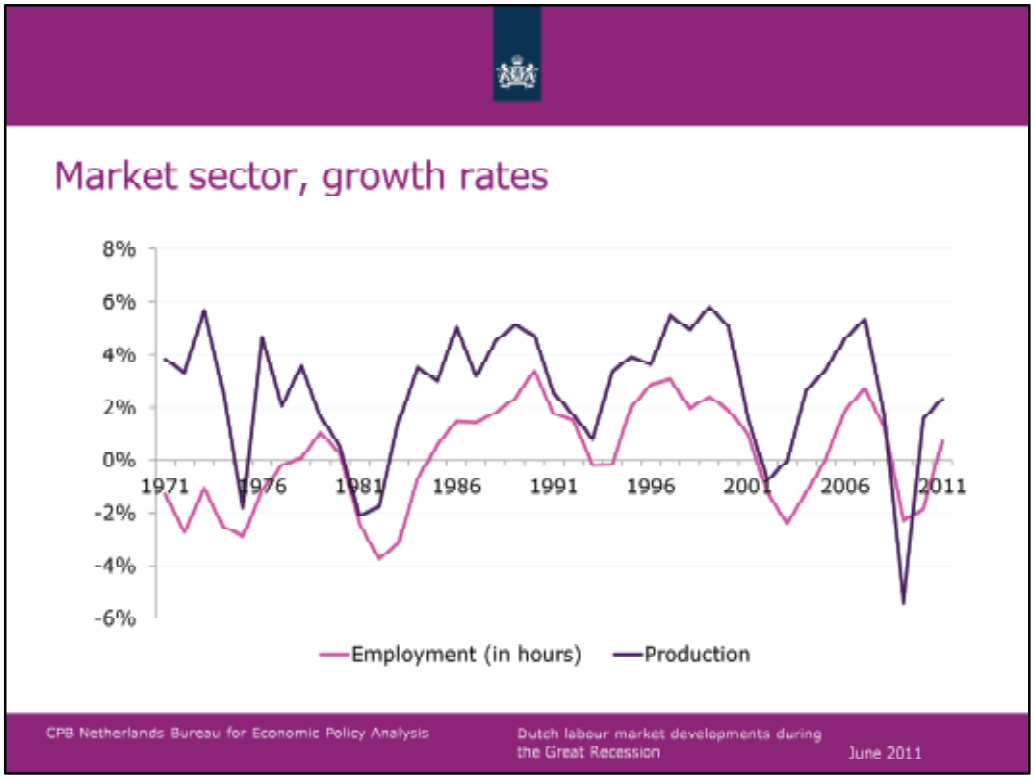
The level of unemployment in the Netherlands was low before the crisis. This was also the case in Anglosaxon countries, as well as f.e. in Denmark, countries known for flexible labour markets (low EPL). In these countries unemployment went up quickly when the crisis struck, as expected. In the Netherlands however the unemployment rate rose relatively little. Actually, (of the depicted countries) only in Germany the increase was smaller, in Austria it was comparable. We dubbed this small increase in unemployment the 'unemployment puzzle'.

This to-be-written paper investigates into the causes of the small unemployment rise in the Netherlands. Thus, the focus is NOT on the low level at the outset. This low level is due to structural factors, such as the social security system, EPL and the structure of our economy, and these factors likely cannot explain why (un)employment responded so differently this time from the 2002-2003 recession (see next slides). Furthermore, the paper takes an historical, rather than an international, point of view. Again, this is because differences between countries are probably due to a) structural factors which cannot explain the different unemployment response in the NL compared to 2002-2003 and b) as far as specific factors play a role in other countries, these factors do not learn us anything about developments in NL.



The unemployment puzzle illustrated: the GDP loss in 2009-2010 was close to the loss in the early eighties, yet the rise in unemployment is much smaller this time. The difference is probably due to structural differences: production structure of economy (less industry), social security arrangements ('Wassenaar agreement' in 1982), education levels (Ridell and Song, 2011), etc. So, remarkable but we're not delving into this right now.

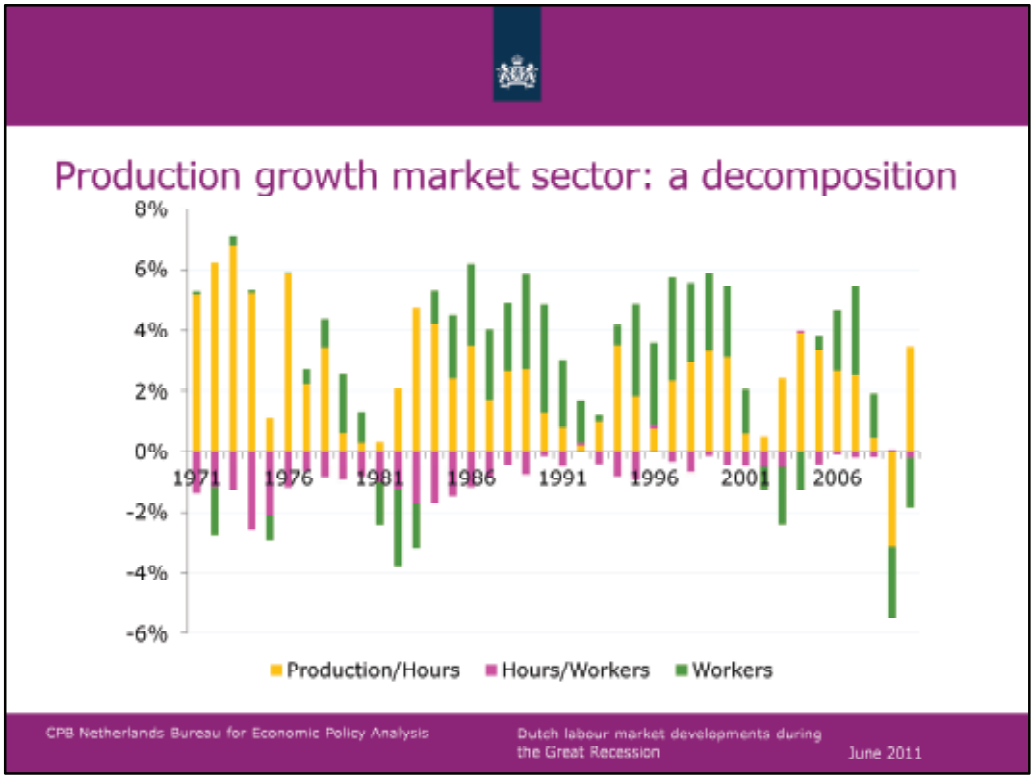
For the moment, wat bothers us is the striking difference from 2002-2003. The speed of increase of the unemployment rate is comparable, but the length is much shorter, despite larger fall in GDP (-2.2% in 2009/2010 vs. +0.4% in 2002/2003).



The main explanation is on the labour demand side, as labour supply moved rather as was to be expected (a little worse)

Over the past four decades, production growth always outpaced employment growth (in hours). In 2009, this was not the case and the difference was huge: about -3%-point. So, the unemployment puzzle seems to be an employment puzzle.

Obviously, this implies a large drop in labour productivity growth. The next slide shows a decomposition of GDP-growth in the market sector (=non health care, non government, non mining and quarrying and non real estate).



(Contractual) Hours per worker show a continuous decline (that is, a negative contribution to economic growth), due to a) shortening of full time working weeks in the seventies and eighties (also as a response to quickly rising unemployment in the eighties) and b) entry of women on the labour market since the eighties, as they work part time relatively often. Looking at actual hours worked makes some difference for 2008 (larger drop, so better productivity) as we will see later on, but not for 2009. So, this is in contrast to experiences in for example Germany and Austria (Stiglbauer, 2010; Möller, 2010). The Dutch equivalent of the *Kurzarbeit* had a minimal impact (0.1 %-point reduction of the unemployment rate (own calculations), corresponding to findings by Hijzen and Venn, 2010) and working hours accounts are not used in NL (as they are in Germany).

Loss of employment in number of workers is comparable to 2002-2003 recession, although cumulative production growth in the two worst consecutive years is this time about 2.5%-pt lower.

In 2009, productivity per hour actually decreased, by 3%-pt. This indicates companies have been labour hoarding massively. Companies barely make up for this loss in 2010, and there are no indications for strong productivity growth in 2011.

Employment growth in the market sector

Dependent variable: cyclical component employment growth

All variables: market sector only, HP-filtered

Estimation period: 1975-2008

Prediction 2009-2010 vs. reality:

cumulatively 1,8%-pt lower level of employment

	Coefficient (t-val)
Constant	0.00 (0.7)
Empl._cyc(-1)	0.34 (3.6)
GDP_cyc	0.42 (7.7)
GDP_cyc (-1)	0.27 (3.5)
R^2-adj	0.86

Cf. Möller, 2010

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Cf Möller (2010), we try to get an estimate of the 'unexpected' part in our employment level.

Simple OLS-regression: Employment growth = constant + c1*employment growth(-1) + c2*gdp growth + c3*gdp growth(-1). All variables are in deviations from trend (growth rates); the estimation is performed on data for the years 1975-2008. Then 2009 and 2010 are forecasted. The conclusion is that the employment level should have been about 1.8%-point lower. Since this figure only corresponds to the market sector, this translates into a higher unemployment level of about 1 to 1.5%-pt.

Labour hoarding (LH)

- Option value of retaining employees: employee may be unproductive now, but productive in the future (e.g. Mortenson and Pissarides, 1994)

- Does a company want to LH? Depends on:
  - production expectations (uncertainty)
  - search/hire/fire/training costs

- Are companies financially able to LH?
  - financial buffer
  - profitability of operations
  - other cost saving measures

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So, firms have been labour hoarding during the Great Recession. Apparently the expected benefits of retaining workers exceed the expected costs. What factors can explain a larger extent of labour hoarding this time compared to 2002-2003? Do firms have more favourable expectations about future economic development, are they financially in a better position, or did they save money on other expenses?

Do companies want to hoard labour ?

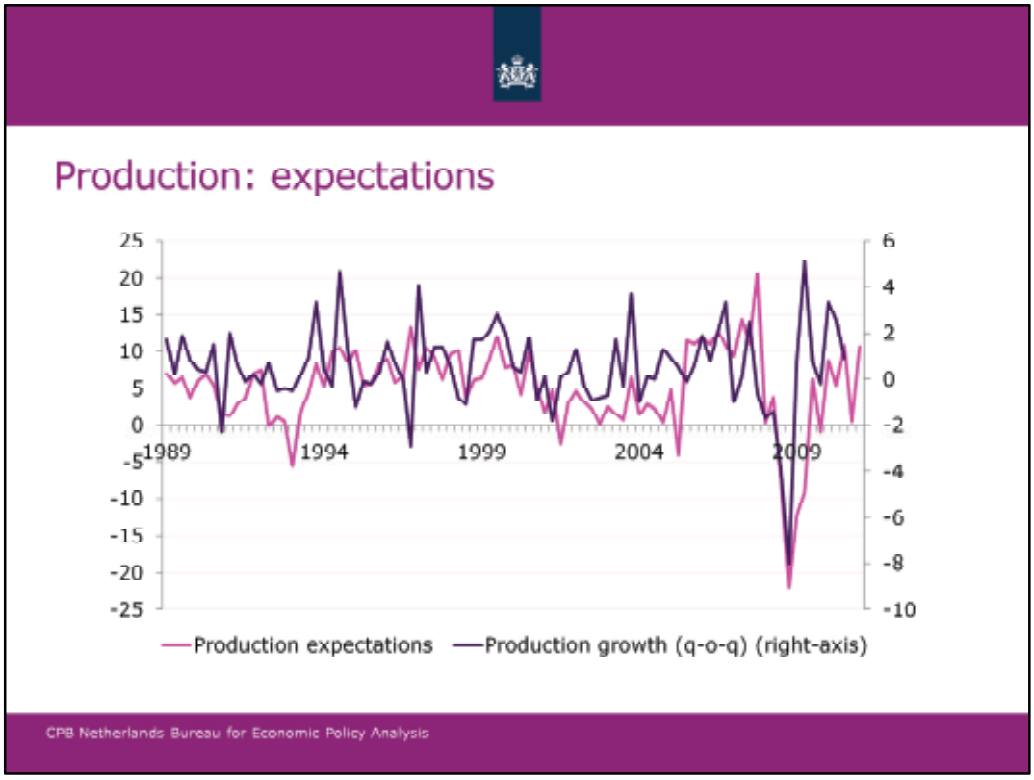
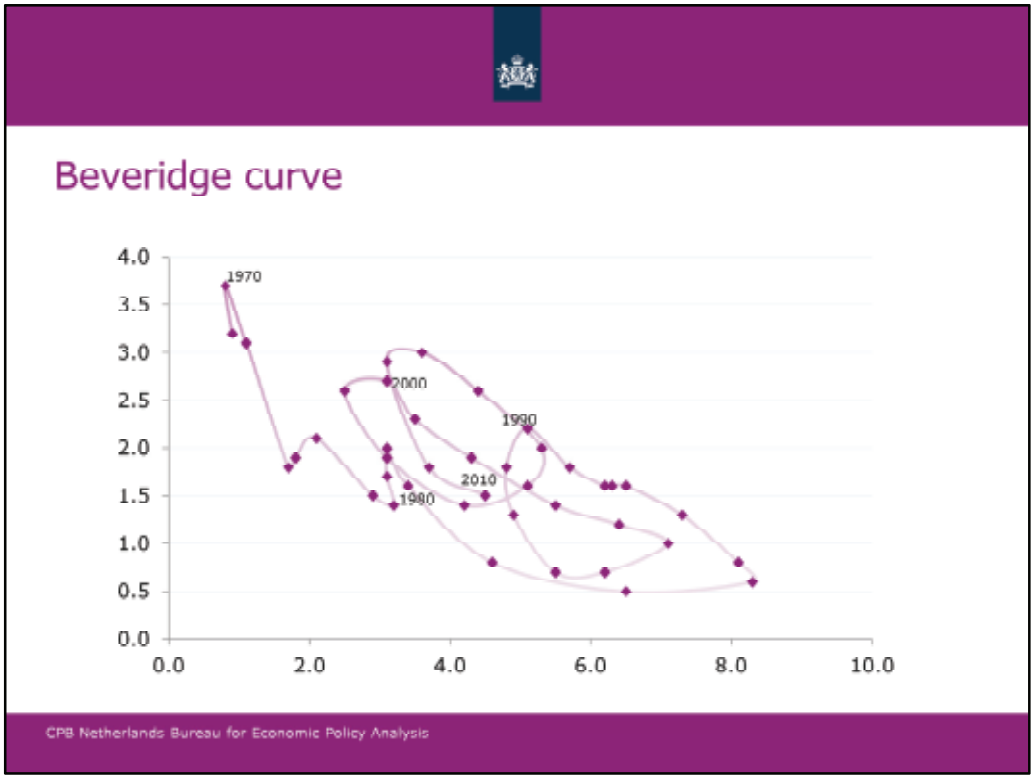


Chart: production growth industry (q-o-q) and production expectations: 'Do you expect production in the next three months will increase/stay the same/decrease?'

From the production expectations of firms in the industry, there seems little reason for labour hoarding. Expectations in the last two decades never were more pessimistic than during the Great Recession. Furthermore (as follows from surveys as well), expectations seem to keep up with current real economic developments, rather than leading them.

However, there is one (small) difference with the previous episode of economic hardship: expectations became more positive sooner. So, perhaps companies saw economic recovery before all their buffers were depleted and before they actually had started laying off workers. But admittedly, evidence is thin.



Compared to the second half of the eighties, the Netherlands has significantly moved in south western direction (to a lower Beveridge curve: better matching). Since the nineties we're moving in north western direction (along Beveridge curve), indicating that the labour market is not becoming more efficient per se, but is getting tighter.

Companies have now experienced a very tight labour market twice in recent years (late nineties and just before crisis): maybe this makes them believe the labour market tightness is now here to stay (especially since ageing starts kicking in and the increase in the labour force participation of women is levelling off: structural labour supply is expected to grow by a meagre 0.4% a year in 2011-2015, compared to an average annual growth rate of more than 1.5% in the early nineties for example (see next slide). In both periods, firms had great difficulties in finding the right employees. If firms perceive the high search costs to be permanent, this may make them more willing to hoard labour.

Average annual growth rate structural labour supply

Years	Growth rate
'87-'90	2.1%
'91-'95	1.7%
'96-'00	1.4%
'01-'05	1.2%
'06-'10	0.9%
'11-'15*	0.4%

*Forecast (CPB, 2010b)

As said, the increase in structural labour supply is slowing down.

Survey results: reasons for LH

	Ecorys (2010)	SCP (2011)
N	424	869
% companies that LH	2009: 19	2010: 13
Reasons for LH		
Essential employees/retaining good workers	39	39
Fewer external workers suffices	22	
Work in pipeline/probably soon more work available	22	21
Dismissal is expensive/difficult		16

We came up with some reasons firms may have been willing to hoard labour, but why not ask them directly? Two surveys did so. The results probably are not completely representative of all companies in the Netherlands, but at least we now have a 'direct measure' of firms' motivations.

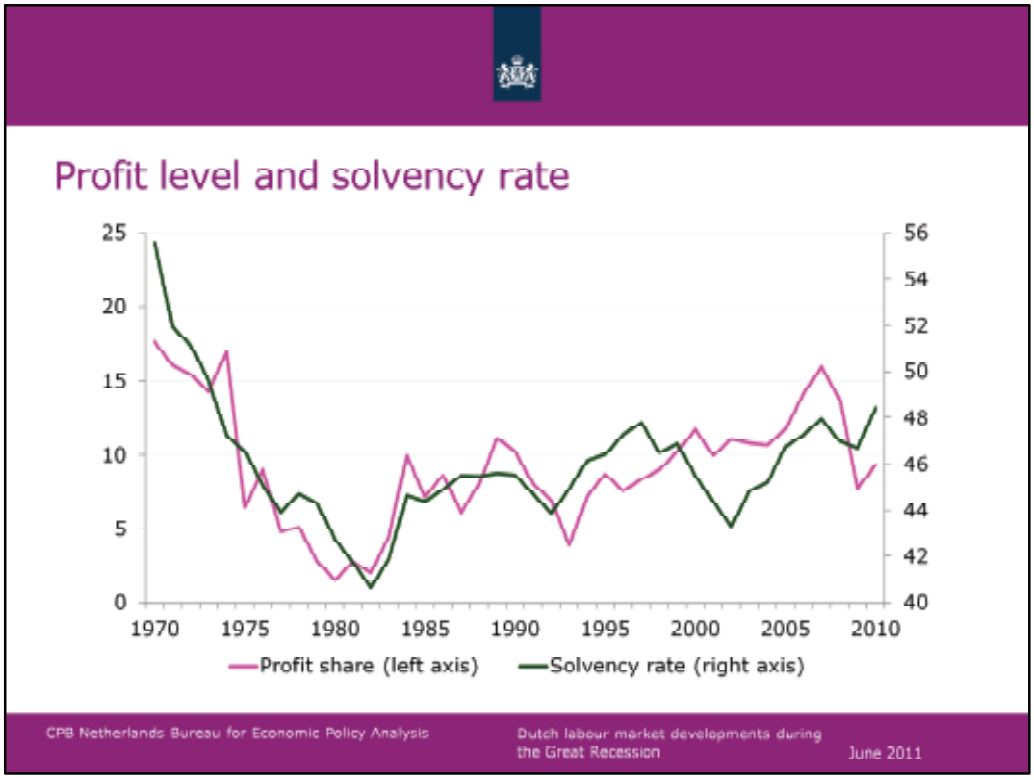
The single most often mentioned reason for labour hoarding is 'keeping the good workers'. This refers to search costs: it's hard to find qualified personnel in the future, so let's not lay off these workers in the first place. The second reason is somewhat remarkable: reducing the number of externally (temporarily) hired workers actually means that a firm is not labour hoarding. It seems that, when answering the survey questions, firms had in mind what reasons they had for not firing people from their own, fixed labour force. The third reason suggests that employers are optimistic about near term economic prospects, which makes labour hoarding (and avoiding hiring and firing costs) attractive.

Unfortunately, we cannot compare results with previous economic downturns.

Ecorys: February 2010, N=424

SCP: Spring/summer 2010, N=869

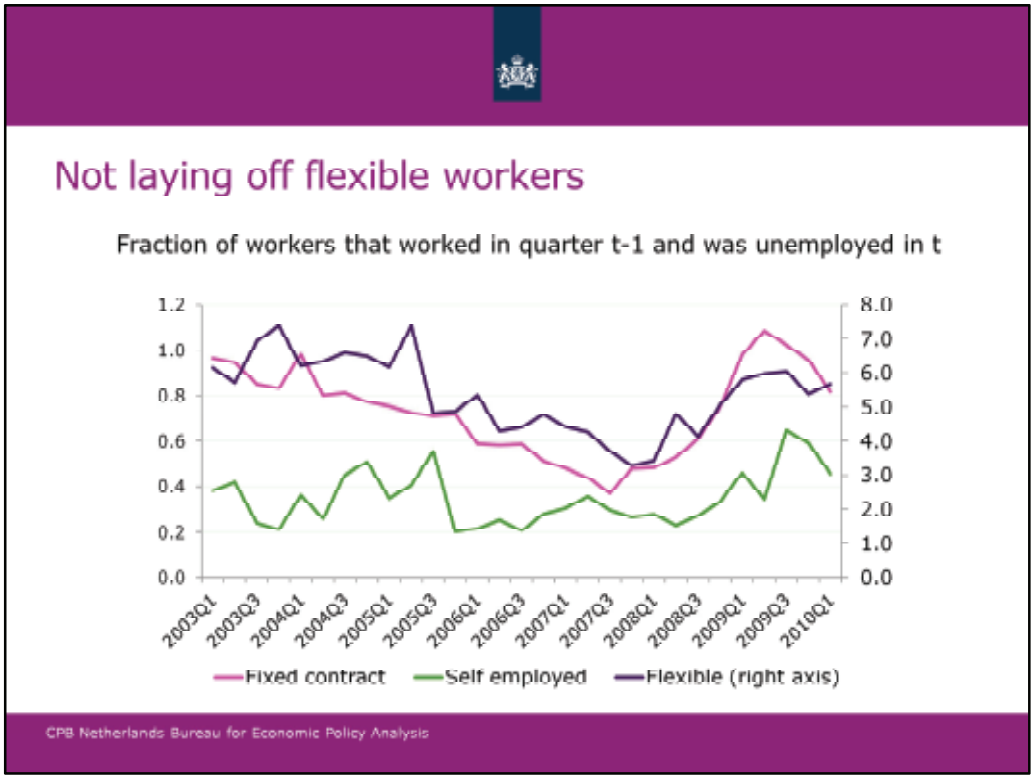
Are companies financially capable of LH?



Companies may want to retain personnel as finding qualified workers is difficult (especially in the near future when ageing kicks in w.r.t. labour supply) and as they expect the amount of work to increase (expectations recovered somewhat quicker than after the 2002-2003 downturn), but the situation doesn't seem to be all too different from the previous recession in 2002-2003. So, to be able to explain the amount of labour hoarding we observed, it may be useful to look at the financial ability of firms to hoard labour. Are companies in a better financial position than in earlier recessions?

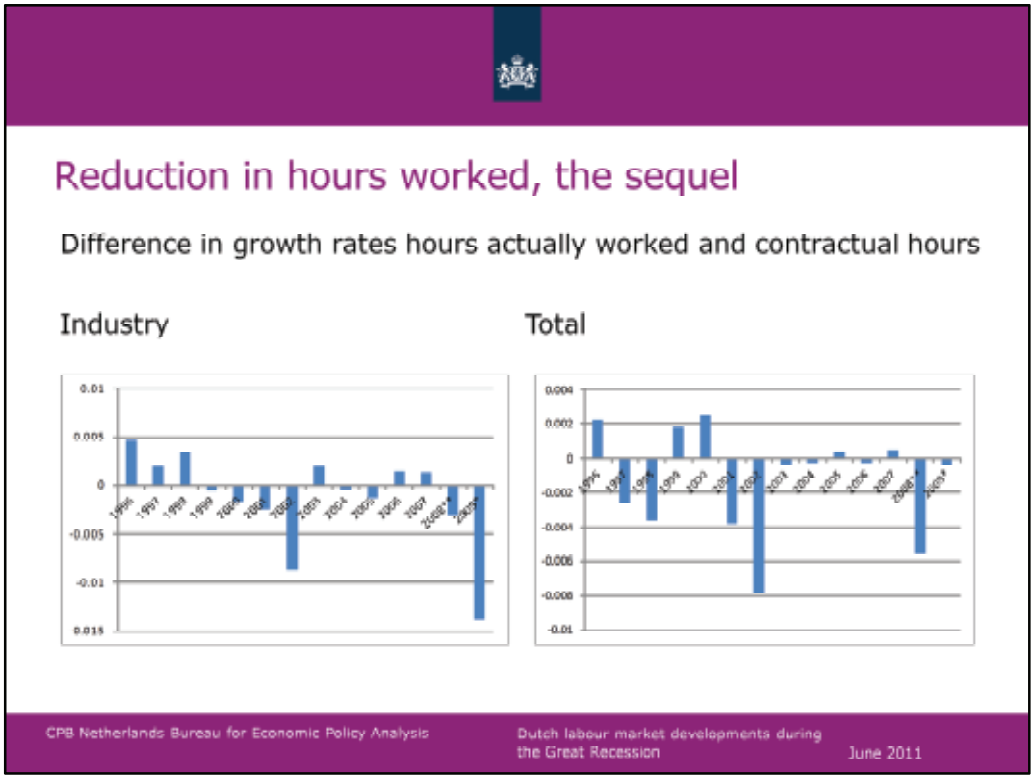
If we look at the profit share (capital income share minus tax share minus interest payments) we see a steep decline in 2009. But a) before the decline, the profit level was historically high, so some loss should be acceptable and b) this steep decline fits the labour hoarding: retaining non productive workers reduces profits.

Next, we look at a stock (as opposed to flow) measure of the financial position of firms, the solvency rate. The difference with 2000-2003 (and earlier recessions) is striking: there is hardly any deterioration of the solvency rate noticeable during the most recent (deep!) recession. Even after 2009 firms are in a healthy financial position. How come this solvency rate remained so high? We're looking at this right now (hopefully, I can elaborate on this at Euroframe conference. For one thing, in 2000-2003 companies had to take losses on investments in 'internetbubble' assets; in the eighties profitability of production reduced dramatically as labour absorbed a large part of firms' value added). Anyway, the high solvency rate during and after the crisis suggests firms are indeed capable of labour hoarding, and more so than in 2002-2003.



This chart shows the probability that someone who works in quarter t-1 is unemployed in quarter t, differentiated by type of contract (fixed, flexible (temporary), or self-employed). There is no hike in the probability for workers with a flexible type of contract, which is strange. The reason for having these type of contracts is flexibility. So, this chart suggest that companies during the crisis were not in the situation of having to fire workers immediately (and that labour hoarding was a voluntarily chosen course of action). Does this have to do with their relatively favourable financial position? Or can they act less risk averse, since they know they can start firing people as soon as it is really necessary?

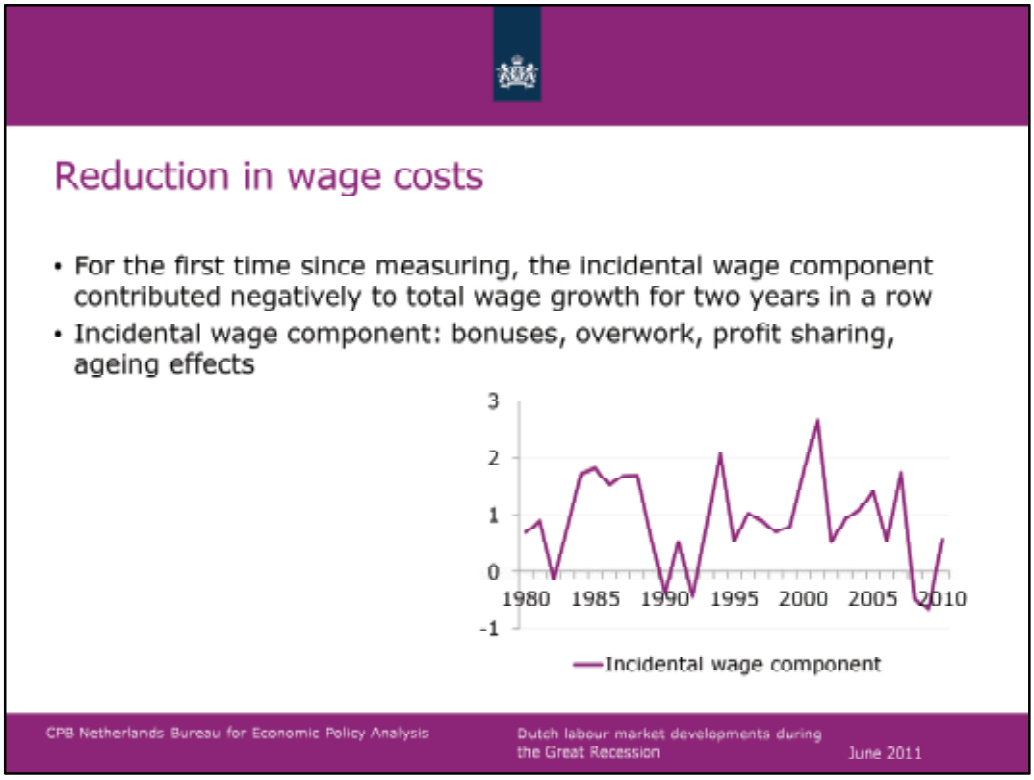
Note: share of flexible workers increased from 8% in 2001 to 9,5% in 2008



Other cost saving measures:

the decomposition of GDP on slide 6 used contractual hours worked (due to data limitations). However, hours actually worked can develop differently, f.e. if people do less overwork. And indeed, in 2008 the total number of hours actually worked in the total economy grew about 0.5%-point less than the contractual hours worked. However, if we compare this figure to the 2002-2003 recession, the growth difference in 2008 is not remarkably large. And in 2009 actual and contractual hours worked grow at the same pace. Therefore, as we tentatively claimed before, developments in the number of hours worked is not a major explanation for the Dutch (un)employment puzzle.

In the industry we see a large growth differential in 2009: almost 1.5%-point. However, in trade and construction, for example, actual hours worked already grow faster than contractual hours worked in 2009.



Other cost saving measures:

the incidental wage component measures the difference between macro wage growth and contractual wage growth. Usually, this difference is positive due to a composition effect: the population ages and with rising age-wage profiles, total wage growth exceeds contractual wage growth. Other elements in the incidental wage component are overwork payments, bonuses and profit sharing payments.

In 2008 and 2009 the incidental wage component was negative two years in a row, for the first time since we started measuring. As we saw, in 2008 this may have to do with reductions in overwork (hours actually worked declined more than contractual hours), but this is not the case in 2009. This suggests firms have found ways to cut back on wage costs without disrespecting current agreements. Especially compared to 2002-2003 (2002: +0.5%; 2003: + 0.9%) the difference is substantial.

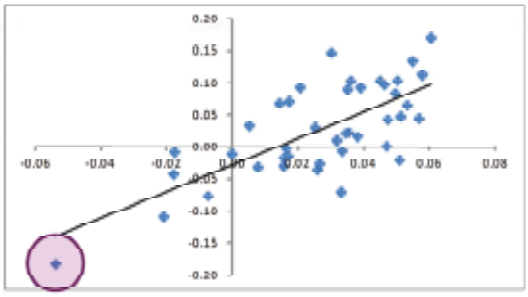
However, true as all this may be on a partial basis, if we look at contractual wage growth in 2009 it's relatively high. This was due to the fact that at the time of signing the (collective) wage contracts (say 2008), inflation was high and expected to remain high. However, oil prices dropped in the wake of the crisis, reducing inflation and raising real wages. Nevertheless, firms have found ways to cut back on wage costs.

Reduce investments

Financing labour hoarding by reducing capital investments?

Production growth market sector (x-axis) vs. business investments in fixed assets (y-axis)

Investments are somewhat lower than on average in the past, but difference is not significant.

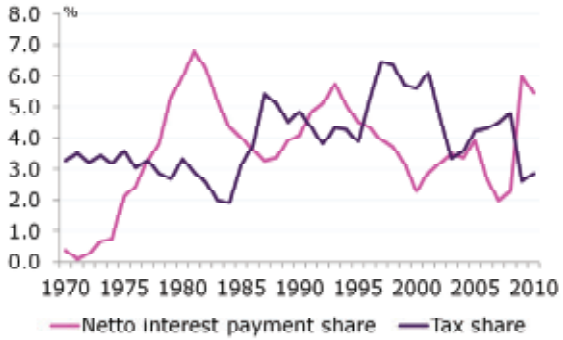


Investments were low, but not exceptionally, given GDP decline. The picture is in volume terms. The conclusion for values (price and volume) is the same.

Tax payments

Tax share non-financial companies went down in 2009:

- lower profits
- government allowed accelerated depreciation of investments



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Finally, the government helped: firms saw their tax share drop. In part this is just cyclical in nature (lower profits, less taxes to be paid), but the government also allowed accelerated depreciation in 2009, and again in 2010, thereby slightly improving firm profits.

(Bookkeeping: Labour income share + capital income share = Labour income share + profit share + tax share + interest payments share = 100)

Explanation: self-employed

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So, firms have experienced difficulties in finding qualified workers since halfway the nineties. With the first post-war generations turning 65 this year, employers may think labour market tightness is here to stay.

Next to this, firms were in good financial shape before the crisis (as was the case in the UK for example (Gregg and Wadsworth, 2010)), as profits were high and their solvency rate was too. During the crisis they could therefore absorb a loss in profitability. Furthermore, solvency did not decline substantially, in contrast to the years around 2000. In combination with some cost saving measures (most notably, a decrease of incidental wage payments and lower tax payments) companies decided AND were able to hoard labour to a considerable extent.

However...(next slide)

Self employed

- Idea: self employed saw their income decline during the Great Recession, but did not become unemployed, because
  - they may actually work full time without getting paid (looking for assignments instead of working on an assignment, do some paperwork, etc.)
  - a self employed person without assignments doesn't report as unemployed immediately
- No evidence at the macro level however

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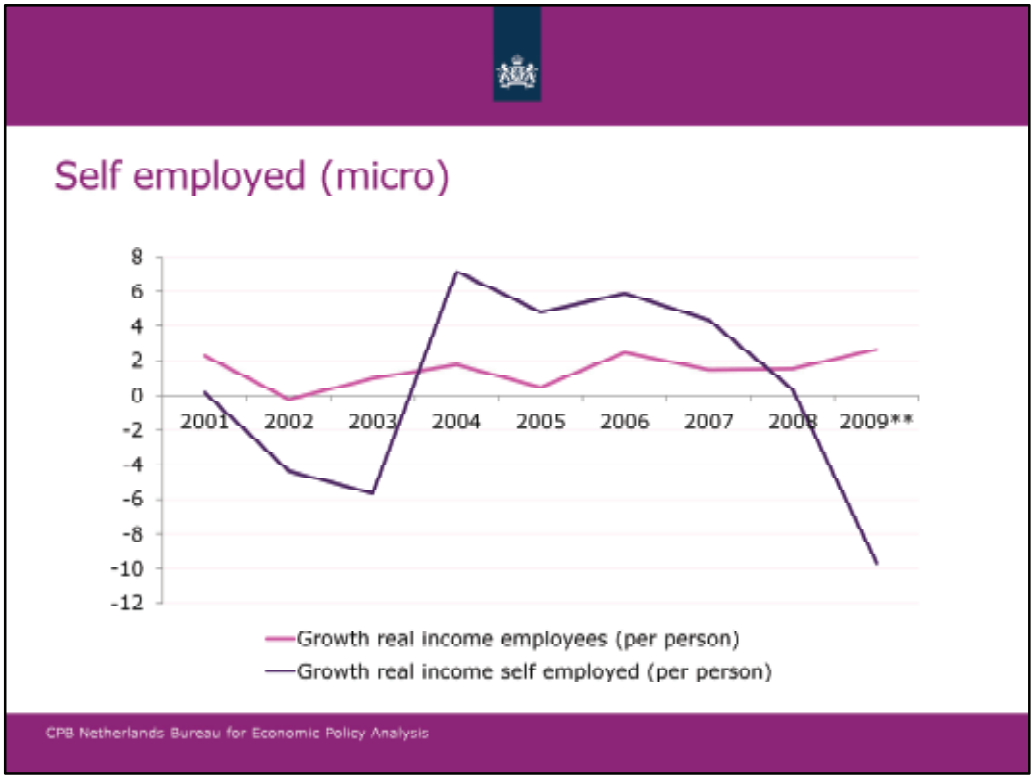
...An often heard story in the Netherlands concerns the role of the self-employed, especially those with no personnel (this latter group has grown substantially in recent years (but it still constitutes only a small part of the labour force)) (see e.g. Van der Ende et al., 2010; CPB, 2010a).

The idea is that self employed saw their income decline during the Great Recession, but did not become unemployed, because a) they may actually work full time without getting paid (looking for assignments instead of working on an assignment, do some paperwork, etc.) and b) a self employed person without assignments doesn't report as unemployed immediately (because he may not consider him/herself to be unemployed).

There seemed to be some evidence in macro figures, supporting the 'self employed hypothesis': production by the household sector declined substantially more than GDP in 2009. However, as Statistics Netherlands revised their figures, the evidence largely disappeared (the declines in household sector production and GDP were roughly in line).

But anyway, to get good information on the income of self employed, its more useful to look at microdata.



Indeed, at the micro level (personal income, from microdata) we see a substantial decline in 2009. However, is this decline extreme, given the large drop in GDP? To provide good estimates, we need longer timeseries (we're trying to get them). But even then, data for 2009 are preliminary and might not be reliable as of yet. So, it is too early for strong conclusions.

Conclusion

- Labour market was tight just before the Great Recession
- Firms may believe the scarcity of personnel to be a structural phenomenon

- Firms were in a financially good position
  - high profit levels
  - high solvency rates
- Firms were able to cut some other costs
  - most importantly: incidental wages, tax payments

- Result: labour hoarding

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