A Monthly Workers labourmarket sentimentindicator; Doing more with The Consumer Survey

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Discussion paper (09010)

Statistics Netherlands

The Hague/Heerlen, 2009

Explanation of symbols

.	= data not available
*	= provisional figure
x	= publication prohibited (confidential figure)
–	= nil or less than half of unit concerned
–	= (between two figures) inclusive
0 (0,0)	= less than half of unit concerned
blank	= not applicable
2005-2006	= 2005 to 2006 inclusive
2005/2006	= average of 2005 up to and including 2006
2005/'06	= crop year, financial year, school year etc. beginning in 2005 and ending in 2006
2003/'04–2005/'06	= crop year, financial year, etc. 2003/'04 to 2005/'06 inclusive

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

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Summary: Labour market indicators are among the most important economic indicators, both from the business cycle analysis perspective and for the general public. Currently, Statistics Netherlands publishes monthly data on the employment and unemployment of the labour force with a publication lag of almost two months. Because employment is sensitive to business cycle changes and these of course are highly mirrored in the labour force, more frequent and timely information on labour market developments would therefore be useful. This can be provided by a sentiment indicator constructed with outcomes of the Consumer Survey which are available on a monthly basis and without publication lag.

The aim was to construct a monthly labour market sentiment indicator for workers which can give a first indication of the growth direction of both the employed and unemployed labour force.

Initially six indicators were selected from the monthly Consumer Survey. Only three had a good coherence with the labour force. Parsimony decided to construct the workerssentiment with two indicators: 'households attitudes towards the current business conditions and consumers expectations with regard to unemployment'.

The workerssentiment has a high correlation both with the growth of the employed and unemployed labour force (0.91;2001-2007). Because of this and its publication lead of nearly two months, the workerssentiment can be used to give first signs of the <u>direction</u> into which the number of employed and unemployed persons of the labour force will develop.

Keywords: Consumer Survey, unemployed and employed labour force, workerssentiment, cross correlation, turning points and parsimony, business cycle and medium term.

1. Introduction

Nowadays sentimentsindicators are widely used and have been increasingly become popular. For many years Statistics Netherlands publishes the Producer Confidence and Consumer Confidence which measure the sentiment of manufacturing producers and that of consumers. Up to date there are no sentimentindicators constructed for the labour market. The pity of it is that there are outcomes available which can quickly give an indication of developments in the labourmarket which are closely related to changes in the macro economy but also are very important for employees in the sense of job security and getting ahead.

To fill this gap, monthly labour market sentimentindicators have been developed for both employers and workers (consumers). This document deals with the so called workerssentiment. This workerssentiment is a indicator of workers attitudes towards the labour market and has been constructed with outcomes from the Consumer Survey. It has been found that the workerssentiment is a reliable early indicator for the development of the unemployed and employed labour force as a follow up of job opportunities or labour demand. In the growth rates of jobs and vacancies as well as in that of the labour force there is a strong business cycle component and likewise in the labour market expectations of consumers or workers. Indeed it is common sense knowledge that expectations of consumers are highly influenced by labour market developments. Here two and two has been put together.

Besides this, the workerssentiment complements the labour market sentimentindicator of employers. The employerssentiment is another labour market indicator which has been constructed to give an early indication of labour demand [Van Ruth and Wekker 2008].

In the second paragraph some special groups of the labour force are introduced because they supply labour depending on a particular stage of the business cycle, either in a contraction or in an expansion. By their very nature from time to time these groups are not included in the employed or non employed labour force as a high frequency statistics. In the third paragraph methodology and the construction of the workerssentiment are introduced. In the fourth paragraph the constructed labourmarket sentimentindicator is confronted with monthly outcomes of the registered unemployment and quarterly number of manyear jobs. However its applicability or primairy use as a sentimentindicator for the labourmarket will depends on its performance with the absolute year growthrates of both the number of employed and non employed persons, the two most important groups of the labour force. In the final section the results are summarized and conclusions are drawn.

2. Labour force groups and the business cycle

Managers tendency or business surveys are not the only possibilily to get quick information of the business cycle and the labour market. With the monthly outcomes from the Consumer Survey (CS) this is also done for the ecnomic climate and the labour market. Because the majority of persons who are interviewed are employed and non employed workers, construction of a workerssentiment with outcomes of the CS is promising. More specifically, assesments and expectations of the CS will be used to construct a sentimentindicator as an expression of consumers attitudes towards the labour market.

The attitudes and expectations of consumers (or workers) are largely determined by the development of the labourmarket. Job security and getting ahead are primairy determinants in the financial expectations and for other important decisions of employees. This is why consumers or workers are highly interested in the macro-economical development; the number of jobs in the labour market are in the medium term largely determined by the business cycle. When the economy boosts much more jobs are created then lost. Workers are more secure of their job, it is easier to get ahead or hop from job to job and more unemployed persons find a job. Often this is parallelled by an increase in the Consumer Confidence.

Besides this another aspect of the labour market plays a role in the relation between employment and Consumer Confidence. The labour supply of workers is related to the labour demand of employers. Labour demand is essentially the sum of the number of manyears and unfilled vacancies, of which quarterly outcomes are available. Every month there are labour supply outcomes available of the employed and unemployed persons who are immediately available to work for at least 12 hours a work. These two groups constitute the *actual* labour force. But this is not the whole story. Interesting background information is that while these two primairy labour market groups cyclically change in time theirt numbers are significantly influenced by the supply and pull back of labour of persons outside the actual labour force.

As has been said the Consumer Survey (CS) deals among others with the economy and the labour market. Households or consumers should response on these and other topics such as their finance and buying willingness. In the CS employed and unemployed persons are by far the largest group (59%). Other interviewed groups are retired persons (29%), disabled persons, students and also persons working in the household (12%). Of course persons from the latter category will supply or pull back labour at certain times in the business cycle as has been mentioned in paragraph two. These other groups are now shortly described and next is supported with statistical evidence for the Netherlands. Having said this the CS can be considered as representative for the working and unemployed labour force because the employed and unemployed persons form a stable majority in the CS. This is thus the backbone for constructing a reliable workerssentiment.

In a growing economy, entrepreneurs will fill their orderbooks and when this is coupled with an optimistic economic outlook, job opportunities will increase importantly. On the other hand during an economic contraction jobs will be reduced and unemployment levels will increase considerable. But regardless of the factual stage of the business cycle there is always more labour supply available then is demanded, both in the actual and the potential labour force.

In the recovery stage of an expanding economy first unemployed persons who are immediately available to work will decrease in numbers and speed. Some years later, a group of so-called 'discouraged workers' will try to find a job, these are persons who are not official counted by that time as unemployed [Statistics Netherlands, Social Economic Trends, 2nd quarter 2008; only in Dutch]. This group is quite smaller then the official counted unemployed workers who are directly available for work. They are named 'discouraged' because there is not much of a chance that they will find a job in recession times and at times when the economy starts to recover. Only later on in the business cycle, after some years of sustained economic recovery, discouraged persons will try to find a job as their employment chances becomes better and better. Indeed, their little chance to find a job is proved by the fact that in economic bad times discouraged persons loose their job more quickly, as can be seen at that time by a relative higher increase compared to the officially 'unemployed persons'. In this sense discouraged workers are involuntary unemployed, their unemployment not only last longer but they become sooner unemployed than they themselves would like. Because discouraged workers are not directly available for work, they are not classified as 'unemployed' but as discouraged. The labour supply of both these two groups is 'pro-cyclical' but their utilisation don't start or end at about the same time.

There is also a so-called group of 'added workers' which is not classified as labour force. Added workers will try to find a job only during a recession because their partner has become unemployed, either part-time or full-time. Seemingly they supply labour because of financial reasons. Thus most of the time the added workers can be regarded as unutilised labour supply (potential labour force) and their supply is 'anti-cyclical'. During a recession they enter on the labour market as 'unemployed persons' and when they have found a job they move to the employed persons of the labour force. In financial better times of the households they quit working and again become a part of the potential labour force. Added workers are voluntary unemployed persons.

Labour supply of discouraged workers are only observed yearly in the Netherlands. During the last economical slowdown, roughly between 2001-2003, the number of employed persons decreased much lesser (with 117.000) then the number of unemployed persons did increase (with 187.000). From the difference of 60 thousand more unemployed persons the half, 30 thousand, were discouraged workers who became unemployed. It is in the slump as has mentioned before that added workers will try to find a job, but data are not available.

During the next period of economic expansion the number of employed persons increased much more than the number op unemployed persons in the labour force did decrease. On the one hand there is the group of added workers who will now quit working and move back to the potential labour force and on the other hand there is the unemployed labour force, discouraged workers and other groups who will find a job as the economy prospers. Thus in 2006 and 2007, about two years after economic recovery, the employed labour force grew with 156 thousand respectively and 185 thousand (341.000) while the unemployed labour force decreased only with 69 and 70 thousand (139.000). Thus more than 200 thousand persons outside the official unemployed labour force did find a job, many of them were discouraged workers.

The employed and unemployed persons are the two maingroups distinguished monthly in the labour force. Their development is used as a target variable in the construction of a reliable workerssentiment, thus for early detection of developments in the labour force or supply in the labour market. Of course the proof of the pudding is in the eating, thus lies in the strength of the statistical relation between the workerssentiment and these two main labour force groups. Of the other groups who supply or pull back labour there are no monthly statistical outcomes available. Only two of these groups[1] were highlighted because they seemingly influence significantly the outcomes of the two maingroups who are monthly observed in the labour force[2]. Only for the group of 'discouraged workers' yearly outcomes are available.

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[1] In the literature mention has been made of 'intertemporal labour substitution' [Snowdon et all, 1996]. At certain times higher real wages makes labour more attractive than leisure and then more labour is supplied (substitution effect). But the reverse is also the case, workers who substitute higher income for more leisure (wealth or income effect). It is assumed that the substitution effect of higher wages has a larger effect on the labour supply than the income effect has. In both cases financial incentives motivate either voluntary supplying labour on or withdrawing labour from the market. Clearly the motivation of added workers to supply labour is different, not because of higher real wage but because of income need. Also supply of labour by discouraged workers does not depend on a money incentive.

[2] By definition jobhoppers also supply labour but are not separately observed monthly. Jobhoppers are working persons from the employed labour force. On average jobhoppers composite about 6 percent of the employed labour force (2001-2006).

3. Workerssentiment: methodology and construction

A more detailed description of the methodoly to construct sentimentindicators can be found in Wekker 2006 and in Van Ruth and Wekker 2008. A first methodological guideline is that the constructed workerssentiment should not lead or lag on average with regard to its target or reference indicator, i.e. the growth rates of the employed and unemployed labour force outcomes. Secondly, selection of individual indicators for the workerssentiment is based on a correlation of at least 0.70 with the target variable. However all indicators who comply to this rule but have a lead or lag of more then three months are dropped. This is to ensure that the workerssentiment will not really lead or lag on avarage. Important is also the turning point relationship between the constructed sentimentindicator and the two target variables. A guideline is that on average turning points of the sentiment indicator should preferably coincide but may not lead or lag more then six months compared with those of the reference indicators, the two labour force statistics. Seasonally adjusted outcomes are used because direction and changes in the sentimentsindicator can be detected more easily. Also a bias, a structural high or low movement existing in the balances is removed in order to identify periods of optimism and pessimism straight.

Table 1 Six questions of the Dutch Consumer Survey

Question 1: Current business conditions/ past 12 months (CurBus)
How do you think the general economic situation in our country has been changed in the past twelve months: it will… got a lot better (++); got a little better (+), stayed the same, got a little worse (-), got a lot worse (--), don't know.

Question 2: Future business conditions /next 12 months (FutBus)
And how do you expect the general economic situation in our country willdevelop over the next 12 months ? It will… get a lot better (+) / get a little better (+) / stay the same / get a little worse (-) / get a lot worse (-) / don't know.

Question 3: Current financial position /past 12 months (CurFin)
How has the financial situation of your household changed over the last 12 months ? It has… got a lot better (+) / got a little better (+) / stayed the same / got a little worse (-) / got a lot worse (-) / don't know.

Question 4: Future Financial position /next 12 months (FutFin)
How do you expect the financial position of your household to change over the next 12 months ? It will… get a lot better (+) / get a little better (+) / stay the same / get a little worse (-) / get a lot worse (-) / don't know.

Question 5: Buying willingnes of durable goods (BuyDG)
In view of the general economic situation, do you think now it is the right moment for people to make major purchases such as furniture, electrical / electronic devices, etc. ? Yes, it is the right moment now (+) / It is neither the right moment nor the wrong moment / no, it is not the right moment now (-) / don't know.

Question Future unemployment /expectations for next 12 months (FutUne)
How do you expect the number of people unemployed (unemployment) in this country to change over the next 12 months ? The number will… increase sharply (+) / increase slightly (+) / remain the same / fall slightly (-) / fall sharply (-) / don't know.

The balances from the following six questions of the CS were firstly selected to construct the workerssentiment (Table 1). The balance is the difference of the percentage of optimistic and pessimistic consumers.

First the seasonally adjusted balances were correlated with each other (Table 2; see Table 1 for the explanation of abbreviations)

Table 2 Correlations of selected CS indicators 1987-2007.

Correlations	FutBC	CurFin	FutFin	BuyDG	FutUne
CurBC	0.71	0.65	0.75	0.80	0.92
FutBC		0.05	0.38	0,29	0.71
CurFin			0.84	0.87	0.50
FutFin				0.84	0.67
BuyDG					0.70

The highest correlation exists between CurBus conditions and Futune, next between CurFin and FutFin on the one hand and BuyDG on the other hand and finally between CurBus and BuyDG.

Coss correlation with the growth rates from the unemployed and employed labour force was applied to determine which of these six indicators can be selected for construction of the workerssentiment. In Table 3 the highlighted outcomes of the cross correlation between indicators of the CS and the two labour force groups are those who are in line with methodological guidelines; i.e. have at least a 0.70 correlation and a maximum of 3 months leads or lag with the two target variables.

Table 3 Cross correlation indicators CS and Labour Force 2001-2007; CS lead (-), CS lag (+), coincident CS and LF (0).

CS-indicator	Labour Force (LF)			
	Employed		Unemployed	
	Correlation		Correlation	
	Coincident	Optimal	Coincident	Optimal
FutFin	0; 0.554	-2; 0.599	0; 0.389	-9; 0.570
CurFin	0; 0.581	-2; 0.597	0; 0.442	-8; 0.541
FutBC	0; 0.421	+11; 0.685	0; 0.516	+9; 0.719
CurBus	0; 0.878	+1; 0.896	0; 0.891	+1; 0.891
BuyDG	0; 0.777		0; 0.700	-2; 0.714
FutUne	0; 0.862		0; 0.892	

Only CurBC, FutUne and BuyDG have acceptable correlations with the growth rates of the two labour force groups. None of the two financial indicators had a good correlation with the two labour force indicators. Thus according to methodological

guidelines CurBC, FutUne and BuyDG can be selected in principle for construction of the workerssentiment. Two of these three indicators, CurBS and BuyDG, are used in the Consumer Confidence published by Statistics Netherlands.

Besides as an arithmetic average of these three indicators, the workerssentiment can also be constructed with weights, this to ensure a right to exist with regard to the Consumer Confidence. Weights were given to the three indicators according to their correlation with the labour force groups, FutUne got a 50 percent weight while CurBC got a 35 and BuyDG 15 percent. The arithmetic and weighted workerssentiment however had the same correlation with the two labour force target variables, namely 0.90 (see Table 4).

Table 4 Crosscorrelation workerssentiment and labour force

lead = -	Workerssentiment with 3 CS-indicators				Workerssentiment: with 2 CS-indicators			
Coinc =0	weighted		average		weighted		average	
lag =+	Employed LF	Unempl. LF	Employed LF	Unempl. LF	Employed LF	Unempl. LF	Employed LF	Unempl. LF
+4	0.780	0.875	0.807	0.888	0.757	0.860	0.761	0.865
+3	0.821	0.897	0.844	0.906	0.800	0.885	0.804	0.888
+2	0.845	0.902	0.865	0.907	0.826	0.893	0.831	0.895
+1	0.872	0.905	0.886	0.905	0.856	0.899	0.860	0.901
0	0.888	0.902	0.897	0.897	0.875	0.899	0.879	0.900
-1	0.908	0.907	0.914	0.898	0.898	0.907	0.901	0.907
-2	0.908	0.906	0.908	0.892	0.902	0.909	0.905	0.909
-3	0.908	0.899	0.902	0.878	0.906	0.906	0.908	0.905
-4	0.901	0.882	0.888	0.855	0.904	0.894	0.903	0.892

There is no reason to prefer a weighted workerssentiment other then to construct it as much as possible independent from the Dutch Consumer Confidence.

But parsimony[3] can also be used to determine how many indicators are ultimately needed to construct a workerssentiment. In this case correlation strength is a criterion to select indicators. Because BuyDG has less high correlation with the two labour force reference indicators then CurBus and Futune it can be dismissed. This also means that a construction of a workerssentiment with two instead of three indicators this increase a right to exist besides the Consumer Confidence. But it must has a coherence with the labour force indicators which is at least the same as the one with three indicators has. Otherwise it will not fulfil the condition of having at least the same explaining power as parsimony demands.

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[3] When two concepts have the same explaining power and there is no special reason to choose the one above the other, a scientifically rule says that the concept with the smallest number of variables should be choosen. Even a workerssentiment for the labour market can be constructed with only indicator, FutUne, but this possibility is skipped given the practice to construct sentimentindicators with at least two indicators. Because the labour market is strongly related to the economy, it is very convenient to construct the labour market sentiment with consumers attitudes towards the current economic conditions amd their expectations with regard to jobs development or unemployment.

Base on two indicators it is again possible to construct a weighted and an arithmitic averaged workerssentiment. In the weighted workerssentiment FutUne was given a weight of 65 percent and CurBC the other 35 percent. Thus FutUne the only one indicator not common to the Consumer Confidence, gets the highest weight while CurBC a common indicator is weighted lower but somewhat higher then in the Consumer Confidence.

First of all these two constructions of the workerssentiment have the same correlation with the employed and unemployed labour force, namely 0.90 (Table 4), thus the parsimonial constructed workerssentiment should be preferred, based on two instead of three indicators. Secondly statistically there is no reason to opt for the weighted indicator workerssentiment, other then a right to exist independent from the existing Dutch Consumer Confidence [4].

In Figure 1 the two underlying indicators are published together with the workerssentiment as the simple arithmetic mean. The amplitudes of CurBC and FutUne are to a very high degree common and also have a coincidental course (0; 0.917).

Figure 1 Workerssentiment, balance of positive and negative percentage

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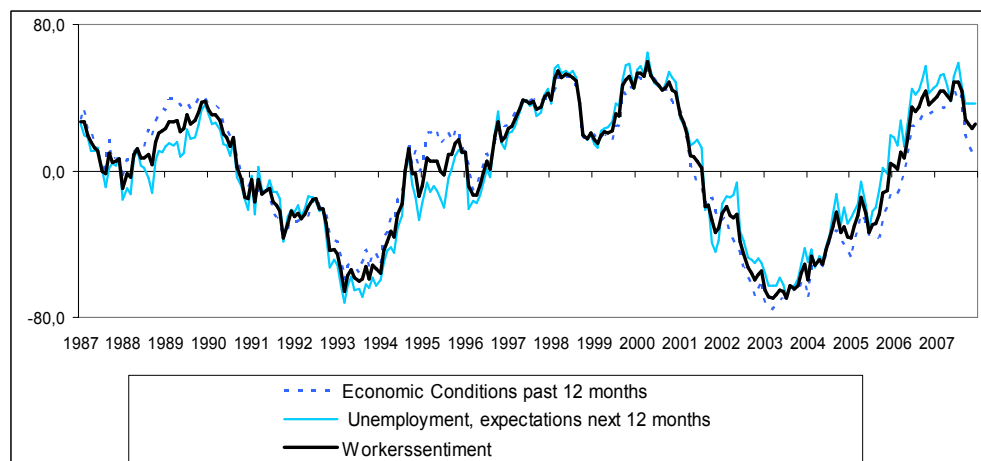
[4] Statistics Netherlands publishes the producer and consumer confidence as an arithmetic mean. In the workerssentiment as an arithmic mean CurBus is weighted for 50 percent which also is higher then in the Consumer Confidence (20 percent). Then the focus doesn't lie on the number of common indicators but on their weight.

4. Results workerssentiment

The construction of the workerssentiment has been done with the employed and unemployed labour force as reference indicators. Because these are rather somewhat short time series, a long historical record of the workerssentiment to track reliable changes in the labour market is done with the growth rates of the monthly registered unemployment and the quarterly number of manyears.

### 4.1 Workers' labourmarketsentiment and registered unemployment

The correlation between the workerssentiment and the (inverted) registered unemployment is 0.860 (1987-2007). With a lead of three months for the workerssentiment the correlation is highest at 0.882. Because this is ample higher than the non optimal correlation the workerssentiment should also not be regarded as a leading indicator in this case.

Figure 2: Workerssentiment and registered unemployment.
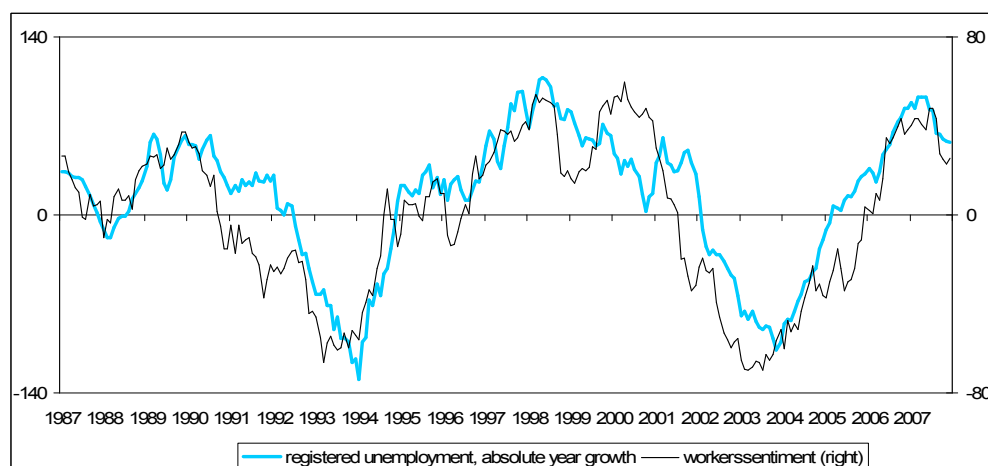
Looking at turning points, at upturns the workerssentiment leads consistently, this is also the case for two of three common downturns.

*Figure 3: Workerssentiment and number of manyears.*

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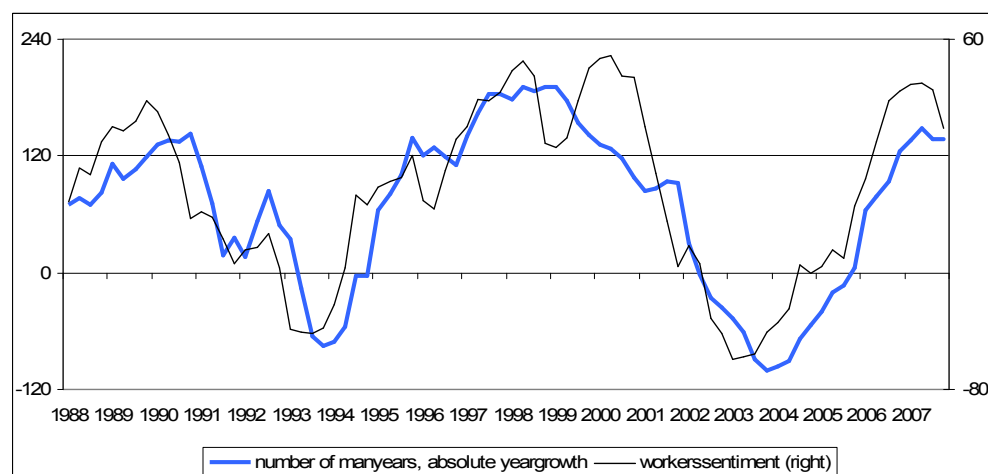
With the growth rates of the number of manyears the workerssentiment also has a high correlation (0.90), is this leading with one quarter (1988-2007). At upturns and downturns often the workerssentiment lead compared with those of the number of manyears. Although in this case the workerssentiment must be regarded as a leading indicator according to methodological guidelines, is ability to track changes in employment development is reliable, given the correlation strength.

4.2 Workerssentiment and the employed and unemployed labour force

Measured with cross correlation, historically the workerssentiment turned out to be a reliable labourmarketindicator for the development of the registered unemployment and the number of manyears. This corroborates the construction of the workerssentiment to track developments of the labour force. But the performance of the workerssentiment can't be judged on the short term. From 2001 till 2003, for three years the growth of the labour force declined while from 2004 till 2007 for four years there was an increase. These two periods of increasing and decreasing developments of the labour force can cyclically be viewed as medium term and are used to judge the performance of the workerssentiment.

Cross correlated the workerssentiment leads one month optimal (0.905) on the development of the employed labour force measured over 2001-2007. Not synchronized the correlation is already high (0.879). The correlation with the unemployed labour force is also optimal at one month lead (0.907), slightly higher then non optimal cross correlation (0.900). In Figure 4 the workerssentiment is pictured together with the two indicators of the labour force.

Figure 4: workerssentiment and unemployed and employed labour force.
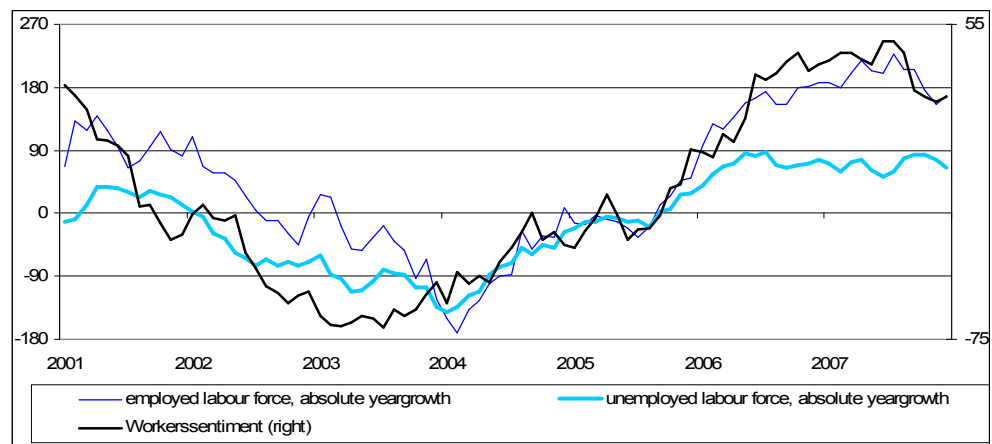
Besides a near co-movement in time turning points of the workerssentiment must also be in line with those of the target variable, this to comply to another important methodological condition of sentimentindicators. Compared with the up turning point date of the unemployed (January 2004) and the employed labour force (February 2004), the corresponding change occurred six and seven months earlier in the workerssentiment (July 2003).

Looking at 2007 it seems as if another turning point is going to happen. In that case in the workerssentiment the downturn can be dated in July 2007, in the unemployed labour force in October 2007 and in the employed labour force also in July 2007. In the unemployed labour force a turning point can also be dated in June 2006, but the latter one, which is dated in Oktober 2007 corresponds better with the development and turning point date of the employed labour force and the workerssentiment. That is to say could be regarded as more realistic business cycle change in the medium term.

Ex post the workerssentiment leads on average at the most one month on the two labour force series. The correlation is high, about 0.91. But far more important for its practical use is the fact that the workerssentiment has a publication or ex ante lead of almost two months on the employed and unemployed labour force. The turning points dates of the workerssentiment comply more or less to the condition of at most six months difference with those of the two target variables.

The workerssentiment has also been compared with the growth rates of the total labour force, as the sum of the employed and unemployed persons. In this case the workerssentiment is a leading indicator (12;0.88). But the workerssentiment is not constructed to be uses as a leading indicator.

5. Discussion, summary and conclusions

Measured in the medium term, business cycle changes in the labour force are contributed by more groups then the two groups of employed and unemployed persons who are monthly observed and published by Statistics Netherlands. At particular stages in the business cycle the labour supply of other groups such as added and discouraged workers can contribute significantly to the number of the labour force, but their labour supply is not immediately available according to existing definitions of employed and unemployed persons. Outcomes of the Consumer Survey can be used to track early developments in the employed and unemployed labour force in the medium term because of high correlations and also because the outcomes of the Consumer survey has a broader coverage then the monthly observed labour force.

About sixty percent of the sample consists of employed and unemployed consumers. This is the backbone of the relation with the labour force. Then there is a group of more then 10 percent of consumers such as persons working in the household and students which can be viewed as part of the potential labour force. Especially persons form this second group, as a part of the potential labour force, can supply labour from time to time. Thus at least implicitly the Consumer Survey covers a broader range of labour supply then which is monthly observed with the two official labour force groups. Finally there is also a roup of (pre) retired persons of almost 30 percent.

If particular indicators from the Consumer Survey are highly correlated in the medium term with the number of employed and non employed persons, then it reasonable to conclude that consumers or workers carefully watch how the economy and the labour market cyclically develop. If the workerssentiment can give early reliable signs of cyclical changes of (immediately available) labour force through the number of employed and unemployed persons, this also implies that given the sample structure, changes in the labour force caused by other supply groups will also be included. The labour supply of these groups is not immediately available but varies with the stage of the business cycle. For instance discouraged workers will find a job some years later in a economic booming period but will loose their job in a early stage of a economic slowdown. Added workers will enter the labour market in the slump because of financial needs of the households.

Amongst others the Consumer Survey deals with consumers attitudes towards and expectations of the economical situation and of unemployment and also of their financial situation. Out of six indicators selected form the Consumer Survey only two had very high correlations with the employed and unemployed labour force: the economical situation of the past 12 months and the unemployment expectations for the next 12 months. Ohers indicators form the Consumer Survey have poor and less high correlation with the two indicators of the labour force. It was possible to construct a workerssentiment with three survey indicators. But parsimony decided with how many indicators theworkerssentiment was constructed. The reason for this was a right to exist, i.e. to enhance independency as much as possible from the

Consumer Confidence. **W**ith the two mentioned indicators the workerssentiment has been constructed. Consumers or workerssentiment with regard to unemployment or job development highly correlates with their opinion of the current economical situation and the expected development of unemployment.

Besides early indications of changes in the labour force, the workerssentiment is a attractive supplement to the employerssentiment which focuses on labour demand.

Between the workerssentiment and the employed and unemployed labour force a high statistical correlation (0.91) exist. This coherence also holds with regard to turning points consistency. The co-movement between sentiment and labour force is almost one to one, that is to say they coincide with each other, on average the workerssentiment has no historical lead or lag. Because the workerssentiment has a publication lead of almost two months on outcomes of labour force statistics it is an attractive early labour market indicator. The workerssentiment can also be regarded as complementary to the employerssentiment, another labour market indicator, because there is this old wisdom that supply and demand goes hand in hand.

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