

Consumer surveys
Methodology, analytical use and presentation of results

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CONSUMER SURVEYS

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CONSUMER SURVEYS

Introduction

Concepts like attitudes, expectations and sentiment are frequently used when people refer to the psychological mood of consumers. Attitudes reflect the feelings that consumers have about the current situation and expectations are attitudes that refer to some point in the future. Both attitudes and expectations are aggregated into an overall category called consumer sentiment or confidence.

The development of surveys to monitor consumer sentiment is mainly associated with work by Professor Katona at the University of Michigan. Katona found that measures of consumer sentiment provide advanced indications of changes in consumer spending and saving behaviour as well as indicating major changes in expenditure of durable goods. What is of particular importance is that consumer sentiment is a *net* contributor to the explanation of changes in discretionary consumer spending over time. That is, it provides unique information, which is not found in other the variables generally perceived to explain consumer spending, such as income and employment.

The first part of this paper describes the harmonised consumer survey conducted in among the 15 European Union Member countries. Presentation and use of consumer survey results by the OECD and the European Commission are described in the second part of the paper.

I The EU harmonised consumer survey

The first EU harmonised consumer survey was conducted in 1972. The questionnaire used was based on the result of experiments carried out in France and the West Germany and work by Professor Katona.

At first, the survey was based on a household panel and conducted three times a year. The survey was changed to an omnibus survey and the frequency was gradually changed to a monthly basis in all countries. Since July 1986, all old EU member countries except Luxembourg conduct monthly surveys and since October 1995 monthly surveys are conducted in the new EU member countries: Austria, Finland and Sweden.

Sampling and data collection

The survey is conducted in each country on the basis of sample of 1 500 – 2 500 consumers, depending on the size of the economy. The selection of individual persons is usually performed by a random stratified sampling method or by simple random sampling. Survey characteristics of the different consumer surveys conducted in individual EU countries are presented in Table 1.

Data collection is in general performed by either of the following two methods: (1) face-to-face interviews or (2) telephone interviews. Today, telephone interviews are used in more and more countries replacing the very expensive face-to-face interviews. The sampling frame used for telephone interviews is

the telephone register and this may introduce biases in the sampling procedure as certain groups of persons are under-represented.

The harmonised questionnaire

The aim of the consumer survey is to monitor consumer sentiment and the questionnaire is designed to serve this purpose by including questions on the opinion of households that cover four main themes:

- (1) the general economic situation as it affects consumption and savings;
- (2) personal financial situation and the capacity to save;
- (3) intentions with regard to purchase of durable consumer goods and
- (4) intentions with regard to housing

The questionnaire is made up of the following twelve *monthly questions*:

- 1 Current financial situation of household
- 2 Expected financial situation of household
- 3 Current general economic situation
- 4 Expected general economic situation
- 5 Current cost of living/price trend
- 6 Expected cost of living/price trend
- 7 Expected unemployment
- 8 Current conditions for making major purchases
- 9 Expected major purchases
- 10 Current conditions for making savings
- 11 Expected savings
- 12 Current characteristics of financial situation of household

and the following three questions included once a quarter (January, April, July and October):

- 13 Expected car purchase
- 14 Expected home purchase
- 15 Expected home improvements purchase

An outline of the questionnaire is set out in Annex 1.

Results by categories

The results obtained for each question are broken down by category of respondents and by reply option. Respondents are categorised by the following criteria: income, occupation, education, age and sex to take into account differences in consumer behaviour.

The definitions of the strata used for the different categories are as follows:

Household *income* is divided into four groups, according to the level of income, with each group defined as four excluding parts of the sample, with each part containing approximately one quarter of the total

number of respondents. The intervals for the income groups are changed depending on the evolution of inflation.

Occupation is reported for the following 10 categories:

Self employed plus professionals (incl. employers/ family workers, excl. self-employed farmers)
Farmers (self-employed) (incl. self-employed professionals)
Clerical plus office employees
Skilled manual workers
Other manual workers (unskilled)
Total workers (incl. armed forces)
Other occupations

Full-time worker
Part-time worker
Unemployed

Education is divided into the following three groups: (1) primary, (2) secondary and (3) higher level.

Age is reported for the following four groups: 16-29, 30-49, 50-64 and 65 years or older.

Table 1 Consumer surveys in EU countries

Survey characteristics

<i>Country</i>	<i>Type of survey</i>	<i>Sample size</i>	<i>Response rate (%)</i>	<i>Sampling method</i>
Belgium	face-to-face interviews	2 000	na	random selection of sample points, then selection by quotas
Denmark	telephone interviews	1 800/2 000 depending on survey date	65-75	simple random sampling among population aged 16 years or older; weighting criteria: sex, age, urbanisation, material status and type of housing (correction for bias due to non-response)
Germany	face-to-face interviews	2 000	80	quotas; weighting criteria: age, sex, size of household job of the head of household, size of town, region
Greece	face-to-face interviews	1 850	na	stratified multistage random sampling; sampling fraction:0.62/1000
Finland	telephone interviews	1 750	85	rotating panel among population aged 15-74 years
France	telephone interviews	3 300	60	simple random sampling from electronic directory; weighting criteria: age, size of household, job of the head of household, income, type of municipality, region
Ireland	face-to-face interviews	1 680	75	stratified random sampling (30 survey areas covering the country)
Italy	face-to-face interviews	2 000	100	three-stage random sampling; weighting criteria: municipality, household, sex age, job of the head of the family
Netherlands	telephone interviews	2 000	70	two-stage random sampling (municipality, addresses)
Portugal	face-to-face interviews	2 000	90	multi-stage random sampling and quotas for selection of who in the household should be interviewed
Spain	face-to-face interviews	2 000	96	random sampling of households; quotas for selection of who in the household should be interviewed; weighting criteria: region, type of housing, sex and age.
Sweden	telephone interviews	2 200	82	stratified random sampling among population aged 18-64 years; weighting criteria: region, sex, citizenship, employment
United kingdom	face-to-face interviews	2 000	na	quotas; weighting criteria: sex age, job, class

II Presentation and use of consumer survey results the OECD and the European Commission

Confidence indicators derived from business and consumer survey results are of key importance in assessing short-term economic developments. These sentiment indicators give crucial information on business and consumers assessments of the current economic situation and their intentions and expectations for the future.

Business survey indicators and related composite confidence indicators have been collected and published by the Statistics Directorate for a long time and used as input series for the calculation of leading indicators for OECD member countries.

The Economics Department makes use of both business and consumer confidence indicators in the analysis of short-term economic developments in member countries. Business confidence indicators are mainly used to get advanced information on output growth and in particular, warnings on approaching cyclical turning points, while consumer confidence indicators are used to obtain valuable information on the likely development of real private consumption and household saving.

The increased use and availability of consumer confidence indicators across OECD member countries over recent years have prompted the Statistics Directorate to collect and publish such sentiment indicators on a regular basis. Since October 1996, consumer confidence indicators for 17 OECD member countries are published in the monthly publication “Main Economic Indicators (MEI)”. An overview of the consumer confidence indicators published in the MEI is presented in Table 2 on page 7.

The aim of this part of the paper is to give a short summary of how these confidence indicators are calculated and indicate differences between national indicators and the consumer confidence indicators calculated by the European Commission.

In addition, this part of the paper briefly describes the relationships between consumer confidence indicators and two measures of aggregate economic activity - - GDP and total industrial production - - for a set of OECD countries. The timing relationships between confidence indicators and economic activity are presented in Table 3 on page 19 and give some indication on how well these indicators are correlated with output and their possible use for assessing the current state of the economic cycle.

The relationship between the results of the EU harmonised consumer survey and corresponding quantitative statistics is discussed in a final section. The specific areas of quantitative (statistical) data with which consumer survey results could be compared are identified and correlation results are presented for the following variables: general economic situation, unemployment, cost of living (consumer price index) and consumer confidence indicator.

Table 2 Consumer Confidence Indicators
Published by the OECD in the monthly publication - -Main Economic Indicators

	<i>Start year</i>	<i>Periodicity</i>	<i>Unit</i>	<i>Adjustment</i>	<i>Source (1)</i>
United States	1978	M	1990=100	SA	Michigan
Japan	1987	Q	Percent	SA	EPA
New Zealand	1988	Q	Normal=100		WBC
Austria	1977	Q	Balance		WIFO
Belgium	1973	M	Balance	SA	EC
Denmark	1990	M	Balance		DANSTA
France	1987	M	Balance	SA	INSEE
Germany	1973	M	Balance	SA	EC
Greece	1986	M	Balance	SA	EC
Ireland	1986	M	Balance	SA	EC
Italy	1990	M	1990=100	SA	ISCO
Netherlands	1973	M	Balance	SA	EC
Portugal	1986	M	Balance	SA	EC
Spain	1986	M	Balance	SA	EC
Sweden	1993	M	Balance		NIER
Switzerland	1972	Q	Balance		OFQC
United Kingdom	1974	M	Balance	SA	EC

(1) Sources:

Michigan	Survey Research Centre at the University of Michigan
EPA	Research Bureau of the Economic Planning Agency
WBC	Westpac Banking Corporation and McDermott Miller Limited
WIFO	Austrian Institute of Economic Research
DANSTA	Danmarks Statistik
INSEE	Institute National de la Statistique et des Etudes Economiques
ISCO	Instituto Nazionale per lo Studio della Congiuntura
NIER	Konjunkturinstitutet
OFQC	Office Federal des Questions Conjuncturelles
EC	European Commission

II.1 Consumer Confidence Indicators published by the OECD

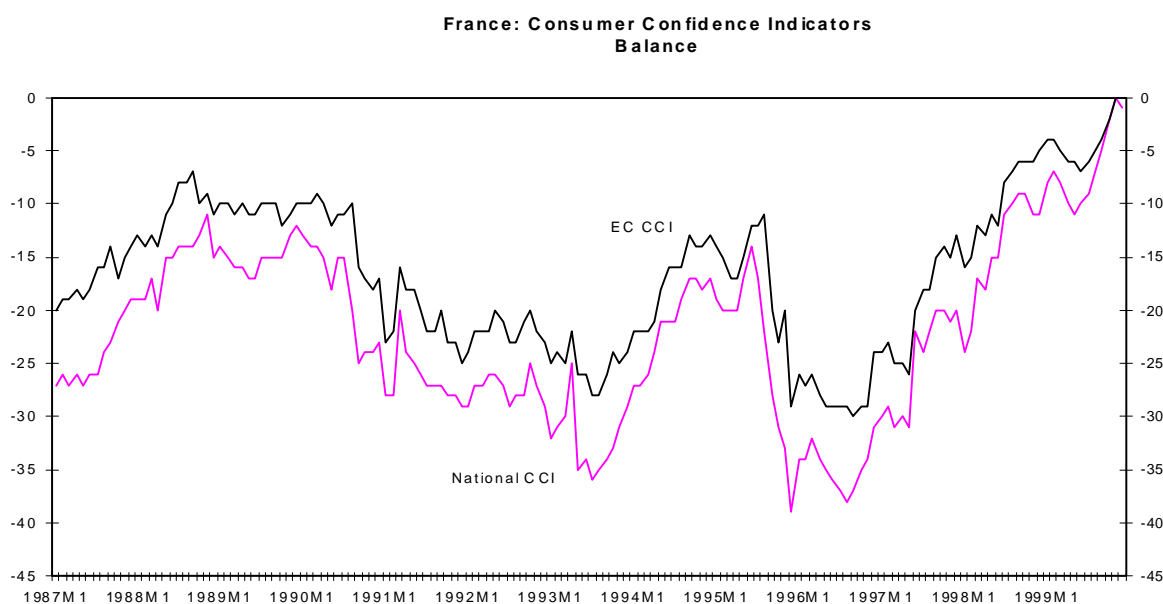
II.1.1 European Union countries

For the majority of European Union (EU) countries, data come from the consumer surveys carried out by the European Commission (EC/DG II). The confidence indicators published by the OECD correspond to the ones published by the EC for the following 8 EU countries: Belgium, Germany, Greece, Ireland, Netherlands, Portugal, Spain and the United Kingdom. For the remaining EU countries i.e. Austria, Denmark, France, Italy and Sweden, data are compiled according to national definitions. For all EU countries, the confidence indicator is an average of the answers (balances) to the following five questions:

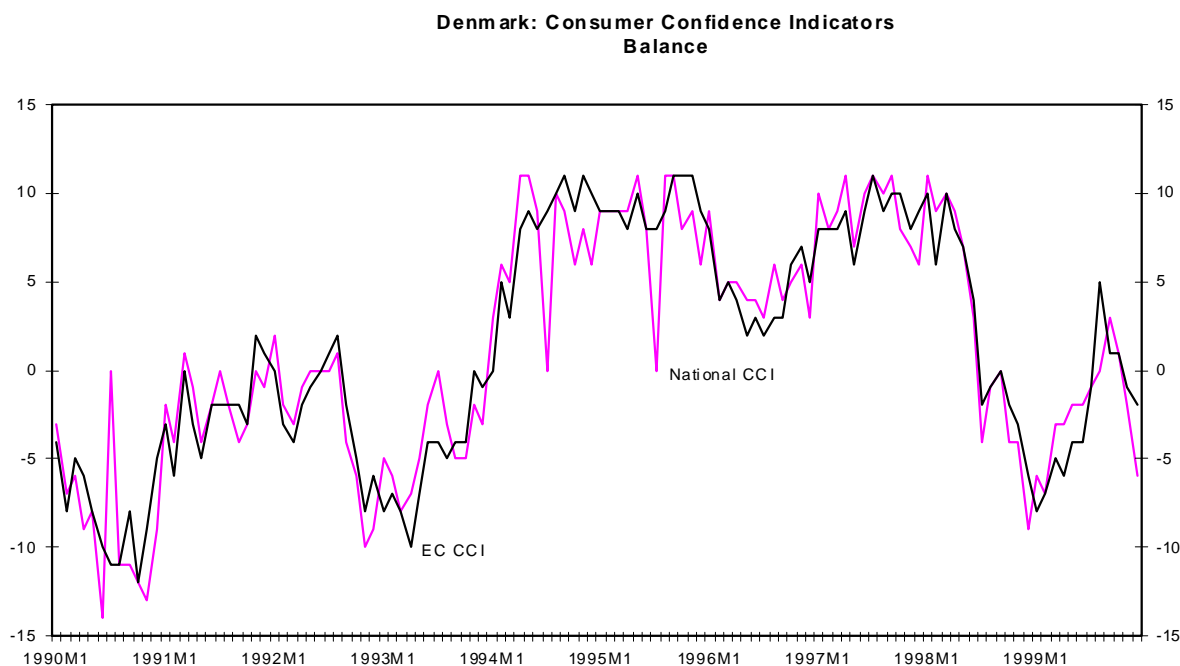
- (1) Current financial situation of household compared to past 12 months;
- (2) Expected change in financial situation of household over next 12 months;
- (3) Change in general economic situation over past 12 months;
- (4) Expected change in general economic situation over next 12 months;
- (5) Current conditions for making major purchases

The confidence indicator is based on the above five questions with five answer alternatives to each question (a lot better, a little better, the same, a little worse, a lot worse). The confidence indicator is expressed as the balance of positive over negative results. The confidence indicator published by the EC is constructed with double weights on the extremes. Responses “a lot better” and “a lot worse” get the weight 1 and “a little better” and “a little worse” get the weight 1/2, and “the same” has zero weight.

The confidence indicators published by the OECD for the three EU countries i.e. *Austria, France, and Sweden* are computed according to national practices i.e. with equal weights to positive and negative answer alternatives. The national and EC confidence indicators for France are plotted in the graph below. The two indicators show the same development, but a minor difference in level is registered.



The OECD publishes seasonally adjusted confidence indicators for most EU countries. However, the indicators published for *Austria, Denmark and Sweden* are not adjusted for seasonal variation. The national and EC confidence indicators for Denmark are shown in the graph below. The two indicators show the same general pattern and differences for a few periods are mainly due to the seasonal effect showing up in the unadjusted national indicator.

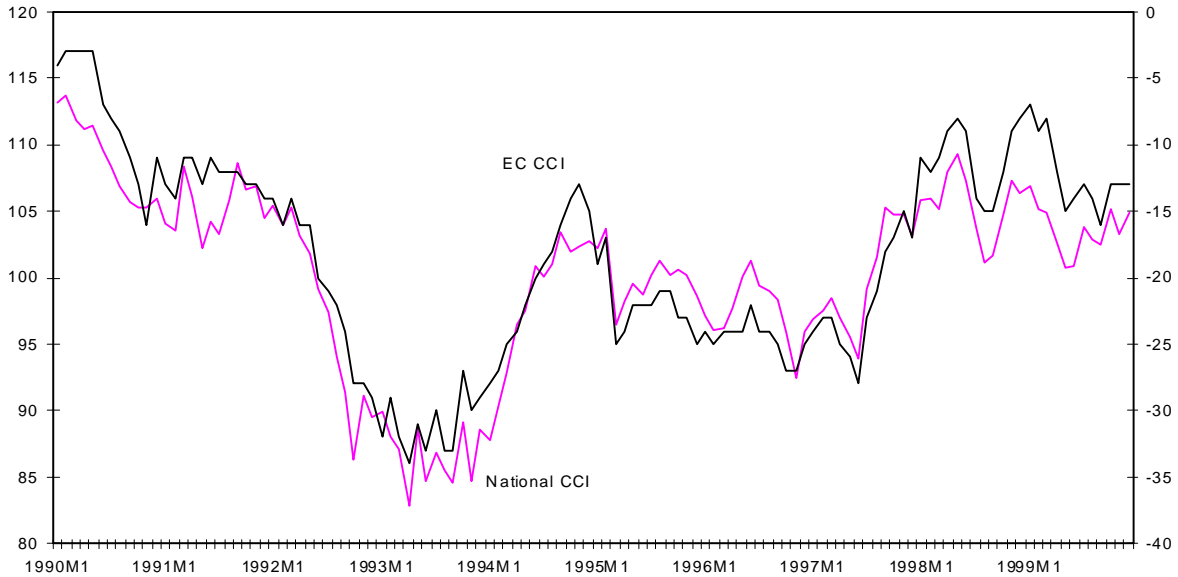


The confidence indicator for *Italy* published by the OECD is compiled according to national practice and differs from the one published by the EC in the selection of questions for the composite confidence indicator and in the construction of the indicator. The indicator is an average of the answers to the following nine questions:

- (1) Change in general economic situation over past 12 months;
- (2) Expected change in general economic situation over next 12 months;
- (3) Change in economic situation of household over past 12 months;
- (4) Expected change in economic situation of household over next 12 months;
- (5) Expected change in the level of unemployment over next 12 months;
- (6) Ability to make savings over next 12 months
- (7) Current conditions for making savings;
- (8) Current conditions for making major purchases;
- (9) Current financial situation of household

The confidence indicator is calculated using all five answer alternatives to each question with double weights on the extremes i.e. (2, 1, 0, 1, 2). The national index is expressed in base 1980=100. The OECD publishes the indicator with 1990=100. The national and EC confidence indicators for Italy are plotted in the graph below. The two indicators show the same general development, but a slight difference is registered over a few periods.

**Italy: Consumer Confidence Indicators
Balance (RS) and Index (LS)**

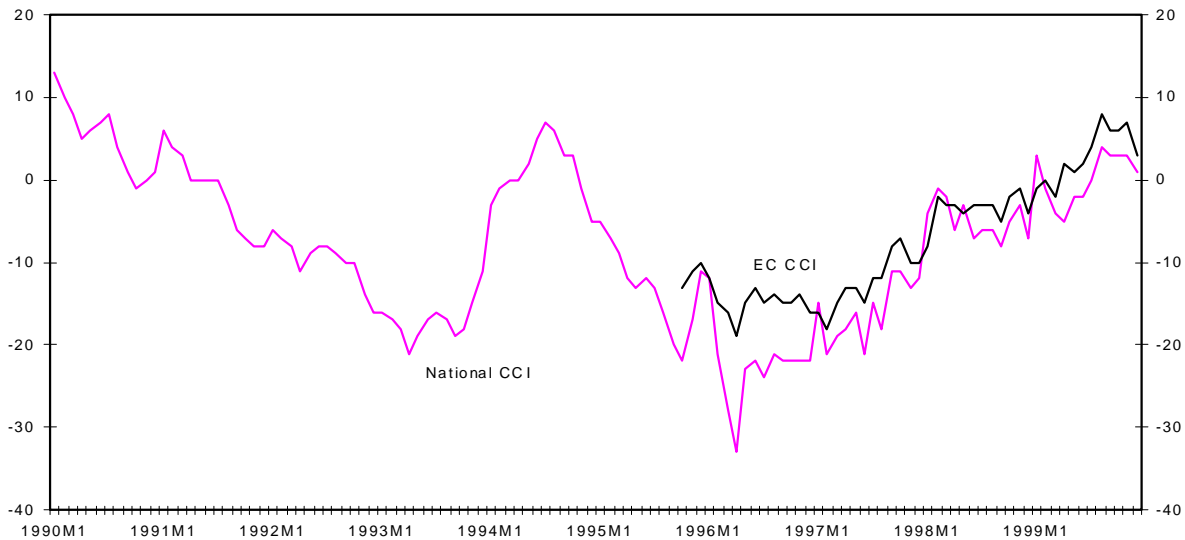


A confidence indicator for *Austria* is now published by the EC and the indicator published by the OECD is compiled according to national practice. The national indicator is an average of the answers to the following three questions:

- (1) Expected change in financial situation of household over next 12 months;
- (2) Expected change in general economic situation over next 12 months;
- (3) Expected change in consumer expenditure of household over next 12 months

The indicator is based on above questions with three answer alternatives to each question and calculated as the balance between positive and negative answers plus 100. The OECD publishes the indicator as a balance series i.e. 100 is deducted from the series value. The national and EC confidence indicators for *Austria* are plotted in the graph below. The two indicators show the same general development, but a slight difference is registered over a few periods.

**Austria: Consumer Confidence Indicators
Balance**



II.1.2 OECD countries outside EU

United States

The consumer confidence indicator published for the United States is compiled by the Survey Research Centre at the University of Michigan. The monthly indicator is based on the results of a consumer survey based on interviews conducted by telephone with just over 500 respondents each month. The sentiment indicator is an average of the answers to the following five individual questions:

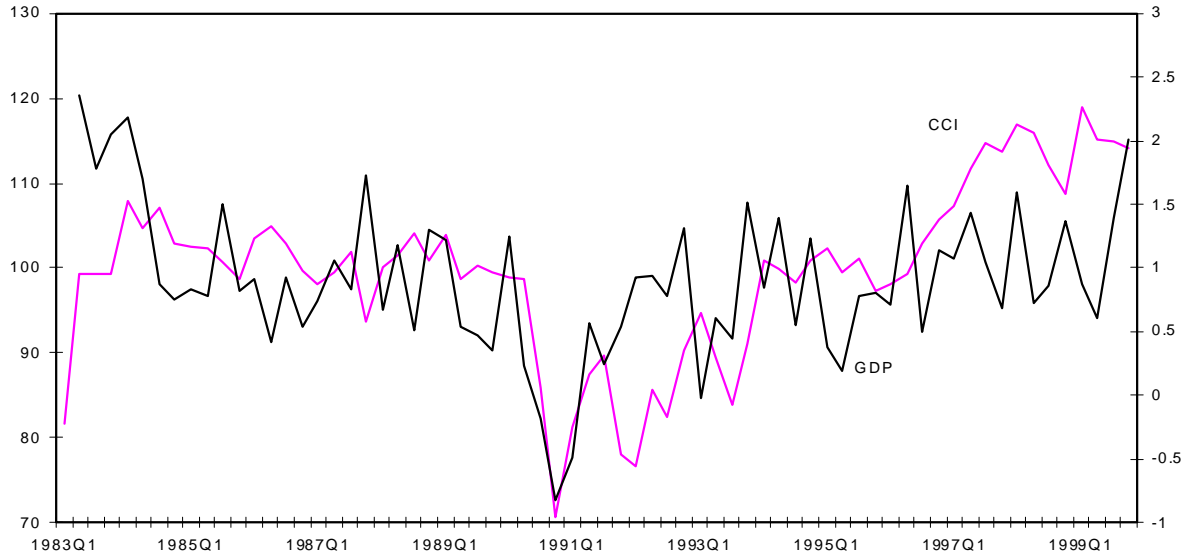
- (1) Current personal finances compared to past 12 months;
- (2) Expected personal finances over next 12 months;
- (3) Expected business situation over the next 12 months;
- (4) Expected business situation over the next 5 years;
- (5) Current buying conditions for durable goods

The indicator is based on the above questions with three answer alternatives to each question. It is calculated using all answer alternatives with the following weights; “good times” (better) gets the weight 2, “no change” gets the weight 1 and “bad times” (worse) gets the weight 0. Alternatively the index level can be calculated by subtracting negative replies from positive replies, that is the percent saying “good times or “better” minus the percent saying “bad times” or “worse”, and adding 100. The national index is expressed in base quarter 1 1966=100. The OECD publishes the indicator benchmarked to 1990=100 and adjusted for seasonal variation.

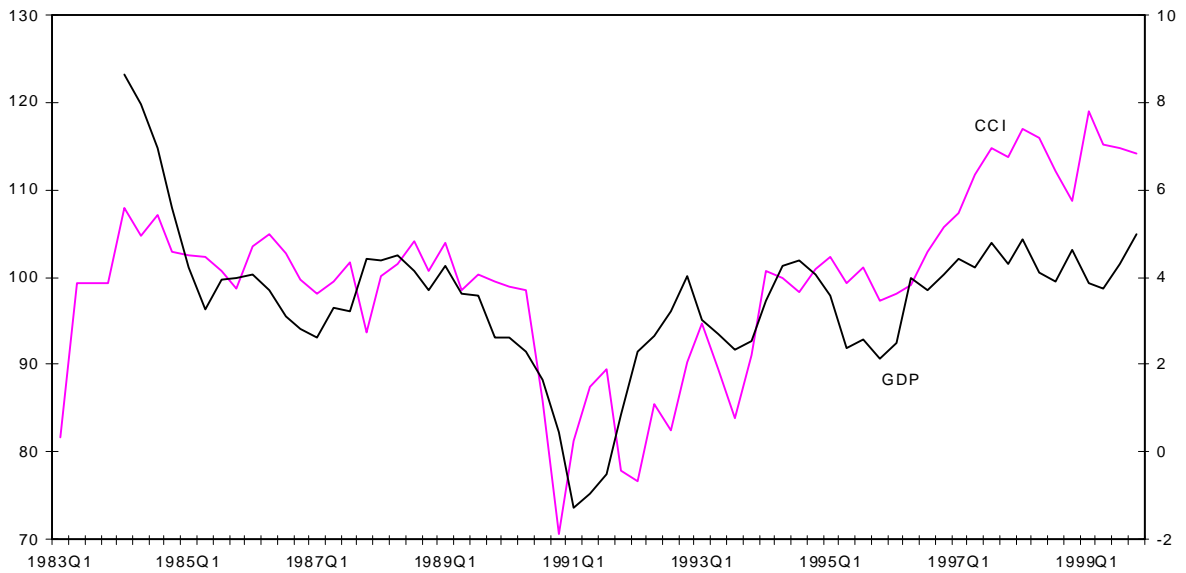
The main difference between this indicator and the EC harmonised indicator is the inclusion of the question on expected business situation over the next 5 years in place of the question on past general economic situation as in the EC confidence indicator.

The relationship between consumer confidence and GDP is presented in the two graphs on page 12. The bottom graph shows the confidence indicator against year-on-year changes in GDP and the top graph shows the indicator against quarterly changes in GDP. The confidence indicator shows a relatively better relationship against the year-on-year changes in GDP compared to the quarterly changes in GDP, but the indicator gives valuable information for the assessment of short-term developments in GDP over any period. Table 3 presents correlation results for the confidence indicator against GDP, total industrial production and private consumption.

United States: Consumer Confidence Indicator and GDP growth Index (LS) and Quarterly change (RS)

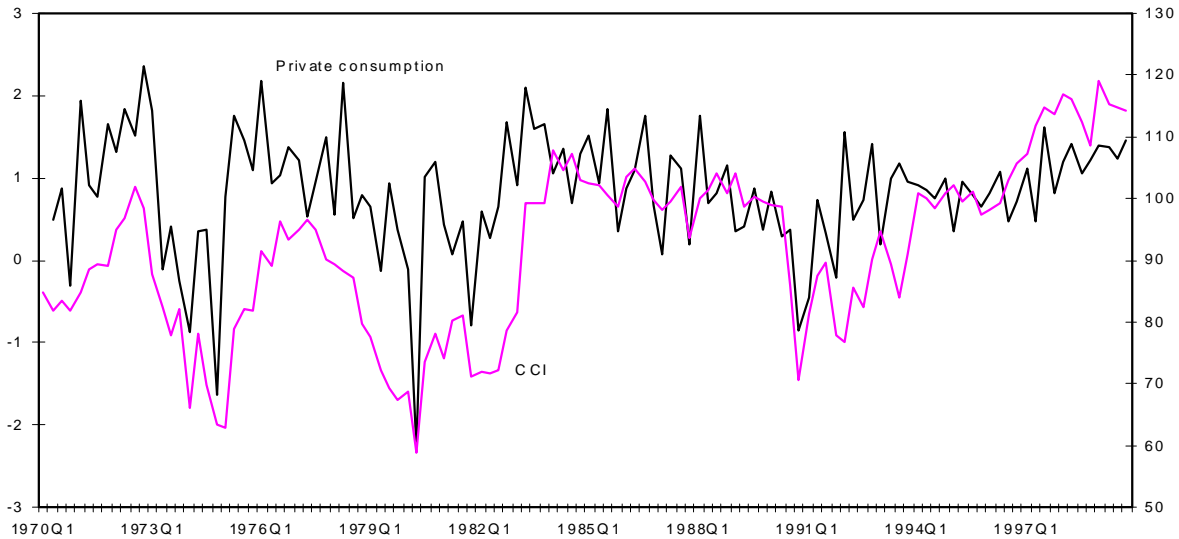


United States: Consumer Confidence Indicator and GDP Annual Growth Index (LS) 4 quarter rate of change (RS)

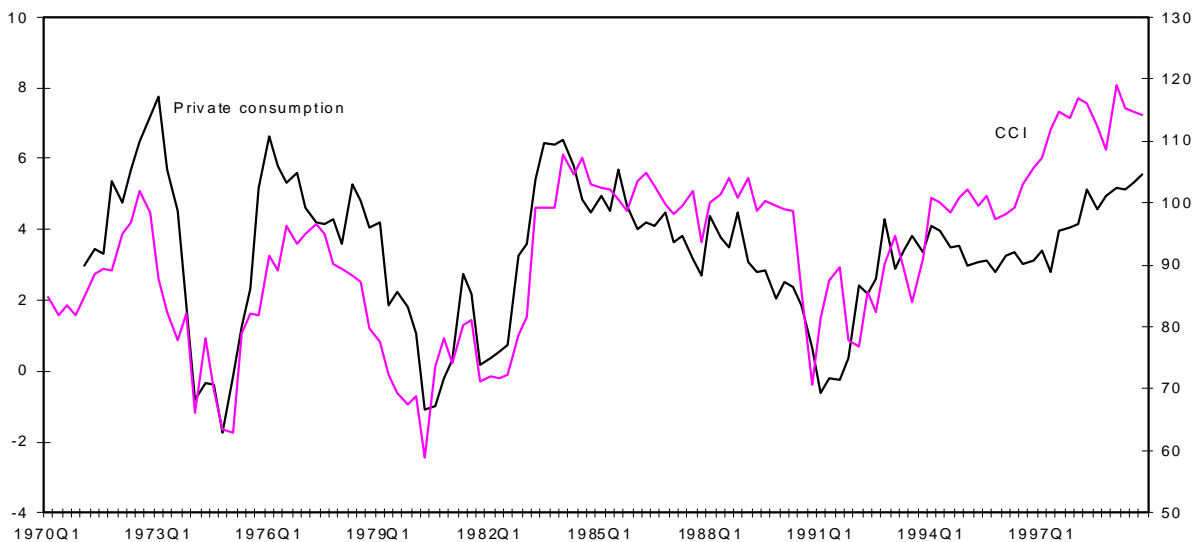


Consumer confidence and private consumption are plotted in the two graphs below. The relationship between the confidence indicator and the year-on-year changes in private consumption is shown in the bottom graph and the relationship between the indicator and the quarterly changes in private consumption is plotted in the top graph. The confidence indicator shows a very good correlation with changes in private consumption on both measures, relatively better in comparison with GDP. In addition, the confidence indicator is rapidly available on a monthly basis, while private consumption is not very up-to-date.

United States: Consumer Confidence Indicator and Private Consumption Growth Index (RS) and Quarterly Change (LS)



United States: Consumer Confidence Indicator and Private Consumption Growth Index (RS) and 4 Quarter Change (LS)



Japan

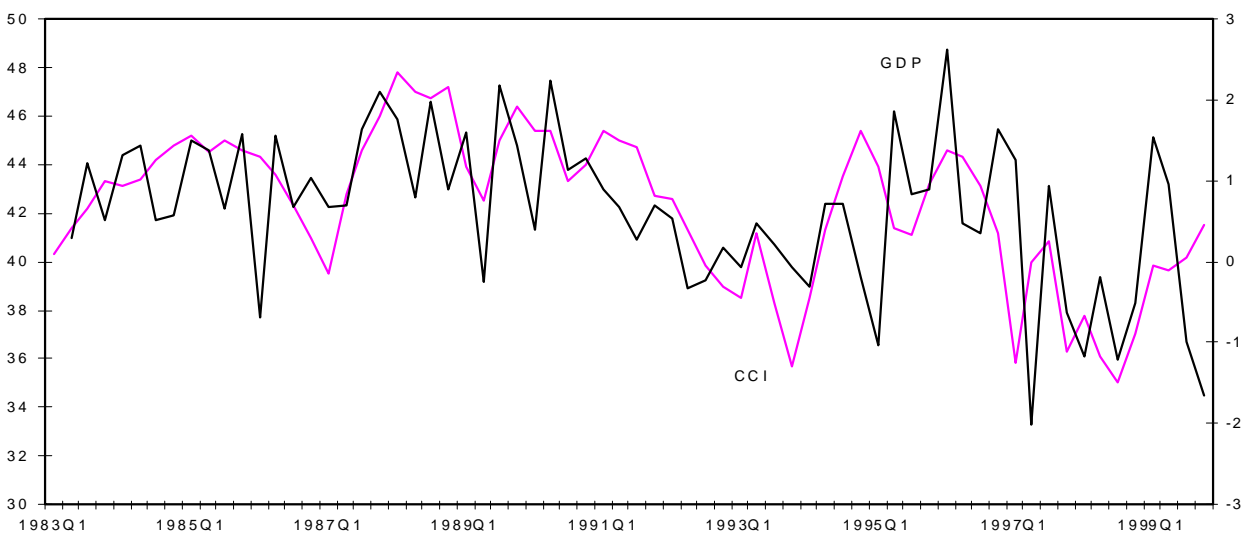
The published consumer confidence indicator is compiled by the Research Bureau of the Economic Planning Agency. The indicator is based on results from a quarterly consumer survey among a sample of 5 040 households (excluding single person and foreign households). The sentiment indicator is an average of the answers to the following five individual survey questions:

- (1) Standard of living over next six months;
- (2) Income growth over next six months;
- (3) Commodity price development over next six months;
- (4) Employment environment over next six months;
- (5) Optimal time for durable goods purchases over next six months

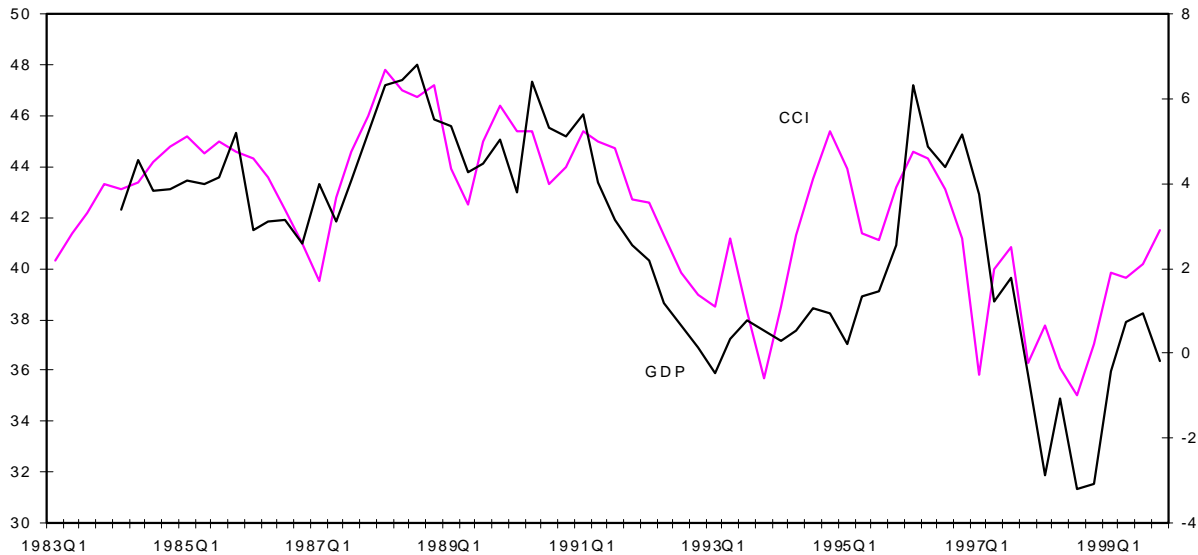
The confidence indicator is based on above questions with five answer alternatives to each question. The indicator is calculated over all answer alternatives to each question with the following weights to the different answer alternatives: (1) improve (increase) gets the weight 1, (2) somewhat improve (increase) gets the weight 0.75, (3) no change gets the weight 0.5, (4) somewhat deteriorate (decrease) gets the weight 0.25 and (5) deteriorate (decrease) gets the weight 0.

This indicator is very different from the EC harmonised indicator both in the selection of questions making up the indicator, the time period considered and in the construction of the indicator. Only one question i.e. “optimal time for durable goods purchases” is the same compared to the EC indicator. The indicator is computed with different weights to all answer alternatives giving an indicator expressed in percent form, with a scale between 0 and 100 and not a percent balance scale (+/-100) as in the EC confidence indicator. In addition, the confidence indicator published by the OECD is adjusted for seasonal variation.

Japan: Consumer Confidence Indicator and GDP Growth Index (LS) and Quarterly Change (RS)



**Japan: Consumer Confidence Indicator and GDP Annual Growth
Index (LS) and 4 Quarters Change (RS)**



The relationships between the confidence indicator and the year-on-year and quarterly changes in GDP, respectively are presented in the two graphs above. The confidence indicator is showing a very good relationship with changes in GDP for the period up to 1993, while the pattern between the two series is different over the last few years. Table 3 presents correlation for the consumer confidence against GDP and total industrial production.

New Zealand

The consumer confidence indicator published for New Zealand is compiled from results of a consumer survey conducted under the joint sponsorship of Westpac Banking Corporation and McDermott Miller Limited. The survey is conducted quarterly among a random sample of at least 1 550 persons. Data collection is performed by computer aided telephone interviews. The sentiment indicator is an average of the answers (balances) to the following five questions:

- (1) Current personal financial situation compared to past 12 months
- (2) Expected personal financial situation over next 12 months
- (3) Expected business situation over the next 12 months;
- (4) Expected business situation over the next 5 years;
- (5) Current buying conditions for major household purchases

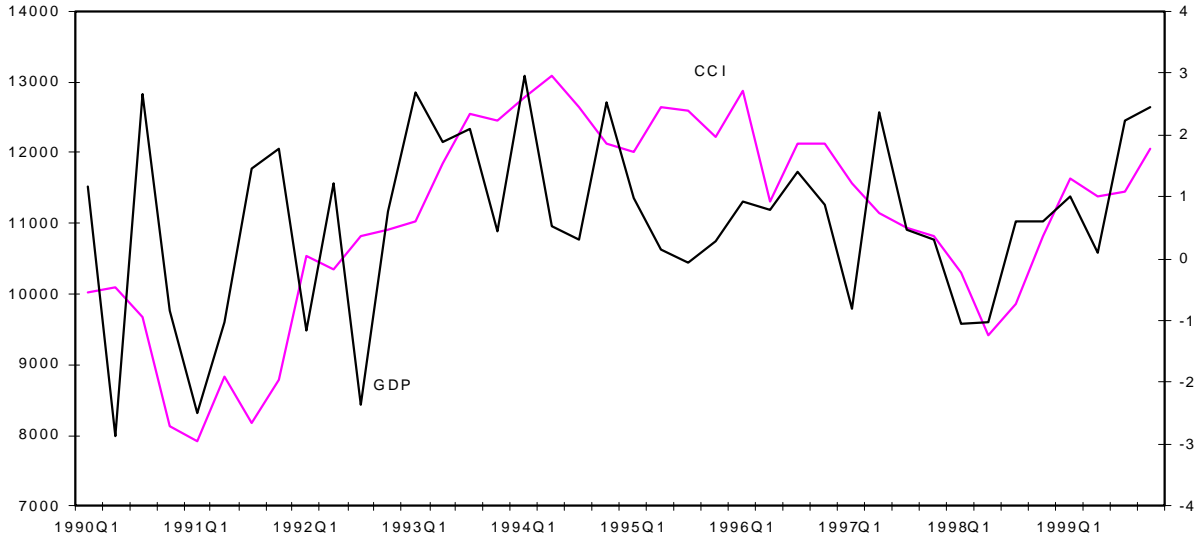
The indicator is expressed as the balance of positive over negative results to each question plus 100. The OECD publishes the indicator according to national practice i.e. with normal=100 and with no adjustment for seasonal variation.

This indicator is constructed in the same way as the one for the United States. The main difference in relation to the EC harmonised confidence indicator concerns the inclusion of the question on

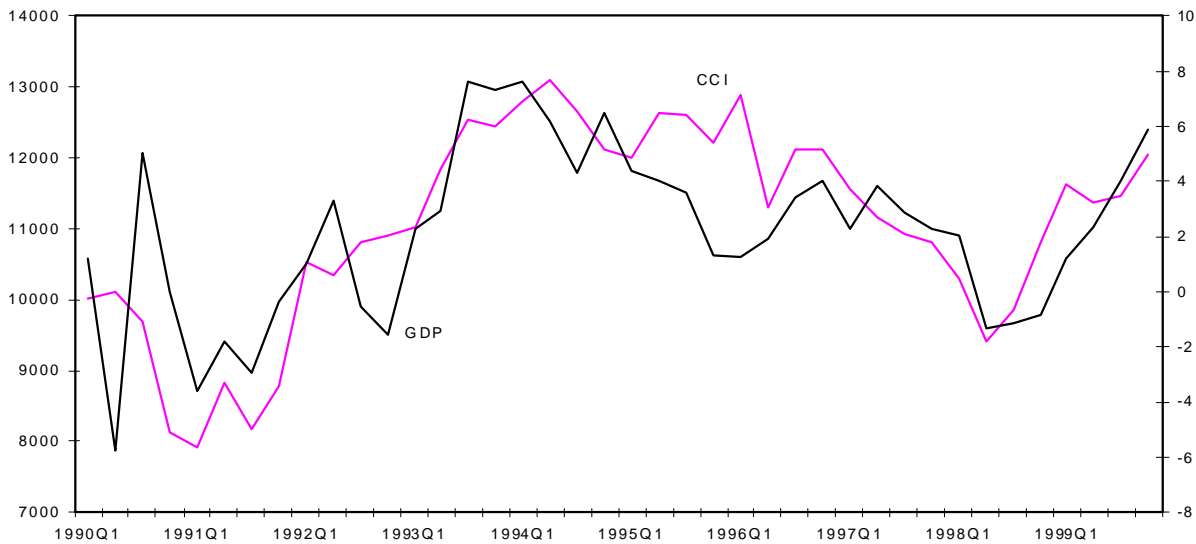
expected business situation over the next five years in place of the question on past general economic situation as in the EC indicator.

The relationship between the confidence indicator and changes in GDP is presented in the two graphs below. The indicator shows rather good relationship with the year -on-year changes in GDP and very bad correspondence with the quarterly changes in GDP. Table 3 presents correlation results for the confidence indicator against GDP.

New Zealand: Consumer Confidence Indicator and GDP Growth Index (LS) and Quarterly Change (RS)



New Zealand: Consumer Confidence Indicator and GDP Annual Growth Index (LS) and 4 Quarter Changes (RS)



Switzerland

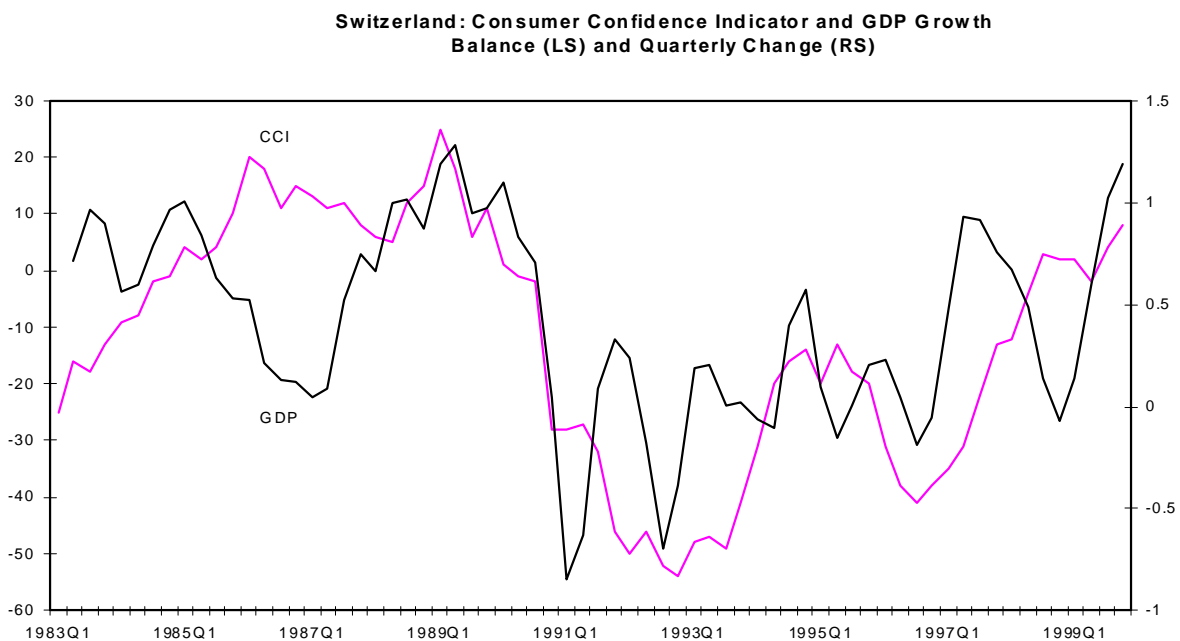
The consumer confidence indicator published by the OECD is compiled by the Office Federal des Questions Conjoncturelles (OFQC). The indicator is based on the results of a quarterly consumer survey conducted by the Institute für Konsumenten und Sozialanalysen AG (Konso). The sentiment indicator is an average of the answers (balances) to the following three individual questions:

- (1) Change in general economic situation over past 12 months;
- (2) Current financial situation of household compared to past 12 months;
- (3) Expected change in financial situation of household over next 12 months

The confidence indicator is based on the above three questions and is expressed as the balance of positive over negative results. The balances are computed, with equal weights to positive and negative answer alternatives. The confidence indicator published by the OECD is not adjusted for seasonal variation.

The main difference between this indicator and the EC harmonised confidence indicator is that it includes only a subset of the questions included in the EC indicator. The two questions related to the future general economic situation and the current conditions for making major purchases are excluded in the indicator for Switzerland.

The relationship between consumer confidence and GDP is presented in the two graphs below. The confidence indicator shows a rather good relationship with changes in GDP, as measured either as year-on-year or quarterly changes. Table 3 presents correlation results for the confidence indicator against GDP and total industrial production.



Switzerland: Consumer Confidence Indicator and GDP Growth
Balance (L S) 4 Q uarter Change (R S)

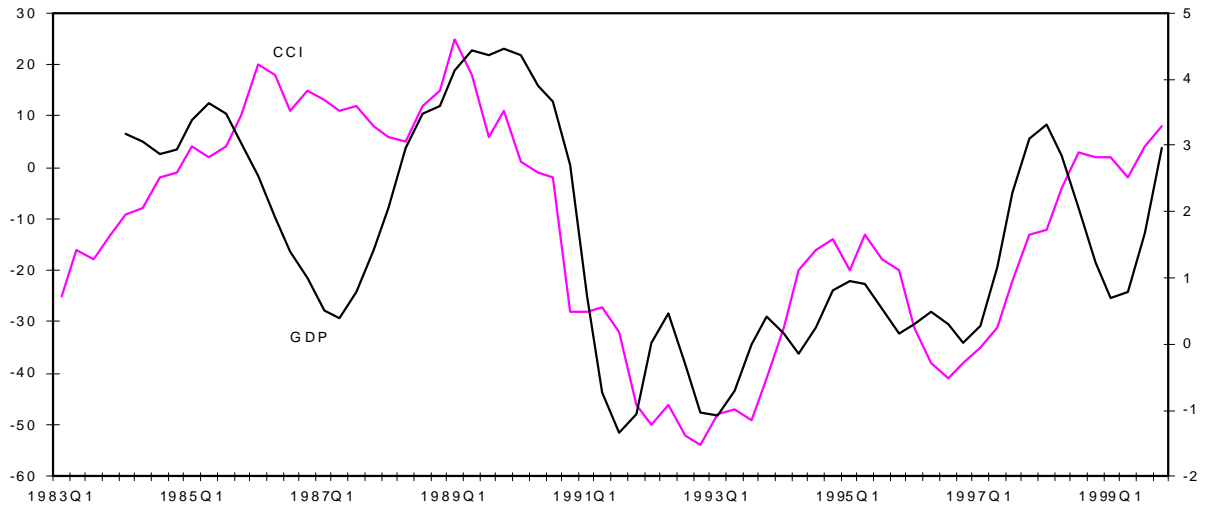


Table 3 **Correlation between consumer confidence indicators and economic variables**
Timing relationship (lead and lag) at peak correlation

	GDP (1)			Industrial production (2)	
	Start year	Lag (+) quarters	Correlation coefficient.	Lag (+) months (3)	Correlation coefficient
United States(4)	1978	1	0.60	2	0.49
Japan	1987	0	0.79	-1Q	0.83
New Zealand	1988	-1	0.53		
Austria	1977			1Q	0.49
Belgium	1973			0	0.45
Denmark (5)	1990			0	0.61
France	1987			-2	0.83
Germany	1973			0	0.60
Greece	1986			-4	0.43
Ireland	1986			-5	0.64
Italy	1990			-1	0.36
Netherlands	1973			-2	0.39
Portugal	1986			-15	0.95
Spain	1986			-12	0.50
Switzerland	1972	0	0.91	-2Q	0.48
United Kingdom	1974			-12	0.50

(1) GDP, quarterly data, changes over 4 quarters

(2) Industrial production, monthly data, changes over 12 months

(3) Q, lag in quarters

(4) Correlation results against private consumption (quarterly data): lag 0 and corr. coeff. 0.66

(5) Industrial production refers to manufacturing sales

II.2 Use of consumer survey results by the EC

The relationship between consumer survey results and corresponding quantitative statistics is discussed in this section. The specific areas of quantitative (statistical) data with which consumer survey results could be compared are identified. The content of the EU harmonised consumer survey could be linked to the following quantitative statistical series:

<i>Consumer survey</i>		<i>Quantitative statistics</i>
Subject area	Questions	Series linked with subject area
Financial situation of households	1,2	Income (disposable income)
General economic situation	3,4	GDP (growth)
Price development	5,6	Consumer price index
Unemployment	7	Unemployment
Major purchases	8,9	Private consumption (furniture, el appliances etc)
Savings	10,11,12	Household savings
Car purchases	13	Household car purchases
House purchases/building	14	Household residential investment
Home improvement	15	Private consumption (central heating, sanitary etc)
Consumer confidence	1,2,3,4,8	Private consumption (total)

The following subject areas are analysed: GDP (growth), prices (CPI), unemployment, and private consumption (total). The comparisons are restricted to EU countries with available quantitative series comparable to the survey series. The correlation results between survey variables on assessment and expectation on general economic situation and GDP are set out in Tables 4 and 5. Results of correlation between expectation on unemployment and the unemployment rate are presented in Table 6 and correlation between assessment and expectation of cost of living and the consumer price index (CPI) are set out in Tables 7 and 8. Finally, correlation results between the consumer confidence indicator and private consumption are presented in Table 9.

The results of the comparisons may be summarised as follows. Consumer survey results give a first quick indication of the development in some areas of the economy. This is noticed in the areas of private consumption where the survey results are available long before corresponding quantitative statistics. The usefulness of survey results is shown to be very important in countries with no quarterly national accounts. The correlation between the survey results and corresponding quantitative series is rather good for most variables and very good for prices and unemployment. These results indicate that consumer survey results could be a very useful tool in assessing and forecasting economic developments.

Table 4 *Correlation between assessment of general economic situation (t) and changes in GDP over same quarter of the preceding year 1986-1996*

	GDP t-2	GDP t-1	GDP t
Europe	0.90	0.90	0.86
Belgium	0.55	0.69	0.78
Denmark	0.28	0.37	0.42
Germany	0.92	0.92	0.92
Greece	0.53	0.71	0.68
Spain	0.53	0.66	0.76
France	0.46	0.63	0.79
Ireland	0.62	0.70	0.74
Italy	0.52	0.64	0.72
Netherlands	0.25	0.36	0.42
Portugal	0.40	0.51	0.57
Finland	0.65	0.78	0.86
United Kingdom	0.77	0.82	0.84

Table 5 *Correlation between expectation of general economic situation (t) and changes in GDP over same quarter of the preceding year 1986-1996*

	GDP t-2	GDP t-1	GDP t
Europe	0.78	0.87	0.88
Belgium	0.61	0.75	0.80
Denmark	0.37	0.47	0.47
Germany	0.91	0.91	0.92
Greece	0.19	0.18	0.12
Spain	0.81	0.85	0.83
France	0.53	0.65	0.76
Ireland	0.75	0.78	0.76
Italy	0.67	0.78	0.80
Netherlands	0.32	0.37	0.38
Portugal	0.52	0.60	0.66
Finland	0.47	0.43	0.34
United Kingdom	0.32	0.26	0.17

Source: The joint harmonised programme of business and consumer surveys, 1997
The highlighted figures indicate the timing relationship for which the correlation is the highest for each indicator in every country.

Table 6 *Correlation between expectation on unemployment (t) and the unemployment rate UR 1986-1996*

	UR t-2	UR t-1	UR t
Europe	0.96	0.97	0.97
Belgium	0.84	0.85	0.85
Denmark	0.84	0.86	0.88
Germany	0.94	0.95	0.92
Greece	0.91	0.91	0.90
Spain	0.87	0.89	0.90
France	0.66	0.68	0.70
Ireland	0.38	0.34	0.30
Italy	0.72	0.71	0.70
Netherlands	0.79	0.81	0.83
Austria	-0.90	-0.90	-0.72
Portugal	0.71	0.67	0.64
Finland	0.79	0.83	0.65
Sweden	0.79	0.83	0.65
United Kingdom	0.91	0.90	0.89

Table 7 *Correlation between assessment of cost of living (t) and changes in the consumer price index CPI over same month of the preceding year 1986-1996*

	CPI t-2	CPI t-1	CPI t
Europe	0.77	0.77	0.75
Belgium	0.30	0.37	0.45
Denmark	0.86	0.87	0.87
Germany	0.96	0.96	0.95
Greece	0.18	0.45	0.45
Spain	0.54	0.80	0.82
France	0.41	0.75	0.78
Ireland	0.55	0.74	0.74
Italy	0.63	0.62	0.67
Netherlands	0.93	0.84	0.88
Austria	0.45	0.61	0.76
Portugal	0.22	0.60	0.61
Finland	0.40	0.49	0.63
Sweden	-0.15	0.70	0.71
United Kingdom	0.71	0.84	0.87

Source: The joint harmonised programme of business and consumer surveys, 1997
The highlighted figures indicate the timing relationship for which the correlation is the highest for each indicator in every country.

Table 8 *Correlation between expectation of cost of living (t) and changes in the consumer price index CPI over same month of the preceding year* 1986-1996

	CPI t-2	CPI t-1	CPI t
Europe	0.82	0.82	0.82
Belgium	0.56	0.62	0.63
Denmark	0.86	0.87	0.87
Germany	0.87	0.89	0.90
Greece	0.20	0.42	0.14
Spain	0.52	0.78	0.56
France	0.40	0.72	0.40
Ireland	0.55	0.75	0.56
Italy	0.64	0.56	0.61
Netherlands	0.93	0.80	0.92
Austria	0.06	0.51	0.61
Portugal	0.21	0.58	0.23
Finland	0.30	0.32	0.58
Sweden	-0.20	0.71	-0.04
United Kingdom	0.73	0.82	0.67

Table 9 *Correlation between consumer confidence indicator(t) and changes in private consumption PC over same quarter of the preceding year* 1986-1996

	PC t-2	PC t-1	PC t
Europe	0.89	0.91	0.91
Belgium	0.63	0.76	0.85
Denmark	0.53	0.63	0.66
Germany	0.94	0.94	0.95
Greece	0.48	0.54	0.55
Spain	0.80	0.87	0.89
France	0.69	0.64	0.67
Ireland	0.33	0.39	0.42
Italy	0.79	0.87	0.90
Netherlands	0.52	0.47	0.29
Portugal	0.60	0.73	0.79
Finland	0.84	0.83	0.78
United Kingdom	0.83	0.75	0.66

Source: The joint harmonised programme of business and consumer surveys, 1997
The highlighted figures indicate the timing relationship for which the correlation is the highest for each indicator in every country.

ANNEX 1 HARMONIZED QUESTIONNAIRE AND RESPONSE ALTERNATIVES

Consumer Survey

- Q.1 How does the financial situation of your household now compare with what it was 12 months ago?
a lot better (++), a little better (+), no change (=), a little worse (-), a lot worse (-- --)
- Q.2 How do you think the financial situation of your household will change over the next 12 months?
a lot better (++), a little better (+), no change (=), a little worse (-), a lot worse (-- --)
- Q.3 How do you think the general economic situation in the country has changed over the last 12 months?
a lot better (++), a little better (+), no change (=), a little worse (-), a lot worse (-- --)
- Q.4 How do you think the general economic situation in the country will develop over the next 12 months?
a lot better (++), a little better (+), no change (=), a little worse (-), a lot worse (-- --)
- Q.5 Compared with what it was 12 months ago, do you think the cost of living is now:
very much higher (++), quite a bit higher (+), a little higher (=), about the same (-), lower (- --)
- Q.6 By comparison with what is happening now, do you think that prices in the next 12 months will:
increase at a higher rate (++); increase at the same rate (+), increase at a lower rate (=), stay the same (--), decrease slightly (-- --)
- Q.7 How do you think the level of unemployment in the country will change over the next 12 months?
increase sharply (++), increase slightly (+), no change (=), fall slightly (-), fall sharply (-- --)
- Q.8 Do you think that there is an advantage for people to make major purchases (durable goods) at the present time?
yes (++), neither right or wrong time (=), no, purchases should be postponed(-- --)
- Q.9 Over the next 12 months, how do you think the amount of money you will spend on major purchases will compare with what you spent over the last 12 months?
much more (++), a little more (+), about the same (=), a little less (-), much less (-- --)
- Q.10 In view of the general economic situation, do you think the present time to save is:
very good (++), quite good (+), rather unfavourable (-), very unfavourable (-- --)
- Q.11 Over the next 12 months, how likely are you to be able to save any money?
very likely (++), fairly likely (+), fairly unlikely (-), very unlikely (-- --)
- Q.12 Which of these statements best describe the present situation of your household?
we are running into debt (-- --), we are having to draw on our savings (--),
we are just managing to make ends meet our income (=), we are saving a little (=),

we are saving a lot (++)

The following questions are included in the questionnaire once a quarter (January, April, July and October)

- Q.13 How likely are you to buy a car within the next 2 years?
very likely (++), fairly likely (+), fairly unlikely (-), very unlikely (-- --)
- Q.14 Are you planning to purchase or build a home within the next 2 years?
yes, definitely (++), possibly (+), probably not (--), no (-- --)
- Q.15 Over the next 12 months, how likely are you to spend any large sums of money on home improvements such as central heating, sanitary ware etc. ?
very likely (++), fairly likely (+), fairly unlikely (--), very unlikely (-- --)