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**PILOT BUSINESS TENDENCY SURVEY REPORT
COMPARING BUSINESS EXPECTATION SURVEY AND BUSINESS
TENDENCY SURVEY**

(Draft Report)

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**Pilot Business Tendency Survey Report
Comparing Business Expectation Survey and Business
Tendency Survey**

(Draft Report)

**Report Submitted to the Asian Development Bank,
RETA 5938
Manila**

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Pilot Business Tendency Survey Report
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Business Tendency Survey
(Draft Report)

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Executive Summary

Asian Development Bank (ADB) has initiated a technical assistance programme (RETA 5938) to help five member countries, including India, to develop Business Tendency Survey using a harmonised set of core questions used in most OECD countries. The chief advantage of using a harmonised set of questions is to get a comparable view of business conditions across countries and identify common factors that explain downswing and upswing in economies. National Council of Applied Economic Research, New Delhi (NCAER) conducted a special Business Tendency Survey in the month of April and May 2001 under this ADB program.

Business Expectations move in opposite directions for the Industrial Confidence Indicators using the NCAER method and Business Tendency Survey method. Aggregate index also suggests that the responses in the NCAER survey are a bit more optimistic than the Business Tendency Survey.

Responses are also compared for questions on firm's expectations, even though there are differences in questions in terms of period covered, or the form in which the question is asked or the content of the question. Out of seven comparable questions (future production, existing stock of finished goods, future expectations for selling price, employment in future, current rate of capacity utilisation, financial position of firms and future business situation) business expectations in the NCAER survey (conducted during the same time period as BTS) reflect greater optimism in six of these questions. The results point to the possibility that firms make a distinction in the outlook for a very short-term future and a slightly longer-term future.

The, statistical analysis of responses reinforces the conclusion that there are differences in the responses when the questions are framed differently and when there is a difference in the time horizon that is evaluated by the respondent. The questions related to business situation, selling price and financial position of the firm are all futuristic questions. The time period for which evaluation is made is three months in the Business Tendency Survey and 6 months in the NCAER survey. Respondents in the NCAER survey are more optimistic compared to the respondents in the ADB survey. Since the sample characteristics are similar, this difference can be attributed to the format of questions asked in the two surveys.

At this point we cannot suggest which format of the questionnaire is better. To do that we need to compare times series of expectations from the two surveys with actual movements in the economy. It is important to carry out the two surveys for a few more rounds before coming to an informed conclusion. It is proposed that a study program be launched with ADB/OECD to analyse past data from NCAER's Business Expectations Survey as well as results from concurrent Business Expectations Survey and Business Tendency Survey in the near future.

Background of the Study and Key Objectives

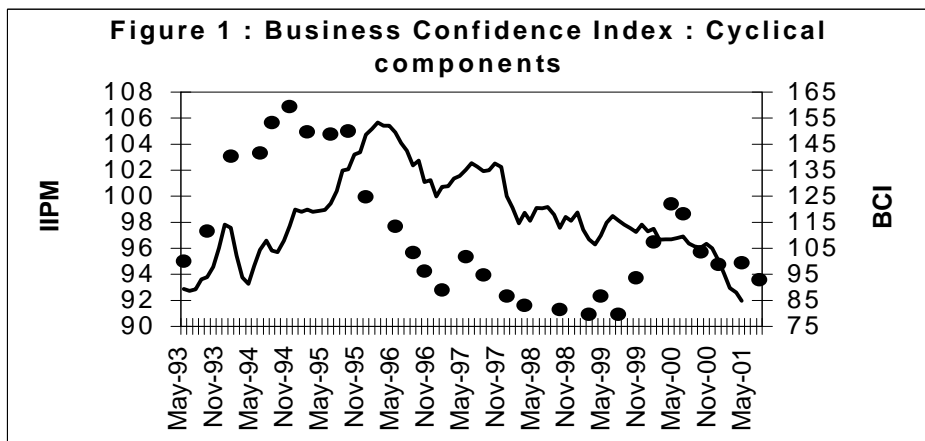
Background: Asian Development Bank has initiated a technical assistance programme (RETA 5938) to help five member countries, including India, to develop Business Tendency Surveys using a harmonised set of core questions used in most OECD countries. The chief advantage of using a harmonised set of questions is to get a comparable view of business conditions across countries. Cross country time series of such information have proved to be useful in identifying common factors that explain downswing and upswing in economies. National Council of Applied Economic Research, New Delhi conducted a special Business Tendency Survey in the month of April and May 2001 under this ADB program.

Objective: To conduct pilot Business Tendency Survey under RETA 5938 based on the improved and harmonised questionnaire, analyse and interpret the results, compile business confidence indicators, and prepare a report on these qualitative statistics.

Chapter 1

BTS and NCAER Questionnaire: A Comparative View

The NCAER Survey: NCAER has been conducting Business Expectations Surveys since the early 1990s. So far 37 rounds have been completed and the Business Confidence Index constructed from these surveys has proven to be an important indicator of the business trends in the economy. A comparison of the BCI and cyclical component of the Index of Industrial Production Manufacturing suggests that BCI has been reasonably successful in capturing the upturns and downturns in the economy (see Figure 1). The methodology of constructing the BCI and the sample design of Business Expectation Survey is given in Appendix 1.



The harmonisation of the Business Expectations Survey questionnaire suggested by ADB requires harmonisation in the following aspects:

- Content
- Type of variable (form of questions)
- Period covered by variables

Content

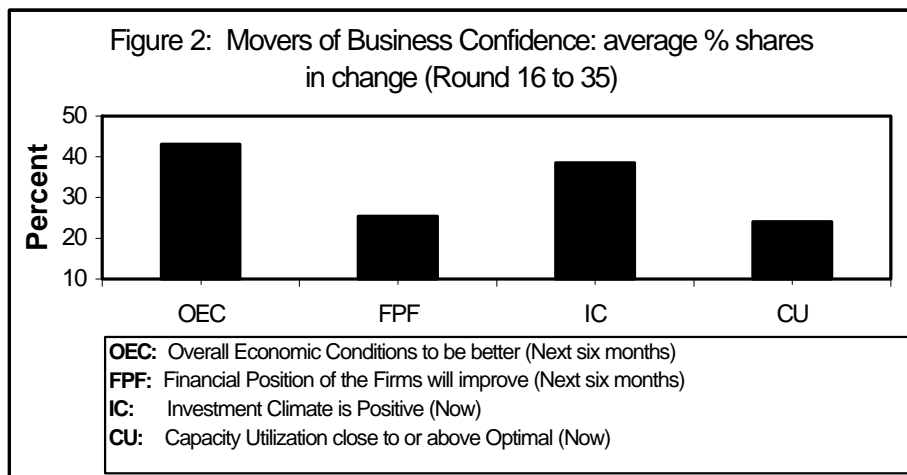
On content the harmonised methodology suggests three general principles:

- All information should be qualitative.

The NCAER survey also has all information that is qualitative, except the question on ideal and current level of inventory and level of pending sales order. For these three questions respondents are required to choose between less than 1 month, between 1 to 2 months and more than 3 months.

- All questions refer to the unit being surveyed and not to industry or economy as a whole.

The NCAER survey has two questions that relate to the economy as a whole. One relates to the overall economic conditions and the other to the investment climate. Sometimes there is a special question asking firms' opinion on a particular policy initiative. Analysis of responses to the four dimensions of business outlook (business conditions, investment climate, capacity utilisation and financial position) from the past surveys reveals that response on overall business conditions and investment climate are the most important variables in influencing the direction of change in BCI (Figure 2). This reinforces the need to



include some economy level questions in the BCI. On investment climate Business Tendency Survey does not have any question.

- All questions on present/future changes should be evaluated on a 3 month basis

In the NCAER survey evaluation from the past is made on a 3-month basis (except a question each on investment climate and financing of business where firms' are asked to compare the situation with 6 months ago). Future changes in the NCAER survey are evaluated on a six-month basis. It is our experience that the results of the NCAER survey using the six-month time period are meaningful. The NCAER Business Confidence Index (BCI) tracks the IIP pretty well (see Figure 1). The meaningfulness of six monthly evaluations possibly reflects the structure of the Indian economy where the time taken for processes to unfold is longer than experiences for many other countries.

As can be seen from the table below none of the 13 harmonised questions is the same as the questions asked in the NCAER survey.

1. Form of question is different in case of two variables, financial situation and access to credit.
2. Four questions are not asked in the NCAER survey and 8 additional questions are asked in the NCAER survey. The four questions that are missed by NCAER are: firm level business situation, limits to production, firm level experience on volume of production over the past three months, and export order books. In the NCAER survey, current production experience of firms could possibly be captured by responses on current level of inventory and ideal level of inventory compared across two consecutive rounds. The NCAER survey does not have any direct question on the current business situation for firms. Though there is a

question on capacity utilisation that could indirectly give assessment about the current business situation of firms. Does this make any difference to capture business confidence? Or put differently have the eight additional questions in NCAER survey provided useful insights?

3. For three questions the period covered by variables are different, six months instead of three. These questions relate to production, employment and selling price. The difference of three months in period covered is not likely to make much difference in the direction of responses especially when all questions are qualitative.
4. The questions on order books, stocks of finished goods and capacity utilisation are similar in the form of question asked but the content is different. The options in the harmonised questionnaire are above normal, normal and below normal. In the NCAER survey the options in the order books and stocks questions are in terms of months and for capacity utilisation the options are better, same and worse in relation to optimal capacity utilisation. Does this make any difference in tracking business expectations?

Format of the Questions

Question (All questions refer to firms, exceptions are indicated by **)	Format of the harmonised questions	Format of the NCAER questions
Production	T3/T1	Not Asked
Production	F3 - ICI	F6
Order books, total	L - ICI	L (DC)
Order books, exports	L	NA
Stocks of finished goods	L - ICI	L (DC)
Selling prices	F3	F6
Employment	F3	F6
Limits to production	N	Not Asked
Capacity Utilisation	R	R (DC) - BCI
Business situation	L	Not Asked
Business situation	F6	** F6 (for economy) - BCI
Financial situation	L	F6 - BCI
Access to credit	L	T6
Employment	Not Asked	T3
Access to credit	Not Asked	F6
Wages	Not Asked	T6/F6
Cost	Not Asked	T3/F6
Sales, exports, import of raw material	Not Asked	F6
Pre-tax profits	Not Asked	F6
Investment Climate	Not Asked	** T6 (for economy) - BCI
I deal level of inventory	Not Asked	L (DC)

T6/T3/T1: Past/present compared to 6/3/1 months ago

F3/F6: Future changes 3/6 months ahead

L: Present level

N: List of alternatives

BCI refers to Business Confidence Index

R: Present Rate

DC: Different Content

ICI refers to Industrial Confidence Index

Chapter 2

Harmonised and NCAER Survey Results: A Comparative View

Sample Coverage: The sample coverage of the two surveys is pretty similar and therefore comparison of results, wherever possible, are meaningful. The difference in respondents for 11 of the 14 components compared below is less than five units. Total respondents in Business Expectations Survey and Business Tendency Survey were 597 and 503 respectively.

Percentage Distribution of Respondents

Percentage Distribution of Respondents		
	BES	BTS
Regions		
East	18	20
West	18	19
North	29	20
South	35	41
Sectors		
Consumer Durable	15	18
Consumer Non-Durable	15	17
Intermediate	36	31
Capital Goods	17	13
Services	17	21
Size		
< Rs. 1 Crore	15	27
B/W Rs. 1-10 Crore	32	29
Rs. 10-100 Crore	32	24
Rs. 100-500 Crore	15	14
> Rs. 500 Crore	6	6

Survey Results

Comparing Industrial Confidence Index and Business Confidence Index

Comparing the Industrial Confidence Indicators from the two surveys is one way of comparing the responses from the harmonised questionnaire (Business Tendency Survey) and the NCAER questionnaire (Business Expectations Survey). We have attempted to construct similar indices of business expectations from both the surveys for a comparison. The Business Expectations as measured by BCI between October 2000 and December 2000 declined from 103.6 and 98.8 and marginally improved between December 2000 and April 2001 in the NCAER survey. The ADB method shows improvement in business expectation between October 2000 and December 2000 from 54.7 to 66 and then a decline between December 2000 and April 2001 to 48.7. To overcome the variation in questions used for BCI and ICI, the latter is calculated for October and December 2000 by using information from the Business Expectations Surveys and by making necessary adjustments to responses (See Tables 1 to 3). The ICI based on Business Tendency Survey in April 2001 was -3 (Table 4). The negative here implies that those who have negative business expectations are greater in number than those who have positive expectations. This is different from the result of the NCAER survey in the month of March 2001. In the NCAER survey using the ICI method business expectations are positive.

Thus, the business expectations move in opposite directions for the Industrial Confidence Indicators using the NCAER method and BTS method (See box for comparison of these methods). Aggregate index suggests that the NCAER survey is a bit more optimistic than the BTS survey.

The variables that are used in calculating the business confidence are completely different in the two surveys. The ICI in the BTS survey is influenced by observation of firms about their current inventory and order position. BCI in the NCAER survey is equally influenced by observations about the current and future of the economy - investment climate and business situation - (macro aspects) as well as firm level conditions (micro aspects) related with financial position and capacity utilisation. This difference could be one reason that might explain the difference in BCI and ICI. It implies that inclusion of macro aspects and considerations about the future make the respondents more optimistic. Respondents are optimistic about things that are distant from the firms and relate with more distant future.

However, based on comparison of the Industrial Confidence Indicators as discussed we cannot conclude which of the two methods gives better results. For that purpose we need to compare the expectations discerned from the two surveys and compare them with the actual movements in the economy. This cannot be done since we only have Business Tendency Survey results at one point of time. The finding that the two surveys provide different results point to the need for harmonising the surveys for comparison. However, it is important to carry out the surveys for a few more rounds to validate such a finding. To understand the difference in responses (as reflected in the aggregate indicators) in the two surveys in what follows below we compare the responses in the two surveys on specific questions.

A Comparison of BCI and ICI

BCI

BCI is based on four questions relating to future overall economic conditions and financial position of the firms, and present investment climate and capacity utilisation.

BCI is calculated by taking sum of percentages of respondents saying better for overall economic conditions, financial position of the firms, and investment climate and percentages of respondents saying better and same for capacity utilisation. Then percentage change is calculated from the base value of BCI.

The BCI captures both future expectations (by asking responses on macro level factors such as 'overall economic conditions' and 'investment climate') and the current conditions of firms (by asking responses on micro level factors, namely, financial position of the firm and capacity utilisation).

ICI

ICI is based on three selected questions relating to future production, present volume of sales order, and stock of finished goods.

The confidence indicators are made up from the averages of the balances to selected questions. The balances are calculated by subtracting the number of unfavourable replies from the number of favourable replies. Then balances are averaged by taking arithmetic means.

ICI gives us an overall cyclical indicator by combining selected survey variables into a single composite indicator. These indicators are called confidence indicators because they summarise economic agents' assessments of the current economic situation and their expectations for the immediate future.

Comparing Specific Questions

Comparison of responses on specific questions is done both statistically and analytically.

Analytically those questions are compared where the query is about the same aspect of the firm. The variables could be different in terms of the period covered, or the form of question or its content (refer table on format of questions page 5). Out of the seven comparable questions, business expectations in the NCAER survey reflect greater optimism (meaning percentage of respondents suggesting up or increase or above normal expectations) in six of these questions. These responses relate with future production, existing stock of finished goods, future expectations for selling

price, employment in future, current rate of capacity utilisation and current/future financial position of firms (Tables 5 to 12). Responses on current level of sales order are less optimistic in the NCAER survey compared with the Business Tendency Survey. Responses on future business situation are also less optimistic in the NCAER survey compared with the Business Tendency Survey. The question on future business situation in the NCAER survey refers to the economy as a whole while in the harmonised questionnaire it pertains to expectations at the level of firm.

The greater optimism in the NCAER survey can be explained in terms of the distinguishing characteristics of the questions, namely, the period covered by variables. The period covered by variables in the NCAER survey is mostly six months while in the harmonised questionnaire responses have strictly three-month forward horizon. What could then one say? Does it make sense to say that the firms are more positive when they look at the next 6 months and it is not so when the forward time horizon is just three months? The survey suggests that in the month of March 2001 firms felt more confident looking at longer time horizon compared with shorter time periods. The results point to the possibility that firms make a distinction in the outlook for a very short-term future and a slightly longer-term future.

Statistical Comparison

To statistically evaluate if the Business Tendency Survey and Business Expectations Survey give different results for similar questions we used Logit analysis. In other words, the purpose of this analysis is to find out if the way in which the question is asked makes any difference to firm's responses or expectations. The question is **does the format of the question influence the probability that the expectation will be positive (or**

negative) given the characteristics of the firm? The conclusion that we reach is that yes the format of the question does make a difference to firm responses.

The four questions on which logit analysis is applied are
Production, Business Situation, Financial Situation and Selling Price.

Financial Situation

Business Expectations Survey Question: As compared to now do you think your firm's own position over the next six months will be better/same/worse?

Business Tendency Survey Question: Do you consider that the present financial situation of your company is Good/Satisfactory/Bad?

The regression that was run has response on financial situation as the dependent variable. The dependent variable is a dichotomous variable, i.e. either the financial situation is good / will be better or bad/ will be worse (note that no change response has been added to the negative responses, the other option is that these responses are excluded). The explanatory variables include firm characteristics like size, sector to which they belong, type of firm and region in which firm is located. To capture the influence of the two surveys a dummy is added on the right hand side where 0 stands for Business Tendency Survey and 1 stands for Business Expectations Survey.

The regression that is run is as follows

$$F_i = \alpha_0 + \alpha_1 \text{Type 2} + \alpha_2 \text{Type 3} + \alpha_3 \text{Type 4} + \alpha_4 \text{Sector 2} + \alpha_5 \text{Sector 3} + \alpha_6 \text{Sector 4} + \alpha_7 \text{Sector 5} + \alpha_8 \text{Sector 6} + \alpha_9 \text{Size 2} + \alpha_{10} \text{Size 3} + \alpha_{11} \text{Size 4} + \alpha_{12} \text{Size 5} + \alpha_{13} \text{Region 2} + \alpha_{14} \text{Region 3} + \alpha_{15} \text{Region 4} + \alpha_{16} S_i$$

Financial Situation: $F_i = 0$ if decrease, $=1$ if increase

Survey: $S_i = 0$ if Business Tendency Survey, $=1$ if Business Expectations Survey

Type 1 = Public Sector, Type 2 = Private Limited, Type 3 = Public Limited, Type 4 = Partnership

Sector 1 = Consumer Durable, Sector 2 = Consumer Non-Durables, Sector 3 = Intermediates, Sector 4 = Capital Goods, Sector 5 = Information Technology, Sector 6 = Services

Region 1 = East, Region 2 = West, Region 3 = North, Region 4 = South

Size 1 = turnover less than 1 crore, Size 2 = turnover b/w 1 to 10 crore, Size 3 = turnover b/w 10 to 100 crore, Size 4 = turnover B/w 100 to 500 crore, Size 5 = turnover more than 500 crore

The assignment of 1 and 0 values is arbitrary. The category or classification that is assigned the value of 0 is referred as the base, benchmark, control, comparison or omitted category. In the above regression base deals with firms having a turnover of less than 1 crore, belonging to eastern region, in the consumer durable sector and a public sector firm.

The estimation results are provided in the table below

Dependent Variable: FINSITUATION

Method: ML - Binary Logit

Sample(adjusted): 1 1099

Included observations: 1099 after adjusting endpoints

Convergence achieved after 4 iterations

Covariance matrix computed using second derivatives

Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	-2.807465	0.517625	-5.423743	0.0000
REGION2	0.316197	0.233594	1.353622	0.1759
REGION3	0.757470	0.206794	3.662916	0.0002
REGION4	0.291754	0.203056	1.436820	0.1508
SECTOR2	0.112059	0.235909	0.475007	0.6348
SECTOR3	-0.124794	0.203481	-0.613294	0.5397
SECTOR4	-0.302329	0.245993	-1.229013	0.2191
SECTOR5	0.151070	0.254091	0.594548	0.5521
SECTOR6	0.332192	0.315281	1.053636	0.2920
SIZE2	0.009380	0.219667	0.042700	0.9659
SIZE3	0.578493	0.234015	2.472029	0.0134
SIZE4	0.795878	0.276255	2.880950	0.0040
SIZE5	0.856531	0.337978	2.534285	0.0113
TYPE2	1.029470	0.428559	2.402166	0.0163
TYPE3	0.978319	0.410806	2.381464	0.0172
TYPE4	0.659436	0.469552	1.404393	0.1602
SURVEY	1.062619	0.152284	6.977897	0.0000
Log likelihood	-653.9578			
Restr. log likelihood	-718.3135			
LR statistic (16 df)	128.7114			
Probability(LR stat)	0.000000			

The LR statistic tests the hypothesis whether all variables (apart from the constant term) can be dropped from the regression. The degrees of freedom equal the number of variables included in the model. As the probability of LR statistic above suggests the null hypothesis that all variables can be dropped is rejected by the data.

The Variables that are significant at 5 percent level of significance are region3, type2, type3, size3, size4, size5 and the survey variable. Running this regression gives the following results.

Dependent Variable: FINSITUATION
Method: ML - Binary Logit
Sample(adjusted): 1 1099
Included observations: 1099 after adjusting endpoints
Convergence achieved after 4 iterations
Covariance matrix computed using second derivatives

Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	-1.989559	0.191814	-10.37233	0.0000
REGION3	0.564222	0.148946	3.788103	0.0002
SIZE3	0.515310	0.169142	3.046611	0.0023
SIZE4	0.664465	0.209360	3.173792	0.0015
SIZE5	0.740770	0.281452	2.631961	0.0085
TYPE2	0.487298	0.197134	2.471909	0.0134
TYPE3	0.478886	0.208710	2.294502	0.0218
SURVEY	0.970557	0.137759	7.045321	0.0000
Log likelihood	-658.7766			
Restr. log likelihood	-718.3135			
LR statistic (7 df)	119.0738			
Probability(LR stat)	0.000000			

Can this restricted version be maintained? Likelihood ratio of the restricted and unrestricted models can serve as a useful indicator of the validity of our restrictions. Chi-square test suggests that we can accept the null hypothesis that the restricted version of the model can be maintained.

$$\chi^2 = -2 (\ln L_R - \ln L_U) = -2 (-658.7766 + 653.957) = 9.6376$$

The null hypothesis is rejected since $\Pr (2.7 < \chi^2 > 19.02) = 0.05$, $df=9$

All the variables are significant in this regression. The logit value in favour of expectations on the financial situation for the business expectation survey equals 0.970557. The corresponding odds $= e^L = e^{0.970557} = 2.64$. This gives a proportion, $p = (e^L / 1 + e^L)$, of 0.73 (proportion is equal to the ratio of number of observations which have required property (n) to the total number of observations (N)). In other words there is 73 percent greater probability that a firm will be optimistic about firms' financial situation if the questions

is asked as in the Business Expectations Survey compared to the way it is asked in the Business Tendency Survey.

Business Situation

Business Expectations Survey Question: In looking ahead 6 months, as compared to now do you think business conditions for the economy as a whole will be better/same/worse?

Business Tendency Survey Question: Do you consider that the business situation of your company during the next six months will be better/same/worse?

The regression that was run has response on business situation as the dependent variable. The dependent variable is a dichotomous variable, i.e. either the business situation is better or worse (note that no change response has been added to the negative responses, the other option is that these responses are excluded). The explanatory variables include firm characteristics like size, sector to which they belong, type of firm and region in which firm is located. To capture the influence of the two surveys a dummy is added on the right hand side where 0 stands for Business Tendency Survey and 1 stands for Business Expectations Survey.

The regression that is run is as follows

$$B_i = \alpha_0 + \alpha_1 \text{Type 2} + \alpha_2 \text{Type 3} + \alpha_3 \text{Type 4} + \alpha_4 \text{Sector 2} + \alpha_5 \text{Sector 3} + \alpha_6 \text{Sector 4} + \alpha_7 \text{Sector 5} + \alpha_8 \text{Sector 6} + \alpha_9 \text{Size 2} + \alpha_{10} \text{Size 3} + \alpha_{11} \text{Size 4} + \alpha_{12} \text{Size 5} + \alpha_{13} \text{Region 2} + \alpha_{14} \text{Region 3} + \alpha_{15} \text{Region 4} + \alpha_{16} S_i$$

Business Situation: $B_i = 0$ if decrease, $=1$ if increase

Survey: $S_i = 0$ if Business Tendency Survey, $=1$ if Business Expectations Survey

Type 1 = Public Sector, Type 2 = Private Limited, Type 3 = Public Limited, Type 4 = Partnership

Sector 1 = Consumer Durable, Sector 2 = Consumer Non-Durables, Sector 3= Intermediates, Sector 4 = Capital Goods, Sector 5 = Information Technology, Sector 6 = Services

Region 1 = East, Region 2 = West, Region 3 = North, Region 4 = South

Size 1 = turnover less than 1 crore, Size 2 = turnover b/w 1 to 10 crore, Size 3 = turnover b/w 10 to 100 crore, Size 4 = turnover B/w 100 to 500 crore, Size 5 = turnover more than 500 crore

The estimation result

Dependent Variable: BUSSITUATION

Method: ML - Binary Logit

Sample(adjusted): 1 1099

Included observations: 1099 after adjusting endpoints

Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	-2.779554	0.518309	-5.362734	0.0000
REGION2	0.159612	0.238266	0.669891	0.5029
REGION3	0.348287	0.209405	1.663226	0.0963
REGION4	0.363241	0.204009	1.780513	0.0750
SECTOR2	-0.122502	0.239238	-0.512051	0.6086
SECTOR3	-0.325152	0.206410	-1.575270	0.1152
SECTOR4	-0.230553	0.246096	-0.936840	0.3488
SECTOR5	0.365431	0.253530	1.441371	0.1495
SECTOR6	0.150319	0.320710	0.468708	0.6393
SIZE2	0.212431	0.230518	0.921537	0.3568
SIZE3	1.057053	0.242948	4.350945	0.0000
SIZE4	0.955864	0.285617	3.346666	0.0008
SIZE5	1.010865	0.345332	2.927225	0.0034
TYPE2	0.977033	0.424092	2.303822	0.0212
TYPE3	0.724027	0.406410	1.781518	0.0748
TYPE4	0.556986	0.469601	1.186083	0.2356
SURVEY	0.909716	0.155110	5.864971	0.0000
Log likelihood	-638.7617			
Restr. log likelihood	-695.7739			
LR statistic (16 df)	114.0243			
Probability(LR stat)	1.11E-16			
Obs with Dep=0	738	Total obs		1099
Obs with Dep=1	361			

The probability of LR statistic above suggests the null hypothesis that all variables can be dropped is rejected by the data. The Variables that are significant at 5 percent level of significance are type2, size3, size4, size5 and the survey variable. Running this restricted version of the regression gives the following results.

Dependent Variable: BUSSITUATION
 Method: ML - Binary Logit
 Sample(adjusted): 1 1099
 Included observations: 1099 after adjusting endpoints
 Convergence achieved after 4 iterations
 Covariance matrix computed using second derivatives

Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	-1.877647	0.160764	-11.67952	0.0000
SIZE3	0.963122	0.159296	6.046120	0.0000
SIZE4	0.822805	0.204175	4.029909	0.0001
SIZE5	0.891515	0.277929	3.207713	0.0013
TYPE2	0.364982	0.146978	2.483246	0.0130
SURVEY	0.915650	0.139047	6.585174	0.0000
Log likelihood	-648.4373			
Restr. log likelihood	-695.7739			
LR statistic (5 df)	94.67331			
Probability(LR stat)	0.000000			
Obs with Dep=0	738	Total obs	1099	
Obs with Dep=1	361			

Chi-square test suggests that we can accept the null hypothesis that the restricted version of the model can be maintained.

$$\chi^2 = -2 (\ln L_R - \ln L_U) = -2 (-648.4373 + 638.7617) = 19.3512$$

The null hypothesis is rejected since $\Pr(3.81 < \chi^2 > 21.92) = 0.05$, $df=11$

All the variables are significant in this regression. The logit value in favour of positive expectations on the business situation for the business expectation survey equals 0.915650. The corresponding odds $= e^{0.915650} = 2.5$. This gives a proportion of 0.71 (proportion is equal to the ratio of number of observations which have required property (n) to the total number of

observations (N). In other words there is 71 percent greater probability that a firm will be optimistic about firms' business situation if the questions is asked as in the Business Expectations Survey compared to the way it is asked in the Business Tendency Survey.

Selling Price

Business Expectations Survey Question: How do you expect ex-factory price to change for your own company's main product in the next six months? Will it increase, not change or decrease?

Business Tendency Survey Question: Excluding normal seasonal changes, what changes do you expect during the next three to four months with regard to average selling price. Increase, remain stable or decrease?

The regression that was run has response on selling as the dependent variable. The dependent variable is a dichotomous variable, i.e. either the selling price will increase or decrease (note that no change response has been added to the negative responses, the other option is that these responses are excluded). The explanatory variables include firm characteristics like size, sector to which they belong, type of firm and region in which firm is located. To capture the influence of the two surveys a dummy is added on the right hand side where 0 stands for Business Tendency Survey and 1 stands for Business Expectations Survey.

The regression that is run is as follows

$$SP_i = \alpha_0 + \alpha_1 \text{Type2} + \alpha_2 \text{Type 3} + \alpha_3 \text{Type 4} + \alpha_4 \text{Sector 2} + \alpha_5 \text{Sector 3} + \alpha_6 \text{Sector 4} + \alpha_7 \text{Sector 5} + \alpha_8 \text{Sector 6} + \alpha_9 \text{Size 2} + \alpha_{10} \text{Size 3} + \alpha_{11} \text{Size 4} + \alpha_{12} \text{Size 5} + \alpha_{13} \text{Region 2} + \alpha_{14} \text{Region 3} + \alpha_{15} \text{Region 4} + \alpha_{16} S_i$$

Selling Price: $SP_i = 0$ if decrease, $=1$ if increase

Survey: $S_i = 0$ if Business Tendency Survey, $=1$ if Business Expectations Survey

Type 1 = Public Sector, Type 2 = Private Limited, Type 3 = Public Limited, Type 4 = Partnership

Sector 1 = Consumer Durable, Sector 2 = Consumer Non-Durables, Sector 3 = Intermediates, Sector 4 = Capital Goods, Sector 5 = Information Technology, Sector 6 = Services

Region 1 = East, Region 2 = West, Region 3 = North, Region 4 = South

Size 1 = turnover less than 1 crore, Size 2 = turnover b/w 1 to 10 crore, Size 3 = turnover b/w 10 to 100 crore, Size 4 = turnover B/w 100 to 500 crore, Size 5 = turnover more than 500 crore

The estimation results are

Dependent Variable: SELLINGPRICE

Method: ML - Binary Logit

Sample(adjusted): 1 1027

Included observations: 1027 after adjusting endpoints

Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	-1.075030	0.512716	-2.096737	0.0360
REGION2	0.088786	0.245670	0.361404	0.7178
REGION3	0.181084	0.224862	0.805313	0.4206
REGION4	-0.431450	0.223715	-1.928566	0.0538
SECTOR2	-0.332041	0.253133	-1.311728	0.1896
SECTOR3	-0.334860	0.215802	-1.551701	0.1207
SECTOR4	-0.172188	0.256635	-0.670945	0.5023
SECTOR5	-0.317379	0.299162	-1.060892	0.2887
SECTOR6	0.291020	0.359536	0.809434	0.4183
SIZE2	0.256152	0.234458	1.092525	0.2746
SIZE3	0.029017	0.259796	0.111692	0.9111
SIZE4	-0.032057	0.311275	-0.102987	0.9180
SIZE5	0.515590	0.362702	1.421527	0.1552
TYPE2	-0.386081	0.414677	-0.931039	0.3518
TYPE3	-0.321233	0.394759	-0.813744	0.4158
TYPE4	-0.334816	0.459866	-0.728073	0.4666
SURVEY	0.981101	0.167274	5.865221	0.0000
Log likelihood	-564.5810			
Restr. log likelihood	-596.7162			
LR statistic (16 df)	64.27043			
Probability(LR stat)	9.83E-08			

The probability of LR statistic above suggests the null hypothesis that all variables can be dropped is rejected by the data. The Variables that are significant at 5 percent level of significance are region4 and the survey variable. Running this restricted version of the regression gives the following results.

Dependent Variable: SELLINGPRICE
 Method: ML - Binary Logit
 Sample(adjusted): 1 1027
 Included observations: 1027 after adjusting endpoints

Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	-1.345943	0.131516	-10.23402	0.0000
REGION4	-0.553798	0.154986	-3.573216	0.0004
SURVEY	0.902392	0.151167	5.969493	0.0000
Log likelihood	-570.3392			
Restr. log likelihood	-596.7162			
LR statistic (2 df)	52.75384			
Probability(LR stat)	3.50E-12			
Obs with Dep=0	752	Total obs		1027

Chi-square test suggests that we can accept the null hypothesis that the restricted version of the model can be maintained.

$$\chi^2 = -2 (\ln L_R - \ln L_U) = -2 (-570.3392 + 564.5810) = 11.5164$$

The null hypothesis is rejected since $\Pr(5.63 < \chi^2 > 26.12) = 0.05$, $df=14$

All the variables are significant in this regression. The logit value in favour of positive expectations on the selling price for the business expectation survey equals 0.902392. The corresponding odds $= e^{0.902392} = 2.46$. This gives a proportion of 0.71 (proportion is equal to the ratio of number of observations which have required property (n) to the total number of observations (N)). In other words there is 71 percent greater probability that a firm will be optimistic about firms' selling price if the questions is asked as in the Business Expectations Survey compared to the way it is asked in the Business Tendency Survey.

Production

Business Expectations Survey Question: How do you appraise the prospects of production for your company in the next six months as compared to the situation now. Will it increase, not change or decrease?

Business Tendency Survey Question: Excluding normal seasonal changes, what changes do you expect during the next three to four months with regard to the volume of production I ncrease, remain stable or decrease?

The regression that was run has response on production as the dependent variable. The dependent variable is a dichotomous variable, i.e. either the production will increase or decrease (note that no change response has been added to the negative responses, the other option is that these responses are excluded). The explanatory variables include firm characteristics like size, sector to which they belong, type of firm and region in which firm is located. To capture the influence of the two surveys a dummy is added on the right hand side where 0 stands for Business Tendency Survey and 1 stands for Business Expectations Survey.

The regression that is run is as follows

$$P_i = \alpha_0 + \alpha_1 \text{Type 2} + \alpha_2 \text{Type 3} + \alpha_3 \text{Type 4} + \alpha_4 \text{Sector 2} + \alpha_5 \text{Sector 3} + \alpha_6 \text{Sector 4} + \alpha_7 \text{Sector 5} + \alpha_8 \text{Sector 6} + \alpha_9 \text{Size 2} + \alpha_{10} \text{Size 3} + \alpha_{11} \text{Size 4} + \alpha_{12} \text{Size 5} + \alpha_{13} \text{Region 2} + \alpha_{14} \text{Region 3} + \alpha_{15} \text{Region 4} + \alpha_{16} S_i$$

Production: $P_i = 0$ if decrease, $=1$ if increase

Survey: $S_i = 0$ if Business Tendency Survey, $=1$ if Business Expectations Survey

Type 1 = Public Sector, Type 2 = Private Limited, Type 3 = Public Limited, Type 4 = Partnership

Sector 1 = Consumer Durable, Sector 2 = Consumer Non-Durables, Sector 3= Intermediates, Sector 4 = Capital Goods, Sector 5 = Information Technology, Sector 6 = Services

Region 1 = East, Region 2 = West, Region 3 = North, Region 4 = South

Size 1 = turnover less than 1 crore, Size 2 = turnover b/w 1 to 10 crore, Size 3 = turnover b/w 10 to 100 crore, Size 4 = turnover B/w 100 to 500 crore, Size 5 = turnover more than 500 crore

The estimation results are

Dependent Variable: PRODUCTION

Method: ML - Binary Logit

Sample(adjusted): 1 1007

Included observations: 1007 after adjusting endpoints

Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	-0.682961	0.489807	-1.394348	0.1632
REGION2	-0.380089	0.223451	-1.700996	0.0889
REGION3	0.239090	0.207215	1.153823	0.2486
REGION4	0.030577	0.197061	0.155163	0.8767
SECTOR2	-0.343045	0.231255	-1.483405	0.1380
SECTOR3	-0.363338	0.196528	-1.848782	0.0645
SECTOR4	-0.246557	0.235986	-1.044793	0.2961
SECTOR5	-0.315063	0.290900	-1.083062	0.2788
SECTOR6	-0.509630	0.313855	-1.623773	0.1044
SIZE2	0.064788	0.205441	0.315359	0.7525
SIZE3	0.165019	0.227882	0.724144	0.4690
SIZE4	0.509315	0.279384	1.822992	0.0683
SIZE5	0.392126	0.343656	1.141043	0.2539
TYPE2	0.524450	0.411131	1.275629	0.2021
TYPE3	0.658540	0.394949	1.667406	0.0954
TYPE4	0.268657	0.447238	0.600702	0.5480
SURVEY	0.721208	0.141244	5.106116	0.0000
Log likelihood	-660.0935			
Restr. log likelihood	-697.1643			
LR statistic (16 df)	74.14173			
Probability(LR stat)	1.86E-09			
Obs with Dep=0	483	Total obs		1007
Obs with Dep=1	524			

The probability of LR statistic above suggests the null hypothesis that all variables can be dropped is rejected by the data. The Variables that are significant at 10 percent level of significance are region2, Sector3, Sector6, Size4, Type3 and the survey variable. Running this restricted version of the regression gives the following results.

Dependent Variable: PRODUCTION
 Method: ML - Binary Logit
 Sample(adjusted): 1 1007
 Included observations: 1007 after adjusting endpoints

Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	-0.297033	0.128557	-2.310517	0.0209
REGION2	-0.490090	0.166413	-2.945026	0.0032
SECTOR3	-0.177166	0.138301	-1.281014	0.2002
SECTOR6	-0.322051	0.282151	-1.141413	0.2537
SIZE4	0.310326	0.200102	1.550834	0.1209
TYPE3	0.339149	0.140279	2.417669	0.0156
SURVEY	0.728998	0.136902	5.324955	0.0000
Log likelihood	-665.2732			
Restr. log likelihood	-697.1643			
LR statistic (6 df)	63.78222			
Probability(LR stat)	7.65E-12			
Obs with Dep=0	483	Total obs		1007
Obs with Dep=1	524			

Chi-square test suggests that we can accept the null hypothesis that the restricted version of the model can be maintained.

$$\chi^2 = -2 (\ln L_R - \ln L_U) = -2 (-665.2732 + 660.0935) = 10.36$$

The null hypothesis is rejected since $\Pr(3.25 < \chi^2 > 20.48) = 0.05$, $df=10$

Survey, Type2 and Region3 are the significant variables in this regression. The logit value in favour of positive expectations on the selling price for the business expectation survey equals 0.72899. The corresponding odds = $e^{0.72899}$

= 2.07. This gives a proportion of 0.67 (proportion is equal to the ratio of number of observations which have required property (n) to the total number of observations (N)). In other words there is 67 percent greater probability that a firm will be optimistic about firms' selling price if the questions is asked as in the Business Expectations Survey compared to the way it is asked in the Business Tendency Survey.

Chapter 3

Conclusions and Future Work Programme

Pilot Business Tendency Survey and Business Expectation Survey are compared in this report at two levels. At the level of aggregate indicators: Industrial Confidence Indicator (ICI) from BTS and Business Confidence Indicator (BCI) from BES are compared. Secondly, comparison of responses to specific question in the two surveys is also made in this report. Comparison of responses to specific question is made both analytically and statistically.

Business Expectations move in opposite directions for the Industrial Confidence Indicators using the NCAER method and Business Tendency Survey method. We have attempted to construct indices of business expectations using both the methods for a comparison. Aggregate index also suggests that the responses in the NCAER survey are a bit more optimistic than the Business Tendency Survey.

Analytically comparison is made for those questions where the query is about the same aspect of the firm. The variables could be different in terms of period covered, or the form of question or its content. Out of seven comparable questions (future production, existing stock of finished goods, future expectations for selling price, employment in future, current rate of capacity utilisation, financial position of firms and future business situation) business expectations in the NCAER survey (conducted during the same time period as BTS) reflect greater optimism in six of these questions. The results point to the possibility that firms make a distinction in the outlook for a very short-term future and a slightly longer-term future.

The, statistical analysis of responses to four questions reinforces the conclusion that there are differences in the responses when the questions are framed differently and when there is a difference in the future time horizon that is evaluated by the respondent. The questions related to business situation, selling price and financial position of the firm are all futuristic questions. The time period for which evaluation is made is three months in the Business Tendency Survey and 6 months in the NCAER survey. Respondents in the NCAER survey are more optimistic compared to the respondents in the ADB survey. Since the sample characteristics are similar, this difference can be attributed to the format of questions asked in the two surveys. However, we cannot suggest which format is better. To do that we need to compare times series of expectations from the two surveys with actual movements in the economy.

The finding that the two surveys provide different results point to the need for harmonizing the surveys for comparison. However, it is important to carry out the surveys for a few more rounds to validate such a finding.

TABLES

Table 1	
ICI (using Round 34 data of BES)	
Production, Future Tendency (PE)	278
Total Order Books	-16
Stock of Finished Goods	98
ICI_BES	54.7

Table 2	
ICI (using Round 35 data of BES)	
Production, Future Tendency (PE)	282
Total Order Books	-17
Stock of Finished Goods	67
ICI_BES	66

Table 3	
ICI (using Round 36 data of BES)	
Production, Future Tendency (PE)	257
Total Order Books	-14
Stock of Finished Goods	97
ICI_BES	48.7

Table 4	
ICI based on BTS	
Q.2 : Production, Future Tendency (PE)	107
Q.3 : Total Order Books	-97
Q.5 : Stock of Finished Goods	19
ICI_BTS	-3

Table 5: Future Production				
	BTS (F3)		BES (F6)	
	Number of Respondents	% of Respondents	Number of Respondents	% of Respondents
Up	199	42	293	61
No Change	186	39	123	26
Down	92	19	61	13

Table 6 : Sales Order				
	BTS (L)		BES (L)	
	Number of Respondents	% of Respondents	Number of Respondents	% of Respondents
Above Normal	62	13	63	13
Normal	269	55	175	36
Below Normal	159	32	252	51

Table 7 : Stock of Finished Goods				
	BTS (L)		BES (current inventory)	
	Number of Respondents	% of Respondents	Number of Respondents	% of Respondents
Above Normal	91	21	119	27
Normal	280	63	288	65
Below Normal	72	16	36	8

Table 8 : Selling Price				
	BTS (F3)		BES (F6)	
	Number of Respondents	% of Respondents	Number of Respondents	% of Respondents
Above Normal	83	18	165	35
Normal	300	63	267	56
Below Normal	91	19	43	9

Table 9: Employment				
	BTS (F3)		BES (F6)	
	Number of Respondents	% of Respondents	Number of Respondents	% of Respondents
Up	74	15	124	25
No Change	326	65	318	64
Down	498	20	56	11

Table 10 : Capacity Utilization				
	BTS (R)		BES (Relative to Optimal)	
	Number of Respondents	% of Respondents	Number of Respondents	% of Respondents
Above Normal	67	14	176	36
Normal	275	56	221	45
Below Normal	150	30	96	19

Table 11 : Business Situation				
	BTS (F6)		BES (F6 for economy)	
	Number of Respondents	% of Respondents	Number of Respondents	% of Respondents
Better	264	52	211	42
Same	200	40	225	45
Worse	39	8	67	13

Table 12 : Financial Position				
	BTS (L)		BES (F6)	
	Number of Respondents	% of Respondents	Number of Respondents	% of Respondents
Good	117	23	235	47
Satisfactory	294	59	198	39
Bad	91	18	70	14

Appendices

APPENDIX 1

Sample Design and Methodology of constructing BCI

How the Survey is done

- About 790 questionnaires were mailed and additional 500 personally canvassed to respondents selected from a database developed at NCAER.
- Survey work carried out by contracted agencies and NCAER field offices.
- Replacements of respondents when originally selected units do not respond.
- Sample spread over regions, sectors and size class of firms.

The Business Confidence Index

- Based on four questions relating to overall economic conditions, financial position of the firms, capacity utilisation and investment climate.
- All the four questions carry equal weight.
- A weighted BCI based on sectoral level responses.

Business Confidence Index from the NCAER surveys is based on responses to four questions. Overall economic conditions in the next six months; Financial position of the firm over the next six months; Investment climate now as compared to six months' back and present level of capacity utilization relative to its 'optimal' level. A positive response in each case is for the assessment that the situation is 'better'. The BCI is simply an aggregation of the 'positive' responses across respondents and scaling them to a 'base' or 'reference' level. The index attaches equal weight to all the questions. Based on a reclassification of the responses, an estimate at the sectoral level, regional level and 'size-class' level unweighted BCI is done to discern the patterns at a more homogeneous grouping of the respondents. In each case, the 'base' level index used is the percentage of positive responses out of all responses.

The unweighted BCI is specified as,

$$BCI_{UWt} = 100 * \left\{ \frac{\sum_i \sum_j \sum_m PR_{ijmt}}{(N_s + k_i + N_q)} \right\} / \left\{ \frac{\sum_i \sum_j \sum_m PR_{ijm0}}{(N_s + k_i + N_q)} \right\}$$

Where, BCI_{UW} = unweighted BCI,

$PR = 1$ if the response to the m 'th question by j 'th respondent of i 'th sector is 'positive' and zero otherwise,

k_i = number of respondents from i 'th sector,

N_s = number of sectors into which the respondents are classified (5),

N_q = number of questions posed to the respondents for construction of BCI (4),

t = subscript to identify the 'round' number; value zero is attached to the 'base' or 'reference' period.

Interpreting the Business Confidence Index

A higher BCI reflects, greater 'optimism' in the business sector and a favourable climate for new investments.

BCI captures both future expectations (through responses on macro level factors such as 'overall economic conditions' and 'investment climate') and the current conditions of firms (through responses on micro level factors, namely, financial position of the firm and capacity utilisation).

The unweighted BCI is a simple average of all the positive responses in a particular 'round' of the survey relative to such responses in the 'reference' round. If the BCI increases, it is due to the larger proportion of positive responses. The positive responses may increase for a specific question, sector or region. Thus, if the change in responses is sufficiently large, it can lead to change in the BCI relative to its level in any other round. A higher level BCI is taken to reflect greater 'optimism' in the business sector on the performance of the economy. A 'better' outlook for the economy in the next six months, a 'better' financial position of the firm in the next six months, a 'good' climate for investment now and close to or more than 'optimal' level of capacity utilization now, all imply an 'optimistic' assessment of the economy. Such a situation can be expected to prevail when the firm itself is doing well, and the industry at a general level (across several sectors) is also doing well. A 'pessimistic' scenario, on the other hand can prevail when either the firm or across several sectors other firms are not 'doing well'. In general, BCI is expected to be high when the economy is in an expansionary phase and lower when there is a declining growth and uncertainty of growth.

Changes in BCI may also reflect expectations of the business sector about the short-term future. While the current levels of capacity utilization is below its 'optimal' level, investment climate is poor, but there may be signs of improvements that the respondents 'perceive' in terms of overall economic conditions, the BCI may rise relative to the previous period. This is when the BCI can be a 'leading indicator' of the economic activity.

BCI at the sectoral level or regional level or at the level of a size-class reflects the experience or expectations of a more homogeneous group of respondents. For example, the regional level BCI would capture the more 'uniform' macro environment faced by the respondents in terms of local infrastructure, social-political situation and regional level policies. It should also be noted that while a 'region' has the connotation of a large geographical coverage, the survey is limited mainly to large cities: such as Pune-Mumbai in Maharashtra, Chennai and Bangalore in the South, Delhi in the North and Calcutta in the East. There are respondents from other areas but the bulk of the responses are from the cities noted above. Hence, the regional level BCI does indeed capture a more uniform overall business environment. In the case of 'sectoral BCI', the demand and price conditions faced by the firms are likely to be more uniform. While firm - level efficiency may vary, there would be greater uniformity in the market conditions faced by the respondents. Finally, the size-wise distinction is useful as it captures the impact of policies that may have a 'size' orientation. For example, credit policies treat small enterprises differently from the larger enterprises. Tax policies vary for smaller and larger firms. Firms may vary in technical efficiency across size-class due to different factors. The

survey results are, therefore, examined at the level of regions, sectors and size-groups.

In the 33rd round an attempt has been made to calculate the index based on a weighted average of the responses: the weights used are a mixture of GDP and IIP weights. Since service sector is also covered in the sample, responses from services and manufacturing are aggregated based on GDP from the two sectors. Within manufacturing, responses are aggregated based on IIP weights (1993-94 base). The sub-sectors in manufacturing are (1) Consumer durables, (2) Consumer non-durables, (3) Intermediates including basic goods and (4) Capital goods. Within the services, the respondents are mainly from the 'business services' segment and hence the GDP weight (1993-94) relevant for this sector is used for aggregation.

$$BCI_Wt = 100 * \left\{ \frac{\sum_i w_i \sum_j \sum_m PR_{ijmt}}{(\sum_i w_i \sum_j \sum_m PR_{ijm0})} \right\} / \left\{ \frac{(\sum_i w_i \sum_j \sum_m PR_{ijmt})}{(N_s + k_i + N_q)} \right\}$$

BCI_W = weighted BCI
w = weight attached to a sector
Other notations as specified above

APPENDIX 2

Business Tendency Survey Results (April-May, 2001)

1. When asked the question what has been company's experience over the past 3-4 months with regard to the volume of production, 29% of the respondents reported an increase in the volume of production while 34% reported a decline (during the past 3-4 months).
2. Reply of respondents suggesting unchanged situation in the future could be interpreted as suggesting decline in the future if they had reported a decline in production during the past three to four months.
3. Of the respondents reporting a decline in production in the past 3-4 months, 68% expect the volume of production in the next 3-4 months to remain low.
4. On the same basis, of the respondents considering the present situation in terms of sales order, exports order, stock of finished goods, capacity utilisation, business situation and financial situation to be below normal or bad, while 34% - 42% expect the volume of production to increase, 16% - 24% expect it to go down during the next three to four months period.
5. This means a higher percentage of the respondents are optimistic for future production. Same optimism of increase in production is also shown by 61% respondents in the Business Expectation Survey of the latest round carried out during March - April 2001.

Respondents Currently Reporting downfall in	Volume of Production (Next 3 - 4 months)	
	Up	Down
Sales Order	36.8	22.0
Exports Order	39.2	20.8
Stock of Finished Goods	42.4	16.4
Capacity utilisation	36.8	22.5
Business Situation	33.5	23.7
Financial Situation	37.0	23.2

6. Of the respondents reporting the present sales order, exports order, stock of finished goods, capacity utilisation, business situation and financial situation to be below normal/bad, the percentage of respondents expecting future business situation to go up during next six months varies between 43% - 53% whereas a very low percentage (6% - 10%) of the respondents expect it to decline.
7. Thus a higher percentage of the respondents are optimistic about the business situation as compared to the percentage of the respondents that are optimistic for future production in business tendency survey.

Respondents Currently Reporting downfall in	Business Situation (Next 3 - 4 months)	
	Up	Down
Sales Order	47.7	8.9
Exports Order	50.6	8.1
Stock of Finished Goods	52.8	5.7
Capacity utilization	48.0	8.7
Business Situation	42.9	9.9
Financial Situation	44.9	9.9

8. Factors Limiting Ability of the Companies to Increase Production. Out of the twelve factors, the respondents have given following seven factors limiting their ability to increase the production:

- a. Insufficient domestic demand
- b. Financial problems
- c. Unclear economic policies
- d. Competitive imports
- e. Uncertainty of economic environment
- f. Shortage of energy, and
- g. Insufficient foreign demand

9. Access to Credit:

The respondents are almost equally divided over access to credit to be easy or tight. This further supports the reason that financial problems are limiting the ability of firms to increase the production.

Respondents	Easy	Normal	Tight
Number	135	237	126
Percentage	27.1	47.6	25.3

Questionnaire and Survey Data



Business Tendency Survey: March 2001

National Council of Applied Economic

Parisila Bhawan, 11-I .P. Estate, New Delhi - 110 002.
Phone: 011-3317860-68 Fax: 011-3327164

1.	Name of the Respondent.....
2.	Designation
3.	Company Name
4.	Product name or product group [with highest sales]
5.	Type [Please mark [✓]: Public Sector <input type="checkbox"/> 1 <input type="checkbox"/> Pvt. Ltd. <input type="checkbox"/> 2 <input type="checkbox"/> Public Ltd. <input type="checkbox"/> 3 <input type="checkbox"/> Partnership/Individual Ownership <input type="checkbox"/> 4 <input type="checkbox"/>
6.	Industry Sector [Please mark [✓]: Consumer Durable <input type="checkbox"/> 1 <input type="checkbox"/> Consumer Non-Durable <input type="checkbox"/> 2 <input type="checkbox"/> Intermediate Good <input type="checkbox"/> 3 <input type="checkbox"/> Capital Good <input type="checkbox"/> 4 <input type="checkbox"/> I.T <input type="checkbox"/> 5 <input type="checkbox"/> Services <input type="checkbox"/> 6 <input type="checkbox"/>
7.	Size [Please mark [✓]: Less than Rs. 1 crore <input type="checkbox"/> 1 <input type="checkbox"/> Rs. 1 to Rs. 10 crore <input type="checkbox"/> 2 <input type="checkbox"/> Rs. 10 to Rs. 100 crore <input type="checkbox"/> 3 <input type="checkbox"/> Rs. 100 to Rs. 500 crore <input type="checkbox"/> 4 <input type="checkbox"/> Rs. 500 crore and above <input type="checkbox"/> 5 <input type="checkbox"/>
8.	Address
	East... <input type="checkbox"/> 1 <input type="checkbox"/> West... <input type="checkbox"/> 2 <input type="checkbox"/> North... <input type="checkbox"/> 3 <input type="checkbox"/> South... <input type="checkbox"/> 4 <input type="checkbox"/>
 E-Mail :

Please tick [✓] the appropriate box

- Q.1 **Excluding normal seasonal changes**, what has been your company's experience over the past three to four months with regard to the **volume of production**:
Up [1] Unchanged [2] down [3]
- Q.2 **Excluding normal seasonal changes**, what changes do you expect during the next three to four months with regard to the **volume of production**:
Up [1] Unchanged [2] down [3]
- Q.3 **Excluding normal seasonal changes**, do you consider that the present level of your **sales order** in **volume** terms is:
Above normal [1] normal [2] below normal [3]
- Q.5 **Excluding normal seasonal changes**, do you consider that the present level of your **stocks of finished goods** in **volume** terms is:
Above normal [1] normal [2] below normal [3]

- Q.6 **Excluding normal seasonal changes**, what changes do you expect during the next three to four months with regard to average selling price: Increase [1] Remain stable [2] Decrease [3]
- Q.7 **Excluding normal seasonal changes**, what changes do you expect during the next three to four months with regard to the number of people employed in your company: Up [1] Unchanged [2] down [3]
- Q.8 What factors are limiting your ability to increase production. Please tick the most important factor or factors:
- | | | | |
|-------------------------------|-------|---|-------|
| None | [1] | Shortage of semi-finished goods | [1] |
| Insufficient domestic demand | [1] | Shortage of raw materials | [1] |
| Insufficient foreign demand | [1] | Shortage of energy | [1] |
| Competitive imports | [1] | Financial problems | [1] |
| Shortage of labour | [1] | Unclear economic policies | [1] |
| Shortage of skilled labour | [1] | Uncertainty of the economic environment | [1] |
| Lack of appropriate equipment | [1] | Others, please specify _____ | 1_ |
- Q.9 What is your current level of capacity utilisation [relative to normal capacity utilisation]: Above normal [1] normal [2] below normal [3]
- Q.10 Do you consider that the present business situation of your company is: Good [1] Satisfactory [2] Bad [3]
- Q.11 Do you expect that the business situation of your company during the **next six months** will be: Better [1] Same [2] Worse [3]
- Q.12 Do you consider that the present financial situation of your company is: Good [1] Satisfactory [2] Bad [3]
- Q.13 Do you consider that the present situation concerning access to credit for your company is: Easy [1] Normal [2] Tight [3]

VARIABLES OF BUSINESS TENDENCY SURVEY DATA	
Variable Labels	
V1	Type
V2	Sector
V3	Size
V4	Region
V5	Production Volume - last 3 months
V6	Production Volume - Next 3-4 months
V7	Sales Order Volume - Present
V8	Exports Order Volume - Present
V9	Finished Goods Volume - Present
V10	Average Selling Price - Next 3-4 months
V11	People Employment - Next 3-4 months
V12	None
V13	Insufficient Domestic Demand
V14	Insufficient Foreign Demand
V15	Competitive Imports
V16	Shortage of Labour
V17	Shortage of Skilled Labour
V18	Lack of Appropriate Equipment
V19	Shortage of Semi-finished Goods
V20	Shortage of Raw Material
V21	Shortage of Energy
V22	Financial Problems
V23	Unclear Economic Policies
V24	Uncertainty of the Economic Environment
V25	Others
V26	Current Level of Capacity Utilisation
V27	Present Business Situation
V28	Business Situation - Next 6 mnths
V29	Present Financial Situation
V30	Present Situation of Access to Credit.

BUSINESS TENDENCY SURVEY - DATA

(Values of variables are mentioned in the attached questionnaire)

9 represents Non-response

S.No.	V1	V2	V3	V4	V5	V6	V7	V8	V9	V10	V11	V12	V13	V14	V15	V16	V17	V18	V19	V20	V21	V22	V23	V24	V25	V26	V27	V28	V29	V30	
1	4	4	1	2	2	3	3	9	2	3	3	9	9	9	9	9	9	9	9	9	9	9	9	9	9	2	2	2	2	2	
2	2	1	3	2	3	1	2	2	2	2	2	9	1	9	1	9	9	9	9	9	9	9	1	9	9	2	2	2	2	2	2
3	4	6	1	2	1	1	1	1	2	2	1	9	9	9	9	9	1	9	9	9	9	9	9	9	9	1	1	1	1	1	1
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16	3	4	2	2	3	3	2	2	2	3	3	9	9	9	9	9	9	9	9	9	9	1	9	1	9	2	3	1	1	2	2
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21	2	3	2	2	3	3	3	2	2	2	2	9	1	1	9	9	9	9	9	9	9	9	9	9	9	2	2	2	2	2	1
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S.No.	V1	V2	V3	V4	V5	V6	V7	V8	V9	V10	V11	V12	V13	V14	V15	V16	V17	V18	V19	V20	V21	V22	V23	V24	V25	V26	V27	V28	V29	V30
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S.No.	V1	V2	V3	V4	V5	V6	V7	V8	V9	V10	V11	V12	V13	V14	V15	V16	V17	V18	V19	V20	V21	V22	V23	V24	V25	V26	V27	V28	V29	V30			
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S.No.	V1	V2	V3	V4	V5	V6	V7	V8	V9	V10	V11	V12	V13	V14	V15	V16	V17	V18	V19	V20	V21	V22	V23	V24	V25	V26	V27	V28	V29	V30
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94	3	6	2	3	1	1	2	9	9	1	2	9	9	9	9	9	9	9	9	9	9	9	9	9	9	1	1	1	1	1
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96	2	2	3	3	3	3	3	3	3	3	3	9	9	9	9	9	9	9	9	9	9	1	9	9	1	3	3	2	2	3
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S.No.	V1	V2	V3	V4	V5	V6	V7	V8	V9	V10	V11	V12	V13	V14	V15	V16	V17	V18	V19	V20	V21	V22	V23	V24	V25	V26	V27	V28	V29	V30
106	3	1	5	3	2	2	2	9	2	2	1	1	9	9	1	9	9	9	9	9	9	1	1	1	9	2	1	1	1	2
107	3	3	3	3	2	2	2	3	2	2	2	9	1	1	9	9	9	9	9	9	9	9	9	9	9	2	2	2	1	1
108	2	1	2	3	2	2	2	9	1	1	2	9	1	9	9	9	9	9	1	9	1	9	9	9	9	2	2	1	2	2
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113	2	2	2	3	9	9	3	9	2	2	2	1	9	9	9	9	9	9	9	9	9	9	9	9	9	2	2	2	2	2
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115	2	5	3	3	2	2	2	2	2	3	2	9	9	9	9	9	9	9	9	9	1	9	1	1	1	2	2	2	1	1
116	2	1	3	3	1	2	1	9	2	2	2	9	9	9	9	9	9	9	9	1	1	9	9	9	9	2	1	1	2	2
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131	3	1	4	3	2	1	2	9	2	3	2	1	9	9	9	9	9	9	9	9	9	9	9	9	9	2	2	1	2	2
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S.No.	V1	V2	V3	V4	V5	V6	V7	V8	V9	V10	V11	V12	V13	V14	V15	V16	V17	V18	V19	V20	V21	V22	V23	V24	V25	V26	V27	V28	V29	V30	
133	4	1	1	3	3	1	3	3	2	2	2	9	1	9	9	9	9	9	9	9	9	1	9	9	9	3	3	1	3	2	
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139	3	1	2	3	2	1	3	9	2	2	2	9	1	9	9	9	9	9	9	9	9	9	9	9	9	2	2	1	1	2	
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S.No.	V1	V2	V3	V4	V5	V6	V7	V8	V9	V10	V11	V12	V13	V14	V15	V16	V17	V18	V19	V20	V21	V22	V23	V24	V25	V26	V27	V28	V29	V30	
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167	3	2	4	1	3	2	3	3	1	2	3	9	9	9	1	9	9	1	9	9	9	1	9	9	9	3	3	2	3	3	
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179	2	3	2	1	2	2	3	9	1	1	2	9	1	9	1	9	9	9	9	9	9	9	9	9	9	3	2	2	2	2	2
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185	4	5	2	1	2	1	2	9	3	1	2	9	9	9	9	9	9	9	9	9	9	9	9	9	9	2	2	1	2	3	
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S.No.	V1	V2	V3	V4	V5	V6	V7	V8	V9	V10	V11	V12	V13	V14	V15	V16	V17	V18	V19	V20	V21	V22	V23	V24	V25	V26	V27	V28	V29	V30		
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S.No.	V1	V2	V3	V4	V5	V6	V7	V8	V9	V10	V11	V12	V13	V14	V15	V16	V17	V18	V19	V20	V21	V22	V23	V24	V25	V26	V27	V28	V29	V30
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215	2	6	4	2	9	9	1	1	9	1	2	9	9	9	9	9	9	9	9	9	9	1	1	9	9	2	1	1	1	1
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S.No.	V1	V2	V3	V4	V5	V6	V7	V8	V9	V10	V11	V12	V13	V14	V15	V16	V17	V18	V19	V20	V21	V22	V23	V24	V25	V26	V27	V28	V29	V30	
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S.No.	V1	V2	V3	V4	V5	V6	V7	V8	V9	V10	V11	V12	V13	V14	V15	V16	V17	V18	V19	V20	V21	V22	V23	V24	V25	V26	V27	V28	V29	V30	
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S.No.	V1	V2	V3	V4	V5	V6	V7	V8	V9	V10	V11	V12	V13	V14	V15	V16	V17	V18	V19	V20	V21	V22	V23	V24	V25	V26	V27	V28	V29	V30	
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S.No.	V1	V2	V3	V4	V5	V6	V7	V8	V9	V10	V11	V12	V13	V14	V15	V16	V17	V18	V19	V20	V21	V22	V23	V24	V25	V26	V27	V28	V29	V30	
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S.No.	V1	V2	V3	V4	V5	V6	V7	V8	V9	V10	V11	V12	V13	V14	V15	V16	V17	V18	V19	V20	V21	V22	V23	V24	V25	V26	V27	V28	V29	V30	
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S.No.	V1	V2	V3	V4	V5	V6	V7	V8	V9	V10	V11	V12	V13	V14	V15	V16	V17	V18	V19	V20	V21	V22	V23	V24	V25	V26	V27	V28	V29	V30	
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S.No.	V1	V2	V3	V4	V5	V6	V7	V8	V9	V10	V11	V12	V13	V14	V15	V16	V17	V18	V19	V20	V21	V22	V23	V24	V25	V26	V27	V28	V29	V30	
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S.No.	V1	V2	V3	V4	V5	V6	V7	V8	V9	V10	V11	V12	V13	V14	V15	V16	V17	V18	V19	V20	V21	V22	V23	V24	V25	V26	V27	V28	V29	V30
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S.No.	V1	V2	V3	V4	V5	V6	V7	V8	V9	V10	V11	V12	V13	V14	V15	V16	V17	V18	V19	V20	V21	V22	V23	V24	V25	V26	V27	V28	V29	V30	
457	2	3	3	1	2	2	2	2	2	2	2	9	1	9	1	9	9	9	9	9	9	9	9	9	9	2	2	2	1	1	
458	4	6	1	1	2	1	9	9	9	9	2	1	9	9	9	9	9	9	9	9	9	9	9	9	9	9	2	1	1	9	
459	2	2	2	1	3	3	3	3	1	1	3	9	9	9	9	9	9	1	9	1	1	1	9	9	9	3	3	3	3	3	
460	2	6	3	1	2	2	2	9	9	2	2	1	9	9	9	9	9	9	9	9	9	9	9	9	9	2	2	1	2	2	
461	2	2	2	1	1	1	2	2	3	2	3	1	9	9	9	9	9	9	9	9	9	9	9	9	9	2	2	1	2	1	
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467	2	2	2	1	2	1	2	2	3	3	2	9	9	9	9	9	9	9	9	9	9	1	9	9	9	2	2	1	1	1	
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472	2	6	2	1	3	3	3	9	3	2	3	9	9	9	9	9	9	9	9	9	9	9	1	1	9	9	3	3	3	3	3
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S.No.	V1	V2	V3	V4	V5	V6	V7	V8	V9	V10	V11	V12	V13	V14	V15	V16	V17	V18	V19	V20	V21	V22	V23	V24	V25	V26	V27	V28	V29	V30
484	3	1	5	1	2	1	2	2	1	2	2	1	9	9	9	9	9	9	9	9	9	9	9	9	9	2	2	1	1	1
485	3	6	4	1	2	2	2	9	2	2	2	9	9	9	9	9	9	9	9	9	9	1	9	9	9	2	2	2	3	3
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487	3	6	4	1	3	1	9	9	9	2	1	1	9	9	9	9	9	9	9	9	9	9	9	9	9	2	2	1	2	2
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491	2	3	1	1	2	3	3	9	2	3	3	9	9	9	9	9	9	9	9	9	9	9	9	9	1	3	3	3	2	2
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502	4	5	4	3	2	1	2	2	1	2	2	9	1	1	9	9	9	9	9	9	1	1	9	1	9	3	2	1	2	3
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