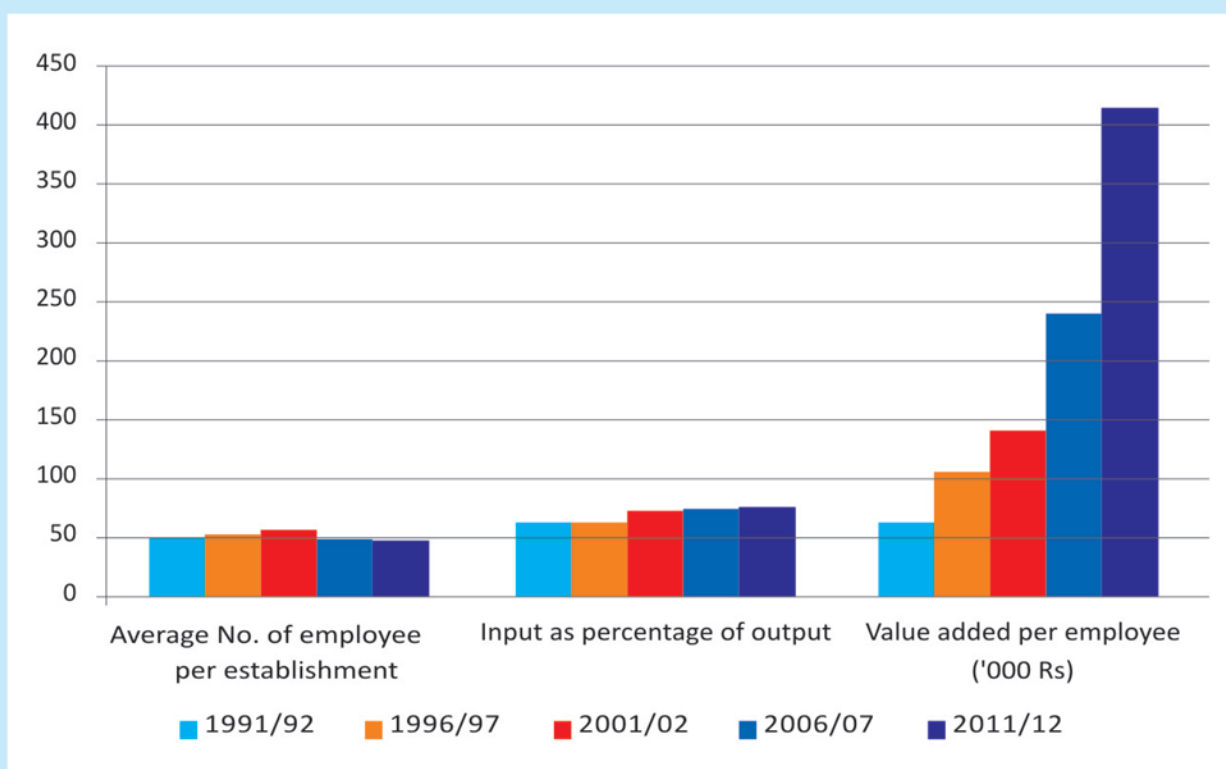


# National Census of Manufacturing Establishments Nepal, 2011/12

## National Level

### Performance indicators



Government of Nepal  
National Planning Commission Secretariat  
**Central Bureau of Statistics**  
Kathmandu, Nepal  
June, 2014

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## Foreword

It is my pleasure to bring out the report on the National Census of Manufacturing Establishments (NCME) 2011/12 of Nepal as its tenth series. This report includes the detailed characteristics of Manufacturing Establishments of Nepal 2011/12 comparable with those of the previous results of NCMEs. The result from the NCME will indeed be helpful in assessing the manufacturing production pattern and structural changes. I hope the findings of the census will be very useful for planners, policy makers, researchers, private sectors and investors.

Broad based economic growth is the sole objective of the Government of Nepal. Nationally representative censuses like this census, through reliable statistical results can support the monitoring and evaluation of the industrial development of the country. In addition to this, the report can be very useful reference to the private sectors and investors to assess their opportunities in the Nepalese Manufacturing sector which has not been doing so during last decade. I firmly believe that we now have an ample opportunity to use this wealth of information to evaluate the periodic plans and economic development issues. I humbly insist on all researchers, analysts, private sectors and investors to come forward in the exploitation of this information for the maximum benefit of the country.

In the meantime, I would like to thank the Technical Committee of the National Census of Manufacturing Establishment 2011/12 for their valuable contribution. Last but not least, I appreciate and would like to offer my thanks to all the staff of the Central Bureau of Statistics who have worked very hard and contributed a lot to make this census a success. Thank also goes to the friends from manufacturing sector who have directly indirectly provided support for this report preparation.

Prof. Dr. Govind Raj Pokharel  
Vice-Chairman  
National Planning Commission  
Kathmandu, Nepal

June, 2014



## Acknowledgement

National Census of Manufacturing Establishments (NCMEs) is also an important statistical operation of the country. Considering this fact, the Central Bureau of Statistics (CBS) has successfully conducted this 10<sup>th</sup> National Census of Manufacturing Establishment 2011/12 almost in the interval of five years.

The nature of economic data collected from establishments is different than the data collected from the household surveys. The census of manufacturing establishments 2011/12 has once again proved that Nepal has capacity to undertake such a special statistical operation with quality. Against this context, I believe that the planners, industrialists, investors, managers, executives, public officers, researchers, students and many other interested parties will find the census useful as a preliminary source of industrial statistics to be used for their own varied purposes and interests.

Finally, I take this opportunity to congratulate the technical committee, staffs and officials of the CBS led by Mr. Bikash Bista, Director General for their hard works.

Dr. Som Lal Subedi  
Secretary  
National Planning Commission Secretariat  
Singha Durbar, Kathmandu, Nepal

June, 2014



## Preface

Central Bureau of Statistics (CBS) has been conducting National Census of Manufacturing Establishments (NCME) every five years since 1964/65 and the present census is the tenth in the series. CBS is pleased to bring out the results of the NCME 2011/12 in time. The census results are published in one volume - national level report. This volume with national level data provides information on structure and characteristics of the manufacturing sector, especially on employment, output, input and value added. The tenth NCME has also collected information on establishment's attempt in environment management.

The census operation went successfully and the credit goes to the sincere cooperation of all manufacturing establishments. The bureau would like to express heartfelt thanks to all respondents of this census.

Data collection work would not have been completed without dedicated efforts of all field staff of Statistics Offices (SOs). I would like to thank all enumerators, supervisors and officers engaged in the field work of NCME. I appreciate the painstaking works of directors Mr. Rajesh Dhital Mr. Anil Sharma, Mr. Mahesh Chand Pradhan, Mr. Indra Bahadur Karki, Mr. Suresh Prasad Kayastha, Computer Officer of CBS, Santosh Koirala, and Ram Krishna Ghimire, Statistical Assistants who were involved in all or partly in the census tasks like questionnaire design, manual preparation, and organization of field work, data processing, tabulation, report preparation. I would also like to thank Mr. Bikash Malla, Mr. Surendra Rawal, and Mr. Rochak Subedi, statistical officers who were involved in management at the census report preparation stage. I would also like to thank Mr. Nebin Lal Shrestha, Director of the Establishment Census and Survey Section of the Bureau who oversaw the census activities throughout the operation period. Mr. Suman Raj Aryal, Deputy Director General of Economic Statistics Division of the Bureau who directed the census deserves my special thanks.

Finally, CBS requests all users to provide valuable comments on the publication which would be very useful for the improvement in the future.

Bikash Bista  
Director General  
Central Bureau of Statistics  
Thapathali, Kathmandu, Nepal

June, 2014



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# **National Census of Manufacturing Establishments 2011/2012, Nepal**

## **1. Introduction**

The National Census of Manufacturing Establishments (NCME) is a regular periodic statistical operation to collect, manage and disseminate data on the manufacturing sector of Nepal. The NCME has been carried out by Central Bureau of Statistics (CBS) in every five years. CBS is the main responsible organization of the government for collection, management and dissemination of statistical information in the country. Particularly, the NCME is carried out by the establishment census and survey section of CBS. The census covers all manufacturing establishments located within the geographic boundary of Nepal engaging 10 or more persons.

Following the international practices, the establishments enumerated are classified according to the Nepal Standard Industrial Classification (NSIC). The reference period of the census was the fiscal year 2068/2069 B.S.(2011/2012). Particularly, it is mid July 2011 to mid July 2012. The actual enumeration work of the census was carried out during the period from January 2013 to July 2013.

## **2. Objectives**

The overall objective of the NCME was to collect, process and disseminate statistics of operational manufacturing establishments engaging ten or more persons in the reference period. The specific objectives of the NCME were to:

1. collect statistics on the structure of the existing manufacturing establishments;
2. collect and produce statistics on employment in the manufacturing establishments;
3. collect and produce statistics on legal status, ownership, raw materials, energy use, other costs incurred, sales, stock of raw materials and finished products;
4. produce information on output and input of manufacturing establishments by Central Product Classification(CPC);
5. collect information on establishment's attempts to manage environment;
6. collect information on problems faced by the manufacturing establishments and
7. produce statistics of manufacturing establishments at national, regional and district levels;

### **3. Technical committee**

The National Census of Manufacturing Establishments (NCME) 2011/12 was conducted under the overall guidance of the technical committee headed by the Director General of the CBS. The technical committee consisted of representatives from National Planning Commission Secretariat, Ministry of Industry, Department of Industry, Department of Cottage and Small Industry, Department of Inland Revenue, Federation of Nepalese Chambers of Commerce and Industry (FNCCI) and Economic Statistics Division, National Account and Price Statistic Sections of the bureau itself. Director of the Establishment and Survey Section acted as the member secretary of the committee. The census questionnaire, enumerators manual, census procedures and census results were discussed in the series of in-house and technical committee meetings. The technical committee extended significant help not only in deciding the technical aspects but also helped in managing the census operation and disseminating the census results.

### **4. Methodology**

The Establishment Census and Survey Section (ECSS) of the CBS carried out the entire work of planning, questionnaire and manual preparation, training, supervision, data entry, editing and processing of the NCME-2011/2012. Particularly, questionnaire was designed to collect information of manufacturing establishments on the following heading in 17 blocks:

1. Introduction of manufacturing establishment
2. Legal status
3. Type of ownership
4. Major manufacturing activities and products
5. Employment particulars
6. Purchase of fuel, water and electricity
7. Receipts from sale and cost of industrial services
8. Cost of raw materials purchased
9. Details of production and sale of goods
10. Value of stock (inventories)
11. Cost of non-industrial service purchased
12. Tax
13. Receipts from non-industrial service
14. Details of fixed assets
15. Capacity utilization
16. Investment and cost of environment protection
17. Problems faced by manufacturing establishments

The field work was carried out with the help of the staff of the Statistics Offices located in 33 districts of the country and staff of the CBS. At first, listing work was carried with a view of coverage, resource management and quality assurance. The intensive supervision and quality control work were carried out by the staff members of the establishment census and survey section and the staff of the CBS of the other section as well. All the personnel involved in the data collection and

processing were duly trained. Completed filled up questionnaires received from the statistics offices were thoroughly checked before data entry and also consistency checks and edits were done during the data entry period. The coding, data entry and processing work were done by the staff members of the section and the other staff of CBS. Data entry was done by using the software "CSPPro" and consistency checks, edits, tabulation and summarization were done by using "SPSS" and "STATA".

## **5. Summary of the Results**

### **5.1 Summary of principal Indicators**

The NCME-2011/12 reveals that there has been 18.3 percent increase in total number of operating establishments as compared to the previous census 2006/07. During the last inter census period (2006/07 to 2011/12), the number of manufacturing establishments found to be increased were establishment engaged in food and beverages; tobacco products; wearing apparel; leather, leather products and footwear; wood products; chemical and chemical products; rubber and plastics products; non-metallic mineral products; fabricated metal products; Machinery and equipment; Furniture manufacturing n.e.c. At the same time, number of manufacturing establishments in textiles; printing and publishing; basic metal; other transport equipment have decreased in comparison to last CME-2006/07.

With the increment of number of operating establishments, the number of persons engaged and number of persons employee have increased by 15.1 and 14.8 per cent respectively. This increment is most probably due to the increased number of establishments in food and beverages, non-metallic mineral products; fabricated metal products; furniture manufacturing n.e.c.; rubber and plastics products; wood products (excluding furniture).

However, data on total wages/salary and other benefits; value of input; value of output; total value added; value of fixed assets has been calculated on the basis of SNA concepts and their values have increased in comparison to last CME-2006/07. The principal indicators of NCME-2011/12 along with previous CME results are as follows:

**Table a: Summary of principal indicators**

Principal indicators	CME Year				
	1991/92	1996/97	2001/02	2006/07	2011/12
1 Total number of establishments	4,271	3,557	3,213	3,446	4,076
2 Total number of persons engaged	223,463	196,708	191,853	177,550	204,360
3 Total number of employees	213,653	187,316	181,943	169,891	194,989
4 Total wages, salaries & other benefits ('000 Rs.)	3,348,493	4,058,069	6,389,661	8,044,096	16,440,763
5 Value of fixed assets at the end of the reference period ('000 Rs.)	20,067,126	26,491,045	40,371,381	78,889,352	119,728,060
6 Value of input during the reference period ('000 Rs.)	20,937,000	34,868,272	69,484,824	115,304,387	241,767,640
7 Value of output during the reference period ('000 Rs.)	33,086,808	54,930,649	95,096,951	156,305,650	322,551,699
8 Total Value added during the reference period ('000 Rs.)	12,149,808	20,062,377	25,612,127	41,001,263	80,784,059

## 5.2 Summary of Performance Indicators

Performance indicators primarily measure the economic efficiency of industrial production with respect to the growth of output in relative term of input. These indicators help to assess correctly the economic situation of a country as a basis for planning and implementing an effective fiscal or monetary policy. Industrial performance is an outcome of various social, economic and technological factors. The top three important dimensions of industrial performance are productivity, structural change, and competitiveness. Among these three dimensions, productivity has been described below.

Productivity is a ratio of volume measure of output to a volume measure of input use or it is derived from the ratio of the value of real output to the value of input over a period of time of the nation. Productivity can be measured in different ways, depending on the definition of output and input components or measures. Some productivity indicators are discussed below:

### a) Input as a percentage of output:

This input as a percentage of output measures the input per 100 outputs of the manufacturing establishments. Higher the value of the indicator shows more use of inputs and lowers the value of the indicator shows less use of inputs for producing 100 outputs. The input as percentage of output of the last five CME years is given in table b below. This indicator was stagnated in the first two CME years but it has a glaring increased in the last three CME years.

### b) Output input ratio:

Output input ratio is a ratio of volume of output to the volume of input use. This ratio indicator measures the output per unit of input and also measures the efficiency of the use of inputs. Higher the value of indicator indicates the efficient use of inputs (i.e. labour, capital, materials, energy, industrial services, etc.), but lower the value of indicator indicates

the inefficient use of inputs. The value of this indicator stagnated in CME year 1991/92 and 1996/97 but it has gradually decreased in the following CME year (table b).

c) **Valued added per employee:**

Value added per employee is a measure of labour productivity in manufacturing. It indicates the average amount of value added produced by an employee. This is the simplest approximation of the rate of labour productivity in manufacturing. When labor is more skilled or when more capital is used by labor, this will result in a higher value added. Labor productivity thus provides a mixed measure of labor skills and capital intensity. For consistency checks of the survey results, it is quite common to compute the average value added per person engaged.

The value added per employee and average value added per person engaged of the Census of Manufacturing Establishments (CME) of the last five CME years are presented in the table b given below. It shows that both value added per employee and per person engaged have been increased gradually till the CME year 2001/02 and then it has been rapidly increased in last two CME years.

d) **Value added output ratio:**

The value added output ratio measures the efficiency of the use of material inputs. It can be calculated at any level (for example: at the manufacturing level, at the level of sectors and sub-sectors, as well as at the enterprise or establishment level). Since it is a ratio between two values, the effects of inflation are nearly eliminated and making the value added output ratio a more stable and robust estimate in comparison with the absolute value of output and input. Thus, it is widely applied in order to check the data consistency in survey results.

The value added output ratio of last five CME years is presented in the table b. The value of this indicator stagnated in CME year 1991/92 and 1996/97 but it has a glaring declined in each CME year after the CME year 1996/97. Thus it indicates that inefficiency in the use of inputs (i.e. inputs are a higher proportion of output), unfavorable prices for products and purchases, or poor control of stocks as compare to the first two CME years.

e) **Value added per unit of capital:**

Value added per unit of capital measures the efficiency and effectiveness of fixed assets in the generation of output of manufacturing industries as well as its sub-sectors. Lower the value of indicator indicates the inefficient use of capital or poor marketing but higher the value of indicator indicates the efficient capital utilization or good marketing. Based on this principle value added per unit of capital of the last five CME year is given in table b shows that there were efficient capital utilization or good marketing strategy in the all CME year except CME year 2006/07 as compare to CME year 1991/92.

**Table b: Summary of performance indicators**

Performance Indicators	CME Year				
	1991/92	1996/97	2001/02	2006/07	2011/12
1 Average number of employee per establishment	50	53	57	49	48
2 Input as percentage of output	63	63	73	74	75
3 Output input ratio	1.58	1.58	1.37	1.36	1.33
4 Value added per employee ('000 Rs)	57	107	141	241	414
5 Average value added per person engaged ('000 Rs)	54	102	133	231	395
6 Value added output ratio	0.37	0.37	0.27	0.26	0.25
7 Value added per unit of capital	0.61	0.76	0.63	0.52	0.67