

**Central Bank of Nigeria**



**Purchasing Managers’  
Index (PMI) Survey  
Report**

Statistics Department

*December 2019*

# PURCHASING MANAGERS' INDEX (PMI) DECEMBER 2019 REPORT

## 1.0 Introduction

The December 2019 PMI survey was conducted by the Statistics Department of the Central Bank of Nigeria during the period December 10-14, 2019. The respondents were purchasing and supply executives of manufacturing and non-manufacturing organizations in all 36 states in Nigeria and the Federal Capital Territory (FCT). The Bank makes no representation regarding the individual companies, other than the information they have provided. The data contained herein further provides input for policy decisions.

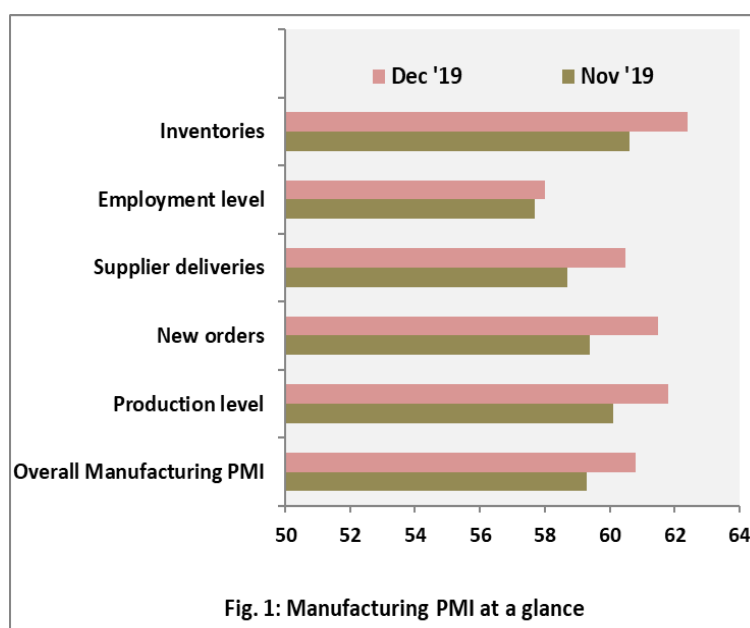
### 1.1 Data and Method of Presentation

The *Manufacturing and Non-Manufacturing PMI Report* on businesses is based on survey responses, indicating the *changes* in the level of business activities in the *current month* compared with the *preceding month*. For each of the indicators measured, this report shows the diffusion index of the responses. The diffusion index is computed as the percentage of *responses with positive change plus half* of the percentage of those reporting *no change*, except for supplier delivery time, which is computed as the percentage of *responses with negative change plus half* of the percentage of those reporting *no change*. The composite PMI for the manufacturing sector is computed as the *weighted average* of five diffusion indices, namely: production level, level of new orders, suppliers' delivery time, employment level and raw materials inventory/work in progress, with assigned weights of *25%, 30%, 15%, 10%* and *20%*, respectively. The composite PMI for the non-manufacturing sector is computed from four diffusion indices, namely: business activity, level of new orders, employment level and raw materials inventory, with equal weights of *25% each*.

*A composite PMI above 50 points indicates that the manufacturing/non-manufacturing economy is generally expanding, 50 points indicates no change and below 50 points indicates that it is generally contracting. The subsectors reporting growth are listed in the order of highest to lowest growth, while those reporting contraction are listed in the order of the highest to the lowest contraction.*

## 2.0 Manufacturing PMI Report

*Production level, new orders, supplier delivery time, employment level and raw materials inventories grew at a faster rate in December 2019*



The *Manufacturing PMI* in the month of December stood at 60.8 index points, indicating expansion in the manufacturing sector for the thirty-third consecutive month (Fig. 2 and Table 1). The index grew at a faster rate when compared to the index in November. All the 14 surveyed subsectors reported growth in the review month in the following order: petroleum & coal products; transportation equipment; plastics & rubber products; food, beverage & tobacco products; fabricated metal products; furniture & related products; primary metal; chemical & pharmaceutical products; printing & related support activities; textile, apparel, leather & footwear; cement; paper products; electrical equipment; and nonmetallic mineral products (Fig. 2 and Table 1).

### 2.1 Production Level

At 61.8 points, the production level index for manufacturing sector grew for the thirty-fourth consecutive month in December 2019. The index indicated a faster growth in the current month, when compared to its level in November 2019. Eleven of the 14 manufacturing subsectors recorded increased production level, 2 remained unchanged while 1 recorded decline (Fig. 3 and Table 2).

### 2.2 New Orders

At 61.5 points, the new orders index grew for the thirty-third consecutive month, indicating increase in new orders in December 2019. The index grew at a faster rate, when compared to its level in November 2019. Twelve subsectors reported growth, 1 remained unchanged while 1 recorded decline in the review month (Fig. 4 and Table 3).

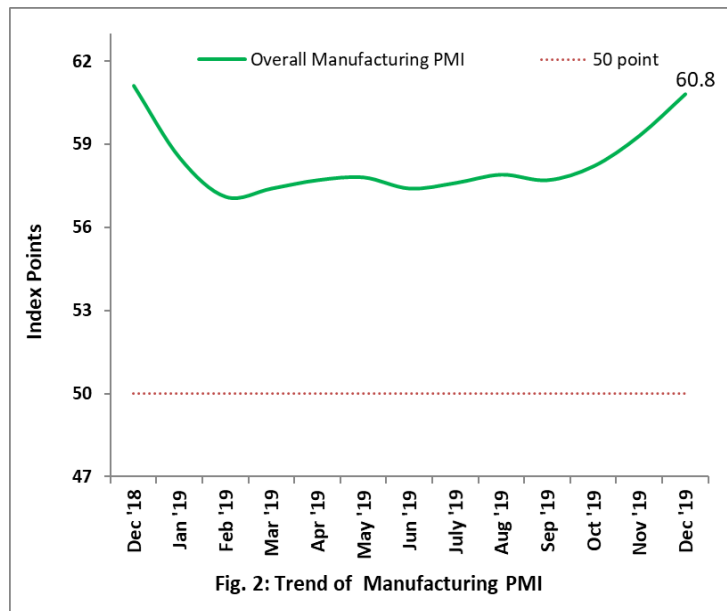


Fig. 2: Trend of Manufacturing PMI

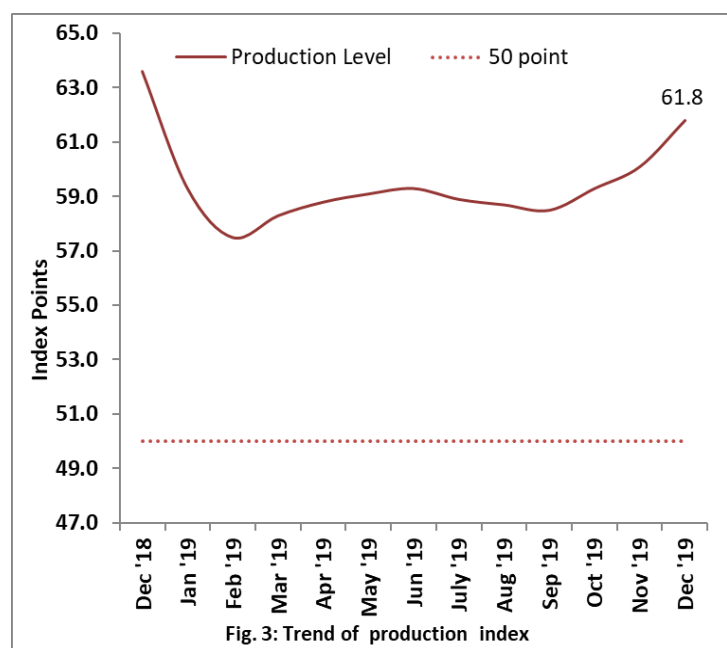


Fig. 3: Trend of production index

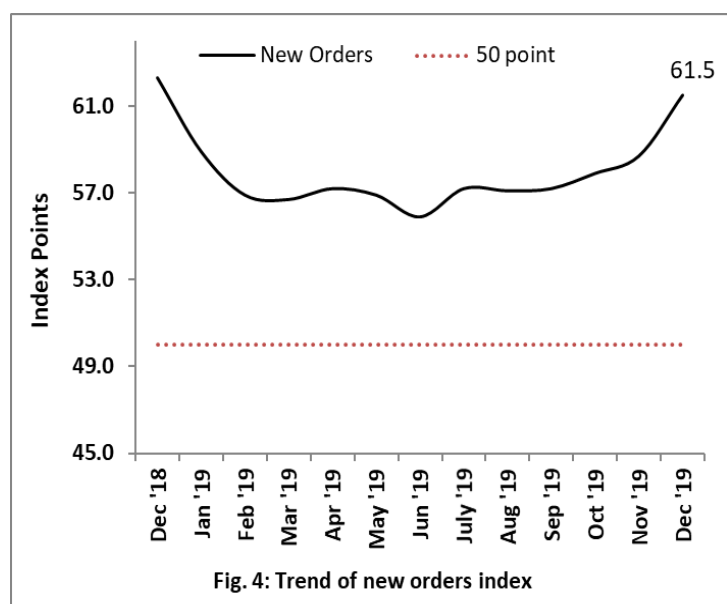
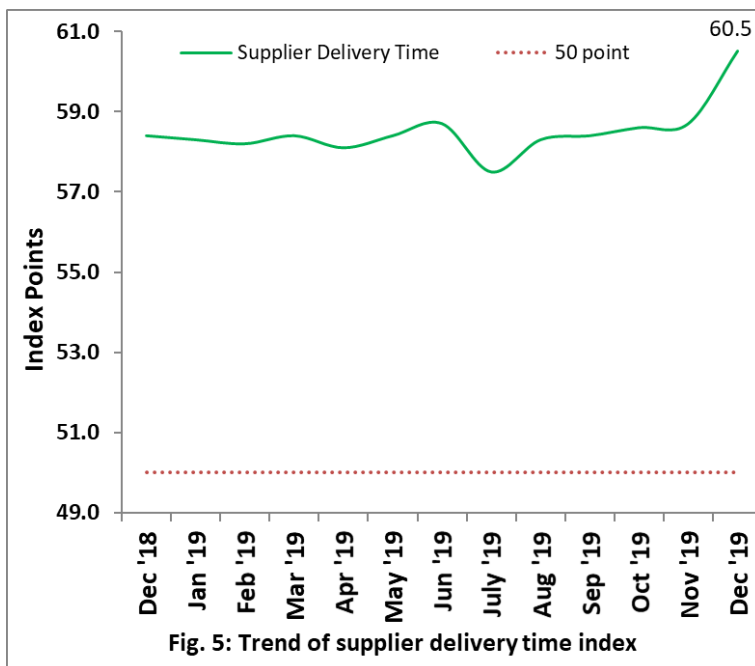


Fig. 4: Trend of new orders index

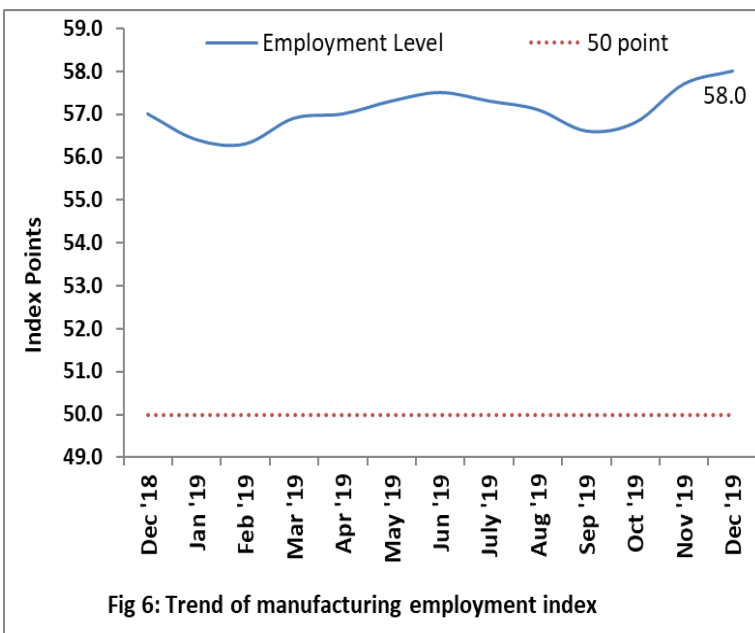
### 2.3 Supplier Delivery Time

The manufacturing supplier delivery time index stood at 60.5 points in December 2019, indicating faster supplier delivery time. The index has recorded growth for thirty-one consecutive months. Twelve of the 14 subsectors recorded improved suppliers' delivery time, while 2 declined in the review period (Fig. 5 and Table 4).



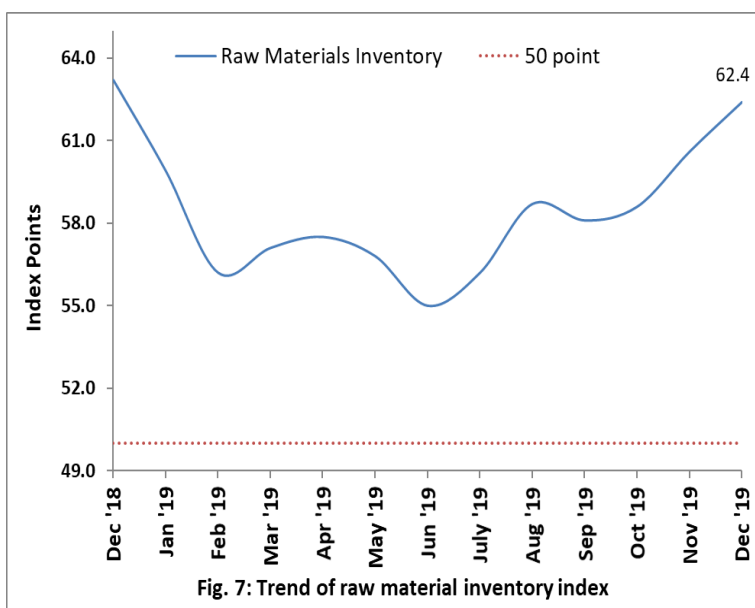
### 2.4 Employment Level

The employment level index for December 2019 stood at 58.0 points, indicating growth in employment level for the thirty-second consecutive month. Of the 14 subsectors, 10 reported increased employment level, 3 reported unchanged employment level while 1 reported decreased employment in the review month (Fig. 6 and Table 5).



### 2.5 Raw material Inventories

The Manufacturing sector inventories index grew for the thirty-third consecutive month in December 2019. At 62.4 points, the index grew at a faster rate when compared to its level in November 2019. Twelve of the 14 subsectors recorded growth, while 2 reported declined raw material inventories in the review month (Fig. 7 and Table 6).



### 3.0 Non-Manufacturing PMI Report

*Business activity, new orders, employment level and inventories grew at a faster rate in December 2019*

The *composite PMI* for the *non-manufacturing* sector stood at 62.1 points in December 2019, indicating expansion in Non-manufacturing PMI for the thirty-second consecutive month. The index grew at a faster rate when compared to its level in November 2019. All 17 surveyed subsectors recorded growth in the following order: management of companies; repair, maintenance/washing of motor vehicles; water supply, sewage & waste management; arts, entertainment & recreation; real estate rental & leasing; utilities; finance & insurance; transportation & warehousing; accommodation & food services; wholesale/retail trade; educational services; construction; information & communication; professional, scientific, & technical services; health care & social assistance; electricity, gas, steam & air conditioning supply; and agriculture (Fig. 9 and Table 7).

#### 3.1 Business Activity

At 62.6 points, the business activity index grew for the thirty-third consecutive month, indicating expansion in non-manufacturing business activity in December 2019. All 17 survey subsectors recorded growth in business activity in the review month (Fig 10 Table 8).

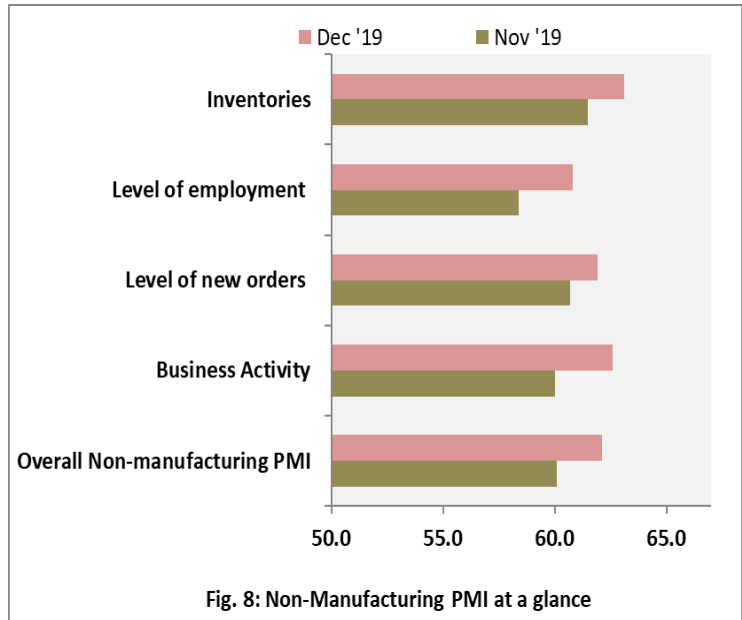


Fig. 8: Non-Manufacturing PMI at a glance

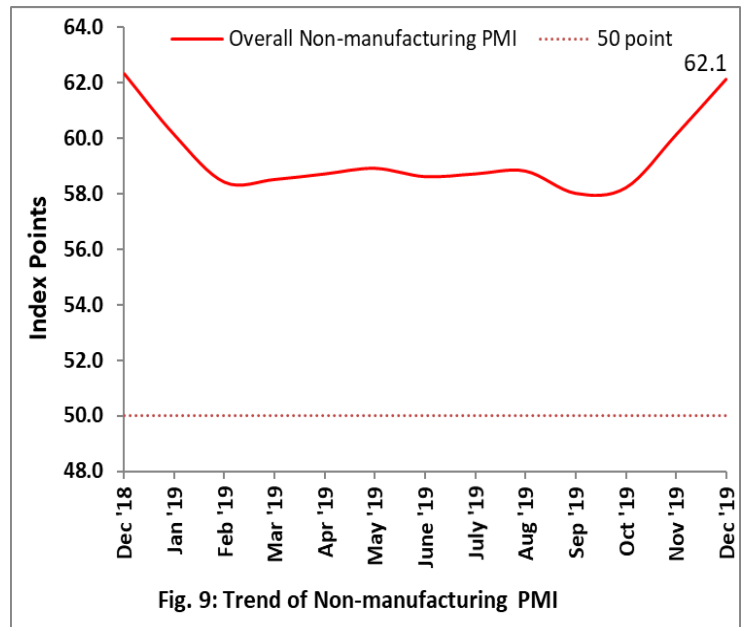


Fig. 9: Trend of Non-manufacturing PMI

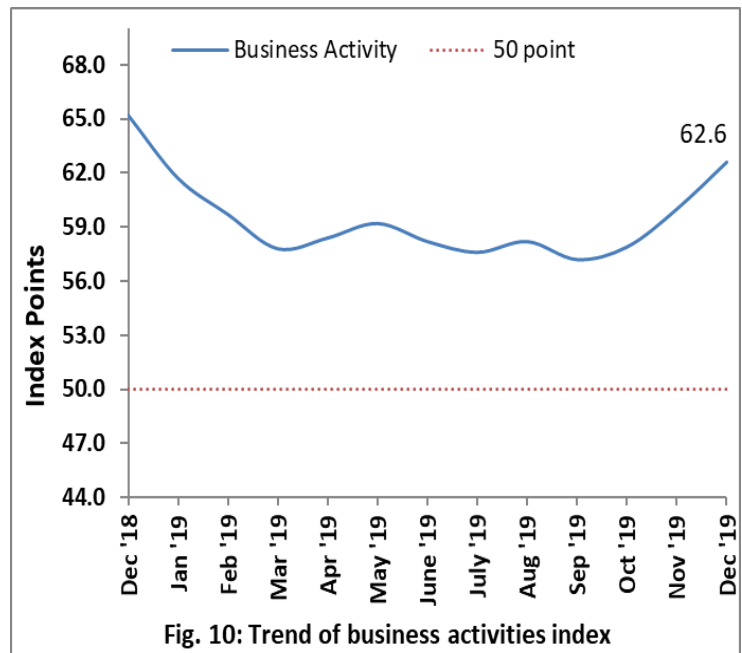
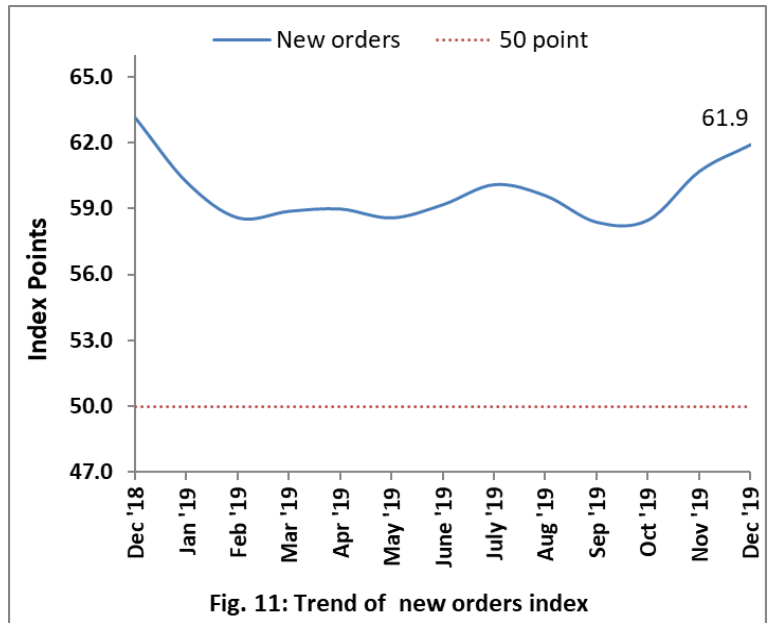


Fig. 10: Trend of business activities index

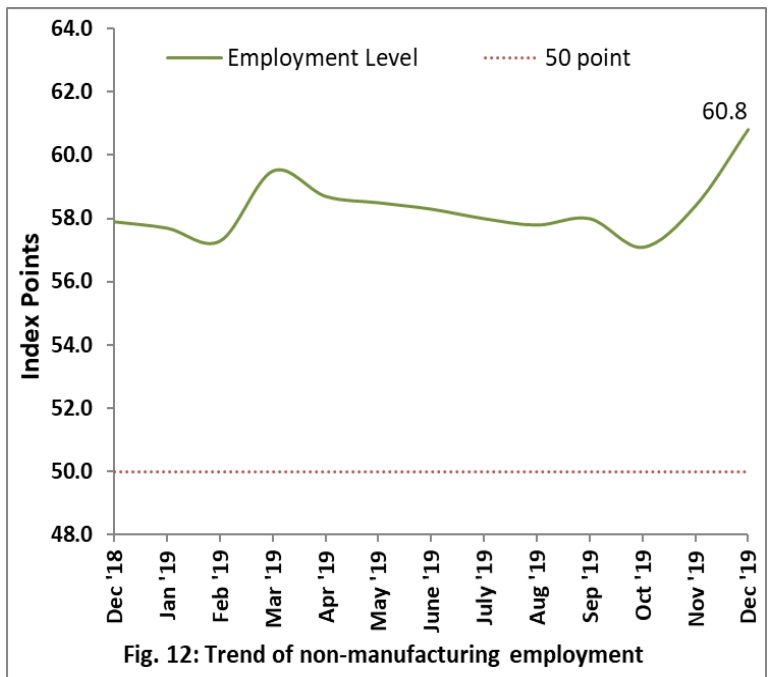
### 3.2 New Orders

At 61.9 points, new orders index grew for the thirty-third consecutive month in December 2019. All the 17 surveyed subsectors recorded growth in new orders during the review period (Fig 11 Table 9).



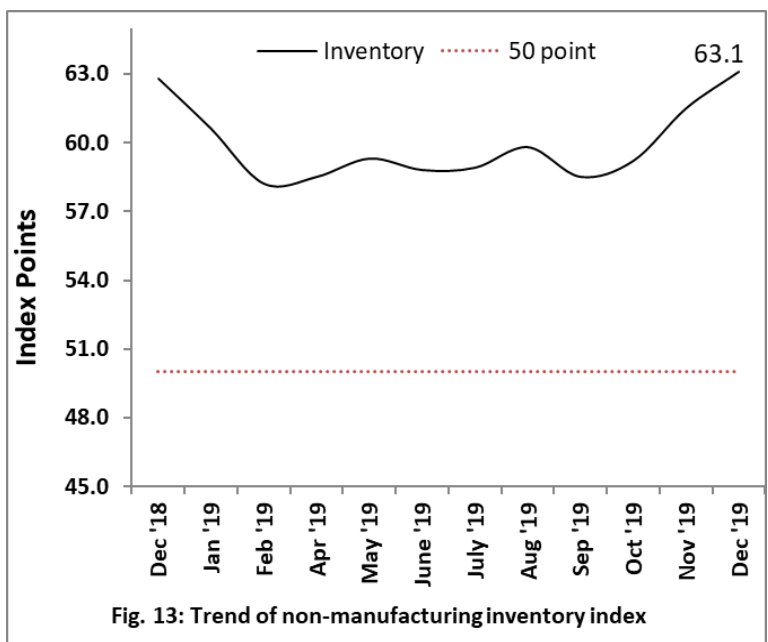
### 3.3 Employment Level

The employment level Index for the non-manufacturing sector stood at 60.8 points, indicating growth in employment for the thirty-second consecutive month. All 17 surveyed subsectors recorded growth in employment level in the review period (Fig 12 Table 10).



### 3.4 Non-manufacturing Inventory

At 63.1 points, non-manufacturing inventory index grew for the thirty-second consecutive month, indicating growth in inventories in the review period. All the 17 surveyed subsectors recorded higher inventories in December 2019 (Fig 13, Table 11).



## APPENDICES

**Table 1: Details of Overall Manufacturing PMI**

Index	Nov 2019 Index*	Dec 2019 Index*	Difference	Direction	Rate of Change	Trend** (Months)
Composite PMI \1	59.3	60.8	1.5	Growing	Faster	33
Production level	60.1	61.8	1.7	Growing	Faster	34
New orders	59.4	61.5	2.1	Growing	Faster	33
Supplier delivery time	58.7	60.5	1.8	Growing	Faster	31
Employment level	57.7	58.0	0.3	Growing	Faster	32
Raw materials/WIP Inventory	60.6	62.4	1.8	Growing	Faster	33
New Export Orders	41.0	39.1	-1.9	Declining	Faster	58
Output Prices	53.1	51.9	-1.2	Growing	Slower	48
Input Prices	59.3	59.2	-0.1	Growing	Slower	66
Quantity of Purchases	55.8	57.0	1.2	Growing	Faster	15
Outstanding Business/Backlog of Work	41.4	45.5	4.1	Declining	Slower	25
Stock of Finished Goods	53.1	52.8	-0.3	Growing	Slower	21
<b>Manufacturing Sub-Sectors</b>						
Cement	58.5	55.5	70.0	Growing	Faster	15
Chemical & pharmaceutical products	53.6	59.1	57.5	Growing	Faster	23
Electrical equipment	65.5	51.0	49.5	Growing	Faster	23
Fabricated metal products	57.4	63.6	52.2	Growing	Faster	18
Food, beverage & tobacco products	61.1	63.7	59.3	Growing	Faster	39
Furniture & related products	67.5	63.4	61.6	Growing	Faster	19
Nonmetallic mineral products	60.5	50.3	59.0	Growing	Faster	6
Paper products	47.5	55.0	59.2	Growing	From Contraction	1
Petroleum & coal products	69.4	75.8	61.3	Growing	Faster	9
Plastics & rubber products	62.4	66.3	57.6	Growing	Faster	17
Primary metal	56.0	61.4	48.2	Growing	Faster	6
Printing & related support activities	60.1	56.2	61.7	Growing	Faster	21
Textile, apparel, leather & footwear	50.3	55.8	53.9	Growing	Faster	5
Transportation equipment	75.0	70.0	49.4	Growing	Faster	16

\1 The composite PMI is a weighted average of the following diffusion indices: production level, new orders, supplier deliveries, employment level and inventories. The weights assigned to these variables are 25%, 30%, 15%, 10% and 20% respectively.

\*The series index is a diffusion index defined as a weighted percentage of high, same and low with 1.0, 0.5 and 0.0 as weights respectively.

\*\* Number of month moving in current direction

**Table 2: Details of Production PMI**

Index	Nov 2019 Index	Dec 2019 Index	Difference	Direction	Rate of Change	Trend (Months)
PRODUCTION PMI	60.1	61.8	1.7	Growing	Faster	34
Cement	60.0	50.0	-10.0	No Change	From Expansion	1
Chemical & pharmaceutical products	52.7	57.4	4.7	Growing	Faster	2
Electrical equipment	100.0	60.0	-40.0	Growing	Slower	3
Fabricated metal products	62.5	65.3	2.8	Growing	Faster	10
Food, beverage & tobacco products	64.4	67.9	3.5	Growing	Faster	39
Furniture & related products	63.0	66.7	3.7	Growing	Faster	19
Nonmetallic mineral products	58.3	40.9	-17.4	Declining	From Expansion	1
Paper products	44.4	55.6	11.2	Growing	From Contraction	1
Petroleum & coal products	75.0	83.3	8.3	Growing	Faster	9
Plastics & rubber products	60.5	69.0	8.5	Growing	Faster	4
Primary metal	45.0	59.1	14.1	Growing	From Contraction	1
Printing & related support activities	60.0	58.0	-2.0	Growing	Slower	7
Textile, apparel, leather & footwear	43.1	50.0	6.9	No Change	From Contraction	1
Transportation equipment	100.0	75.0	-25.0	Growing	Slower	4

**Table 3: Details of New Orders PMI**

Index	Nov 2019 Index	Dec 2019 Index	Difference	Direction	Rate of Change	Trend (Months)
NEW ORDERS PMI	59.4	61.5	2.1	Growing	Faster	33
Cement	50.0	60.0	10.0	Growing	From No Change	1
Chemical & pharmaceutical products	51.4	55.9	4.5	Growing	Faster	2
Electrical equipment	70.0	50.0	-20.0	No Change	From Expansion	1
Fabricated metal products	52.8	68.1	15.3	Growing	Faster	7
Food, beverage & tobacco products	63.1	66.5	3.4	Growing	Faster	39
Furniture & related products	66.7	63.3	-3.4	Growing	Slower	7
Nonmetallic mineral products	63.9	47.7	-16.2	Declining	From Expansion	1
Paper products	50.0	61.1	11.1	Growing	From No Change	1
Petroleum & coal products	50.0	66.7	16.7	Growing	From No Change	1
Plastics & rubber products	57.9	64.3	6.4	Growing	Faster	6
Primary metal	65.0	54.5	-10.5	Growing	Slower	2
Printing & related support activities	64.0	56.0	-8.0	Growing	Slower	7
Textile, apparel, leather & footwear	50.0	55.6	5.6	Growing	From No Change	1
Transportation equipment	83.3	100.0	16.7	Growing	Faster	2

**Table 4: Details of Supplier Delivery Time PMI**

Index	Nov 2019 Index	Dec 2019 Index	Difference	Direction	Rate of Change	Trend (Months)
SUPPLIER DELIVERY TIME PMI	58.7	60.5	1.8	Growing	Faster	31
Cement	70.0	60.0	-10.0	Growing	Slower	3
Chemical & pharmaceutical products	60.8	66.2	5.4	Growing	Faster	6
Electrical equipment	30.0	40.0	10.0	Declining	Slower	2
Fabricated metal products	55.6	59.7	4.1	Growing	Faster	5
Food, beverage & tobacco products	54.1	56.3	2.2	Growing	Faster	18
Furniture & related products	72.2	65.0	-7.2	Growing	Slower	13
Nonmetallic mineral products	61.8	52.3	-9.5	Growing	Slower	20
Paper products	61.1	55.6	-5.5	Growing	Slower	2
Petroleum & coal products	62.5	66.7	4.2	Growing	Faster	2
Plastics & rubber products	60.5	66.7	6.2	Growing	Faster	4
Primary metal	65.0	77.3	12.3	Growing	Faster	2
Printing & related support activities	58.0	62.0	4.0	Growing	Faster	6
Textile, apparel, leather & footwear	69.0	66.7	-2.3	Growing	Slower	4
Transportation equipment	33.3	25.0	-8.3	Declining	Faster	2



**Table 5: Details of Employment Level PMI**

Index	Nov 2019 Index	Dec 2019 Index	Difference	Direction	Rate of Change	Trend (Months)
EMPLOYMENT LEVEL PMI	57.7	58.0	0.3	Growing	Faster	32
Cement	60.0	50.0	-10.0	No Change	From Expansion	1
Chemical & pharmaceutical products	51.4	58.8	7.4	Growing	Faster	5
Electrical equipment	60.0	60.0	0.0	Growing	Flat	13
Fabricated metal products	59.7	58.3	-1.4	Growing	Slower	3
Food, beverage & tobacco products	58.1	58.5	0.4	Growing	Faster	20
Furniture & related products	72.2	58.3	-13.9	Growing	Slower	6
Nonmetallic mineral products	58.3	59.1	0.8	Growing	Faster	2
Paper products	38.9	50.0	11.1	No Change	From Contraction	1
Petroleum & coal products	87.5	83.3	-4.2	Growing	Slower	3
Plastics & rubber products	68.4	66.7	-1.7	Growing	Slower	4
Primary metal	45.0	63.6	18.6	Growing	From Contraction	1
Printing & related support activities	58.0	48.0	-10.0	Declining	From Expansion	1
Textile, apparel, leather & footwear	44.8	55.6	10.8	Growing	From Contraction	1
Transportation equipment	50.0	50.0	0.0	No Change	Flat	2

**Table 6: Details of Raw Materials Inventory PMI**

Index	Nov 2019 Index	Dec 2019 Index	Difference	Direction	Rate of Change	Trend (Months)
RAW MATERIALS INVENTORY PMI	60.6	62.4	1.8	Growing	Faster	33
Cement	60.0	60.0	0.0	Growing	Flat	6
Chemical & pharmaceutical products	56.8	63.2	6.4	Growing	Faster	2
Electrical equipment	30.0	30.0	0.0	Declining	Flat	2
Fabricated metal products	56.9	62.5	5.6	Growing	Faster	4
Food, beverage & tobacco products	64.0	66.5	2.5	Growing	Faster	39
Furniture & related products	64.8	63.3	-1.5	Growing	Slower	5
Nonmetallic mineral products	58.3	61.4	3.1	Growing	Faster	2
Paper products	44.4	44.4	0.0	Declining	Flat	2
Petroleum & coal products	87.5	83.3	-4.2	Growing	Slower	7
Plastics & rubber products	71.1	64.3	-6.8	Growing	Slower	2
Primary metal	65.0	59.1	-5.9	Growing	Slower	4
Printing & related support activities	56.0	60.0	4.0	Growing	Faster	8
Textile, apparel, leather & footwear	51.7	55.6	3.9	Growing	Faster	5
Transportation equipment	100.0	75.0	-25.0	Growing	Slower	2

**Table 7: Non-Manufacturing at a Glance**

Index	Nov 2019 Index	Dec 2019 Index	Difference	Direction	Rate of Change	Trend (Months)
Composite PMI \1	60.1	62.1	2.0	Growing	Faster	32
Business Activity	60.0	62.6	2.6	Growing	Faster	33
Level of new orders/customers/incoming business	60.7	61.9	1.2	Growing	Faster	33
Employment Level	58.4	60.8	2.4	Growing	Faster	32
Inventories	61.5	63.1	1.6	Growing	Faster	32
Average price of Inputs (volume weighted)	54.6	56.0	1.4	Growing	Faster	50
Level of outstanding business/ Backlog of work	43.6	42.5	-1.1	Declining	Faster	66
New Exports orders	41.6	43.2	1.6	Declining	Slower	66
Imports	41.9	41.8	-0.1	Declining	Faster	66
Inventory (sentiments)	45.8	43.5	-2.3	Declining	Faster	66
<b>Non-manufacturing sub-sectors</b>						
Accommodation & food services	58.9	62.9	4.0	Growing	Faster	18
Agriculture	57.5	56.7	-0.8	Growing	Slower	43
Arts, Entertainment & Recreation	56.3	67.9	11.6	Growing	Faster	2
Construction	60.7	61.5	0.8	Growing	Faster	15
Educational services	61.9	62.2	0.3	Growing	Faster	18
Electricity, gas, steam & air conditioning supply	50.1	57.0	6.9	Growing	Faster	14
Finance & insurance	62.8	63.3	0.5	Growing	Faster	34
Health care & social assistance	60.9	57.2	-3.7	Growing	Slower	32
Information & communication	53.3	61.3	8.0	Growing	Faster	33
Management of companies	62.5	75.0	12.5	Growing	Faster	2
Professional, scientific, & technical services	54.9	58.5	3.6	Growing	Faster	3
Real estate rental & leasing	62.0	66.6	4.6	Growing	Faster	22
Repair, Maintenance/Washing Of Motor Vehicles...	66.5	72.7	6.2	Growing	Faster	19
Transportation & warehousing	60.5	63.0	2.5	Growing	Faster	7
Utilities	58.9	64.6	5.7	Growing	Faster	4
Water supply, sewage & waste management	56.3	69.4	13.1	Growing	Faster	3
Wholesale/Retail trade	62.4	62.5	0.1	Growing	Faster	31

\1 The composite PMI is a simple average of the following diffusion (series) indices: business activity, new orders, employment level and inventories

**Table 8: Business activity at a Glance**

Index	Nov 2019 Index	Dec 2019 Index	Difference	Direction	Rate of Change	Trend (Months)
BUSINESS ACTIVITY PMI	60.0	62.6	2.6	Growing	Faster	33
Accommodation & food services	59.7	62.4	2.7	Growing	Faster	18
Agriculture	58.6	51.3	-7.3	Growing	Slower	6
Arts, Entertainment & Recreation	62.5	78.6	16.1	Growing	Faster	8
Construction	60.0	58.3	-1.7	Growing	Slower	14
Educational services	63.3	64.1	0.8	Growing	Faster	28
Electricity, gas, steam & air conditioning supply	53.8	53.1	-0.7	Growing	Slower	2
Finance & insurance	64.0	63.7	-0.3	Growing	Slower	33
Health care & social assistance	60.4	53.0	-7.4	Growing	Slower	15
Information & communication	45.0	63.3	18.3	Growing	From Contraction	1
Management of companies	66.7	100.0	33.3	Growing	Faster	2
Professional, scientific, & technical services	52.3	63.6	11.3	Growing	Faster	2
Real estate rental & leasing	65.8	68.8	3.0	Growing	Faster	3
Repair, Maintenance/Washing Of Motor Vehicles.	69.2	77.3	8.1	Growing	Faster	15
Transportation & warehousing	60.5	60.9	0.4	Growing	Faster	7
Utilities	50.0	58.3	8.3	Growing	From No Change	1
Water supply, sewage & waste management	50.0	77.8	27.8	Growing	From No Change	1
Wholesale/Retail trade	60.4	67.9	7.5	Growing	Faster	18

**Table 9: New Orders at a Glance**

Index	Nov 2019 Index	Dec 2019 Index	Difference	Direction	Rate of Change	Trend (Months)
NEW ORDERS PMI	60.7	61.9	1.2	Growing	Faster	33
Accommodation & food services	63.4	62.8	-0.6	Growing	Slower	18
Agriculture	54.3	56.4	2.1	Growing	Faster	10
Arts, Entertainment & Recreation	50.0	78.6	28.6	Growing	From No Change	1
Construction	58.6	62.5	3.9	Growing	Faster	14
Educational services	62.2	63.0	0.8	Growing	Faster	18
Electricity, gas, steam & air conditioning supply	53.6	62.5	8.9	Growing	Faster	2
Finance & insurance	62.9	64.3	1.4	Growing	Faster	34
Health care & social assistance	62.5	58.3	-4.2	Growing	Slower	2
Information & communication	48.3	56.7	8.4	Growing	From Contraction	1
Management of companies	50.0	66.7	16.7	Growing	From No Change	1
Professional, scientific, & technical services	58.7	56.8	-1.9	Growing	Slower	3
Real estate rental & leasing	57.7	62.5	4.8	Growing	Faster	14
Repair, Maintenance/Washing Of Motor Vehicles..	73.1	68.2	-4.9	Growing	Slower	15
Transportation & warehousing	60.5	56.5	-4.0	Growing	Slower	9
Utilities	50.0	66.7	16.7	Growing	From No Change	1
Water supply, sewage & waste management	50.0	72.2	22.2	Growing	From No Change	1
Wholesale/Retail trade	63.8	62.6	-1.2	Growing	Slower	31

**Table 10: Employment at a Glance**

Index	Nov 2019 Index	Dec 2019 Index	Difference	Direction	Rate of Change	Trend (Months)
EMPLOYMENT LEVEL PMI	58.4	60.8	2.4	Growing	Faster	32
Accommodation & food services	52.2	60.9	8.7	Growing	Faster	16
Agriculture	55.7	60.3	4.6	Growing	Faster	32
Arts, Entertainment & Recreation	50.0	64.3	14.3	Growing	From No Change	1
Construction	58.6	58.3	-0.3	Growing	Slower	15
Educational services	58.9	60.9	2.0	Growing	Faster	18
Electricity, gas, steam & air conditioning supply	50.0	53.1	3.1	Growing	From No Change	1
Finance & insurance	64.0	61.5	-2.5	Growing	Slower	31
Health care & social assistance	59.0	57.6	-1.4	Growing	Slower	31
Information & communication	63.3	66.7	3.4	Growing	Faster	15
Management of companies	83.3	50.0	-33.3	No Change	From Expansion	1
Professional, scientific, & technical services	45.7	63.6	17.9	Growing	From Contraction	1
Real estate rental & leasing	61.5	63.8	2.3	Growing	Faster	3
Repair, Maintenance/Washing Of Motor Vehicles..	65.4	77.3	11.9	Growing	Faster	8
Transportation & warehousing	57.9	60.9	3.0	Growing	Faster	3
Utilities	71.4	66.7	-4.7	Growing	Slower	4
Water supply, sewage & waste management	60.0	55.6	-4.4	Growing	Slower	2
Wholesale/Retail trade	60.7	58.9	-1.8	Growing	Slower	19

**Table 11: Inventory at a Glance**

Index	Nov 2019 Index	Dec 2019 Index	Difference	Direction	Rate of Change	Trend (Months)
INVENTORY PMI	61.5	63.1	1.6	Growing	Faster	32
Accommodation & food services	60.2	65.4	5.2	Growing	Faster	18
Agriculture	61.4	59.0	-2.4	Growing	Slower	15
Arts, Entertainment & Recreation	62.5	50.0	-12.5	No Change	From Expansion	1
Construction	65.7	66.7	1.0	Growing	Faster	18
Educational services	63.3	60.9	-2.4	Growing	Slower	3
Electricity, gas, steam & air conditioning supply	42.9	59.4	16.5	Growing	From Contraction	1
Finance & insurance	60.1	63.7	3.6	Growing	Faster	23
Health care & social assistance	61.8	59.8	-2.0	Growing	Slower	32
Information & communication	56.7	58.3	1.6	Growing	Faster	20
Management of companies	50.0	83.3	33.3	Growing	From No Change	1
Professional, scientific, & technical services	63.0	50.0	-13.0	No Change	From Expansion	1
Real estate rental & leasing	62.8	71.3	8.5	Growing	Faster	22
Repair, Maintenance/Washing Of Motor Vehicles	58.3	68.2	9.9	Growing	Faster	5
Transportation & warehousing	63.2	73.9	10.7	Growing	Faster	7
Utilities	64.3	66.7	2.4	Growing	Faster	4
Water supply, sewage & waste management	65.0	72.2	7.2	Growing	Faster	3
Wholesale/Retail trade	64.8	60.5	-4.3	Growing	Slower	29

**Table 12: Manufacturing PMI Data Series**

Month	COMPOSITE PMI	Production Level	New Orders	Supplier Delivery Time	Employment Level	Raw Materials Inventory	New Export Orders	Output Prices	Input Prices	Quantity of Purchases	Backlog of Work	Stock of Finished Goods
Jul '14	51.3	55.2	53.0	46.4	46.9	52.9	43.6	50.6	54.2	53.3	46.4	47.2
Aug '14	49.7	49.7	51.2	49.9	45.9	52.2	40.8	48.6	52.7	50.8	45.4	48.6
Sep '14	54.0	57.4	57.6	46.4	49.3	55.7	45.4	49.3	52.9	55.1	46.9	49.8
Oct '14	51.9	55.1	55.3	46.2	46.8	52.4	45.9	49.7	56.7	57.1	50.5	51.7
Nov '14	52.2	55.1	56.9	45.1	47.2	51.7	46.0	53.3	60.9	56.0	50.0	47.6
Dec '14	49.8	51.2	51.1	49.7	46.8	48.4	44.6	53.6	56.3	51.4	47.5	51.1
Jan '15	50.2	50.4	49.3	51.3	51.1	49.3	47.7	48.7	55.6	52.5	48.8	45.5
Feb '15	53.0	57.4	54.7	43.8	50.0	56.4	50.1	54.0	60.9	58.0	50.7	53.7
Mar '15	48.9	52.1	48.9	47.8	46.4	47.1	38.1	50.1	56.4	48.7	44.5	46.5
Apr '15	52.0	56.9	54.1	42.7	48.9	53.9	43.0	50.2	54.4	53.0	48.3	48.7
May '15	49.4	53.6	49.7	44.6	48.0	48.0	36.9	51.6	59.0	50.5	44.9	45.6
Jun '15	49.5	51.5	50.8	42.0	48.5	53.3	40.0	49.2	56.7	53.0	45.3	49.3
Jul '15	47.8	49.7	46.2	43.5	48.4	52.6	40.1	47.9	55.0	51.7	45.2	45.3
Aug '15	48.4	51.0	50.1	43.1	44.8	52.4	37.6	49.0	53.1	50.2	43.7	46.1
Sep '15	50.7	54.9	52.1	46.8	47.1	49.0	40.3	47.5	52.8	51.0	42.5	43.2
Oct '15	49.2	52.0	49.3	42.7	48.4	53.1	39.8	49.1	53.8	48.3	45.6	46.8
Nov '15	51.2	55.4	52.9	47.3	45.5	52.2	38.7	46.2	52.8	51.0	46.0	46.9
Dec '15	51.2	55.4	52.7	45.2	47.5	52.7	38.0	48.6	56.5	54.5	45.1	46.4
Jan '16	47.2	49.3	46.2	48.4	46.0	45.8	38.3	52.6	56.7	49.9	44.2	46.3
Feb '16	45.5	45.0	43.0	52.8	45.0	44.7	39.2	53.0	57.0	42.8	38.5	44.4
Mar '16	45.9	46.6	43.0	50.6	45.5	47.1	37.8	56.4	60.9	41.6	41.2	43.8
Apr '16	43.7	42.7	41.8	52.2	42.0	43.0	36.3	63.9	67.8	43.6	42.6	41.6
May '16	45.8	47.9	42.7	50.2	45.7	43.9	38.7	59.6	68.4	42.7	37.0	40.1
Jun '16	41.9	40.2	37.0	55.6	42.2	39.4	35.3	61.4	70.0	39.0	40.2	36.0
Jul '16	44.1	43.0	42.4	51.7	43.8	41.4	38.5	60.8	64.2	41.6	41.9	39.0
Aug '16	42.1	40.5	37.5	57.4	40.4	40.0	31.2	64.1	69.8	39.9	38.3	38.3
Sep '16	42.5	40.9	38.7	55.6	41.2	40.9	26.3	66.5	74.0	42.8	37.1	42.4
Oct '16	44.1	42.3	40.3	57.7	42.2	42.9	37.3	65.2	71.8	43.5	39.2	39.9
Nov '16	46.0	46.9	45.1	53.2	40.6	46.1	39.6	65.7	71.2	48.1	45.2	42.0
Dec '16	52.0	57.6	51.8	47.9	48.6	51.6	37.2	70.4	73.2	52.7	45.3	48.5
Jan '17	48.2	51.3	47.9	48.5	45.3	46.3	33.1	67.9	71.4	48.4	43.6	46.9
Feb '17	44.6	45.2	44.0	48.7	41.7	44.8	38.4	69.9	70.9	47.7	43.2	43.9
Mar '17	47.7	50.8	45.6	51.3	43.6	49.1	38.5	65.0	68.3	50.1	43.6	45.1
Apr '17	51.1	58.5	50.1	47.5	46.6	50.6	37.7	65.1	69.2	45.1	40.0	46.4
May '17	52.5	58.7	50.5	49.9	50.7	50.8	37.6	61.3	68.4	46.1	42.3	51.8
June '17	52.9	58.2	51.0	50.3	51.1	52.3	32.6	62.7	66.6	46.2	43.9	49.1
July '17	54.1	59.3	52.7	51.3	51.8	53.6	37.5	60.4	64.1	48.0	42.1	48.5
Aug '17	53.6	57.4	52.3	52.0	51.5	54.9	36.7	58.8	64.9	49.0	47.9	51.6
Sep '17	55.3	58.8	53.5	55.4	52.8	56.4	30.4	58.2	65.7	49.4	51.9	50.4
Oct '17	55.0	58.4	52.8	55.5	53.1	56.5	35.5	55.4	62.7	49.6	50.8	50.0
Nov '17	55.9	59.3	54.3	56.0	53.7	57.1	37.6	54.0	64.3	48.1	50.0	48.8
Dec '17	59.3	63.2	60.0	57.4	53.9	61.1	40.2	54.3	63.4	53.6	45.7	47.4
Jan '18	57.3	59.6	58.3	56.8	53.3	57.7	35.1	55.0	63.3	49.1	42.9	45.4
Feb '18	56.3	57.8	55.6	57.0	53.9	58.1	42.0	55.9	65.4	54.3	37.6	53.3
Mar '18	56.7	59.1	56.1	56.6	53.3	59.4	36.4	52.1	61.1	54.1	42.1	48.7
Apr '18	56.9	58.6	55.8	57.4	55.0	59.5	37.6	51.3	62.4	52.9	41.4	51.1
May '18	56.5	58.8	54.9	57.5	55.2	58.1	40.1	53.9	61.8	50.8	38.5	55.8
June '18	57.0	59.2	56.2	56.5	55.4	57.7	37.6	53.8	61.9	47.6	38.0	51.1
July '18	56.8	59.0	55.8	56.8	55.0	57.4	39.4	52.3	60.7	51.1	40.7	51.3
Aug '18	57.1	59.3	56.9	55.9	55.5	57.1	39.7	50.1	59.3	50.1	43.1	50.7
Sep '18	56.2	58.4	55.3	56.1	54.9	55.9	37.1	52.4	57.5	49.4	42.2	50.5
Oct '18	56.8	58.9	56.8	56.4	54.8	56.2	39.9	51.2	56.7	50.9	39.6	51.5
Nov '18	57.9	59.9	58.1	56.9	55.4	58.7	41.2	51.9	57.8	52.2	40.0	53.8
Dec '18	61.1	63.6	62.3	58.4	57.0	63.2	42.1	51.6	61.3	56.1	41.7	50.6
Jan '19	58.5	59.3	58.9	58.3	56.4	59.9	41.4	52.5	62.2	52.5	42.1	52.3
Feb '19	57.1	57.5	56.9	58.2	56.3	56.2	39.7	53.7	60.9	52.1	44.1	55.4
Mar '19	57.4	58.3	56.7	58.4	56.9	57.1	47.9	62.3	57.6	51.8	47.6	60.7
Apr '19	57.7	58.8	57.2	58.1	57.0	57.5	37.4	52.4	60.2	57.3	44.5	54.4
May '19	57.8	59.1	56.9	58.4	57.3	56.8	37.7	52.3	62.2	51.5	40.8	51.5
June '19	57.4	59.3	55.9	58.7	57.5	55.0	38.0	52.4	62.7	52.1	43.8	51.1
July '19	57.6	58.9	57.2	57.5	57.3	56.2	41.1	52.2	59.5	52.5	41.8	51.5
Aug '19	57.9	58.7	57.1	58.3	57.1	58.7	39.9	50.3	57.0	51.2	42.4	52.1
Sep '19	57.7	58.5	57.2	58.4	56.6	58.1	39.0	51.9	58.8	50.7	43.9	53.5
Oct '19	58.2	59.3	57.9	58.6	56.8	58.6	40.0	52.5	58.4	53.7	42.5	53.1
Nov '19	59.3	60.1	59.4	58.7	57.7	60.6	41.0	53.1	59.3	55.8	41.4	53.1
Dec '19	60.8	61.8	61.5	60.5	58.0	62.4	39.1	51.9	59.2	57.0	45.5	52.8

**Table 13: Non-Manufacturing PMI Data Series**

Month	COMPOSITE PMI	Business Activity	New orders	Employment Level	Inventory	Average Input Price	Backlog of Work	New Exports Orders	Imports	Inventories (sentiment)
Jul '14	55.0	58.9	55.9	50.2	55.2	54.0	46.2	44.0	47.3	47.8
Aug '14	58.9	60.6	59.8	58.3	57.0	56.1	47.0	46.1	46.4	48.1
Sep '14	54.7	57.1	57.5	49.9	54.3	52.8	46.2	40.7	45.2	47.6
Oct '14	57.3	59.6	59.4	53.9	56.4	53.3	46.4	40.8	44.9	43.8
Nov '14	59.6	62.5	63.6	57.9	54.6	57.3	49.6	45.2	47.5	48.1
Dec '14	53.8	56.2	56.0	51.4	51.5	54.5	45.6	43.6	46.5	43.8
Jan '15	50.6	48.8	50.4	51.2	51.9	48.8	43.2	41.1	44.3	47.0
Feb '15	54.0	54.2	54.7	52.5	54.5	54.1	46.0	43.0	44.6	46.1
Mar '15	48.6	49.7	51.1	45.6	48.0	49.8	46.5	39.9	44.2	40.2
Apr '15	53.7	58.2	56.8	49.1	50.8	51.5	46.6	41.1	44.5	43.0
May '15	51.7	52.9	53.1	49.7	51.1	51.3	44.1	37.2	39.1	44.3
Jun '15	50.1	51.5	50.3	46.4	52.0	48.5	44.4	36.9	40.4	42.7
Jul '15	50.0	50.4	51.4	48.6	49.5	50.3	43.8	39.1	39.2	44.0
Aug '15	50.7	52.3	52.4	48.0	50.1	50.7	43.0	39.8	38.3	44.0
Sep '15	50.1	52.1	52.3	47.0	49.1	48.7	44.5	42.9	41.4	45.9
Oct '15	51.9	54.2	54.1	49.3	50.1	49.9	43.9	40.3	42.4	45.2
Nov '15	49.6	52.9	51.6	45.6	48.5	51.8	42.8	37.7	39.0	41.8
Dec '15	53.4	55.9	56.4	50.0	51.5	54.7	47.0	41.9	42.7	47.2
Jan '16	46.9	46.2	46.4	47.0	47.9	57.3	44.3	36.2	39.0	41.6
Feb '16	44.3	43.7	42.0	44.5	47.1	53.6	39.6	37.5	36.6	43.6
Mar '16	45.4	46.3	44.7	43.9	46.5	58.5	43.8	34.3	35.0	41.1
Apr '16	44.3	44.2	42.2	43.3	47.6	62.2	43.1	31.8	33.1	39.8
May '16	44.3	44.3	41.3	44.6	46.9	62.9	38.1	33.2	35.0	40.3
Jun '16	42.3	40.2	39.6	42.5	47.1	60.7	39.6	33.2	34.7	38.5
Jul '16	43.2	42.8	42.3	41.9	45.8	60.4	38.6	30.0	32.7	38.0
Aug '16	43.7	43.6	42.0	41.4	47.7	60.8	39.4	32.9	34.2	39.4
Sep '16	41.0	39.9	40.0	40.3	43.9	63.1	39.6	28.6	30.2	37.9
Oct '16	43.4	43.0	42.7	41.5	46.4	65.3	40.9	32.8	33.8	38.7
Nov '16	42.8	43.0	42.3	40.2	45.5	66.8	42.4	30.8	34.0	41.1
Dec '16	47.1	48.2	46.9	43.8	49.5	64.0	41.5	33.8	35.5	41.6
Jan '17	49.4	50.6	49.4	45.6	52.0	65.6	43.6	32.5	36.1	45.5
Feb '17	44.5	45.4	44.9	42.6	44.9	65.4	42.9	33.4	34.5	38.7
Mar '17	47.1	49.8	46.4	44.0	48.0	62.1	42.7	33.1	34.5	40.6
Apr '17	49.5	53.3	50.5	45.5	48.6	63.1	41.6	29.2	33.2	41.1
May '17	52.7	56.2	53.2	50.2	51.4	62.7	45.3	31.6	34.1	43.6
June '17	54.2	57.0	54.6	53.4	51.8	58.6	40.5	30.3	33.5	42.7
July '17	54.4	56.8	55.1	54.0	51.9	58.1	42.9	32.0	36.8	41.5
Aug '17	54.1	56.1	53.5	54.4	52.3	54.5	42.8	34.5	34.8	42.0
Sep '17	54.9	56.8	55.4	54.7	52.9	56.9	42.2	31.2	35.9	44.2
Oct '17	55.3	57.5	55.7	54.4	53.4	56.4	41.4	29.6	35.4	38.9
Nov '17	57.6	59.4	58.4	54.6	58.0	55.7	43.6	28.8	33.3	40.6
Dec '17	62.1	67.4	62.2	55.7	62.9	56.1	44.6	34.6	39.1	40.3
Jan '18	58.5	61.3	58.2	55.1	59.5	56.9	41.3	31.0	35.1	42.8
Feb '18	56.1	55.6	53.7	55.3	59.8	52.8	41.2	34.7	39.1	40.3
Mar '18	57.2	58.7	55.8	55.1	59.2	50.3	42.9	39.0	38.5	44.1
Apr '18	57.5	58.8	56.4	55.3	59.5	50.3	41.5	34.2	34.9	45.0
May '18	57.3	58.7	55.9	55.6	59.2	50.8	40.6	36.4	38.4	46.2
June '18	57.5	59.1	56.4	55.9	58.5	52.2	44.0	33.2	40.1	42.4
July '18	57.7	59.6	56.1	56.2	59.1	52.1	43.1	42.1	40.5	45.0
Aug '18	58.0	59.3	56.9	56.7	58.9	50.8	43.3	40.1	40.3	44.8
Sep '18	56.5	58.1	55.8	55.4	56.8	50.2	41.5	40.3	41.3	45.7
Oct '18	57.0	58.3	56.4	55.7	57.6	50.7	42.8	39.7	42.2	45.5
Nov '18	58.4	60.4	57.5	56.2	59.6	52.6	42.0	38.7	39.4	45.9
Dec '18	62.3	65.2	63.1	57.9	62.8	52.4	42.7	42.0	41.3	45.8
Jan '19	60.1	61.7	60.2	57.7	60.6	52.2	40.1	38.1	40.4	45.5
Feb '19	58.4	59.7	58.6	57.3	58.2	50.3	38.8	36.2	42.2	44.6
Mar '19	58.5	57.8	58.9	57.8	59.5	50.5	40.3	39.4	38.7	44.2
Apr '19	58.7	58.4	59.0	58.7	58.5	52.1	43.5	38.8	40.8	45.0
May '19	58.9	59.2	58.6	58.5	59.3	51.3	42.3	39.8	43.2	44.5
June '19	58.6	58.2	59.2	58.3	58.8	52.1	40.3	43.0	45.3	46.1
July '19	58.7	57.6	60.1	58.0	58.9	51.7	41.4	42.0	43.9	46.6
Aug '19	58.8	58.2	59.6	57.8	59.8	51.2	45.1	44.1	45.2	48.1
Sep '19	58.0	57.2	58.4	58.0	58.5	51.9	45.5	42.4	45.7	48.7
Oct '19	58.2	57.9	58.5	57.1	59.2	52.2	42.9	40.4	41.7	45.1
Nov '19	60.1	60.0	60.7	58.4	61.5	54.6	43.6	41.6	41.9	45.8
Dec '19	62.1	62.6	61.9	60.8	63.1	56.0	42.5	43.2	41.8	43.5