

Central Bank of Nigeria



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

Statistics Department

September 2019

PURCHASING MANAGERS' INDEX (PMI) SEPTEMBER 2019 REPORT

1.0 Introduction

The September 2019 PMI survey was conducted by the Statistics Department of the Central Bank of Nigeria during the period September 9-13, 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.

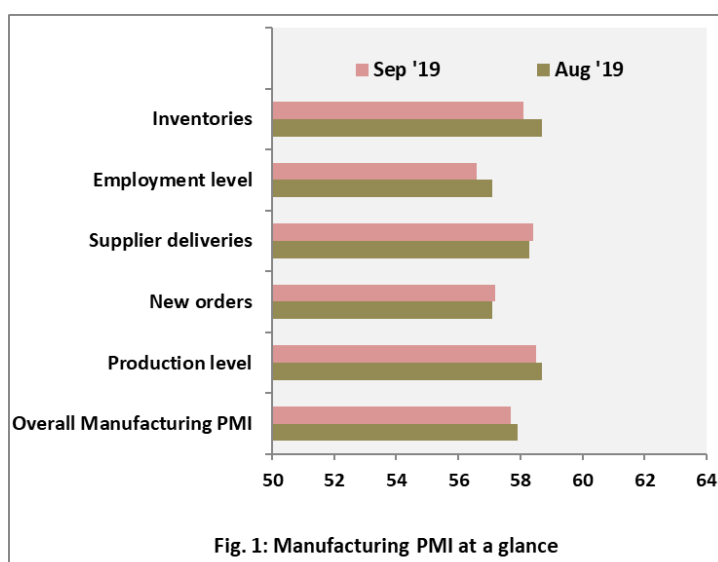
1.1 Data and Method of Presentation

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, employment level and raw materials inventories grew at a slower rate, while new orders and supplier delivery time grew at a faster rate in September 2019



The *Manufacturing PMI* in the month of September stood at 57.7 index points, indicating expansion in the manufacturing sector for the thirtieth consecutive month (Fig. 2 and Table 1). The index grew at a slower rate when compared to the index in August. Thirteen of the 14 surveyed subsectors reported growth in the review month in the following order: cement; petroleum & coal products; food, beverage & tobacco products; transportation equipment; printing & related support activities; chemical & pharmaceutical products; furniture & related products; fabricated metal products; nonmetallic mineral products; electrical equipment; textile, apparel, leather & footwear; plastics & rubber products; and primary metal. The paper products subsector recorded decline in the review period (Fig. 2 and Table 1).

2.1 Production Level

At 58.5 points, the production level index for the manufacturing sector grew for the thirty-first consecutive month in September 2019. The index indicated a slower growth in the current month, when compared to its level in August 2019. Eleven of the 14 manufacturing subsectors recorded increased production level, 1 remained unchanged, while 2 recorded decline (Fig. 3 and Table 2).

2.2 New Orders

At 57.2 points, the new orders index grew for the thirtieth consecutive month, indicating increase in new orders in September 2019. The index grew at a faster rate, when compared to its level in August 2019. Nine subsectors reported growth, 1 remained unchanged, while 4 contracted in the review month (Fig. 4 and Table 3).

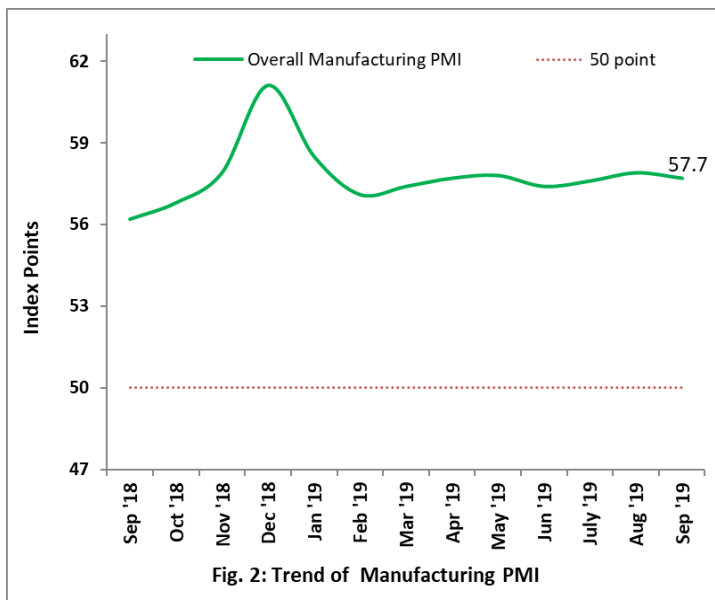


Fig. 2: Trend of Manufacturing PMI

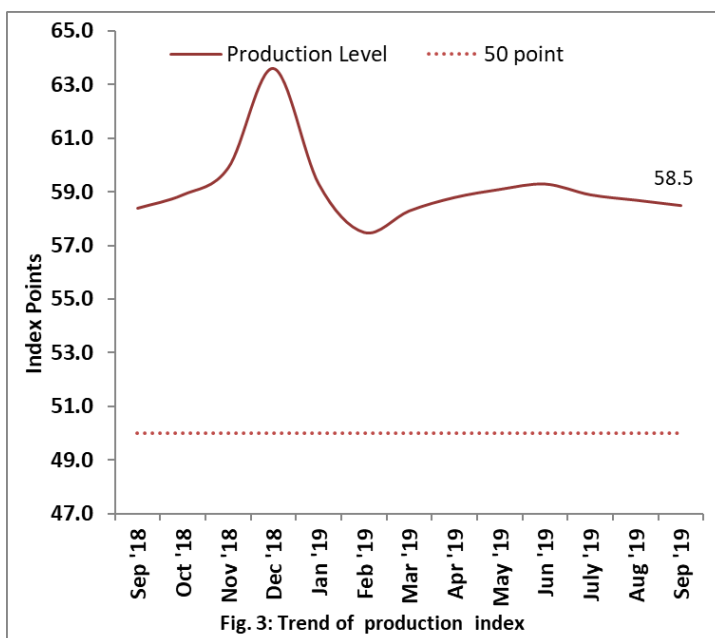


Fig. 3: Trend of production index

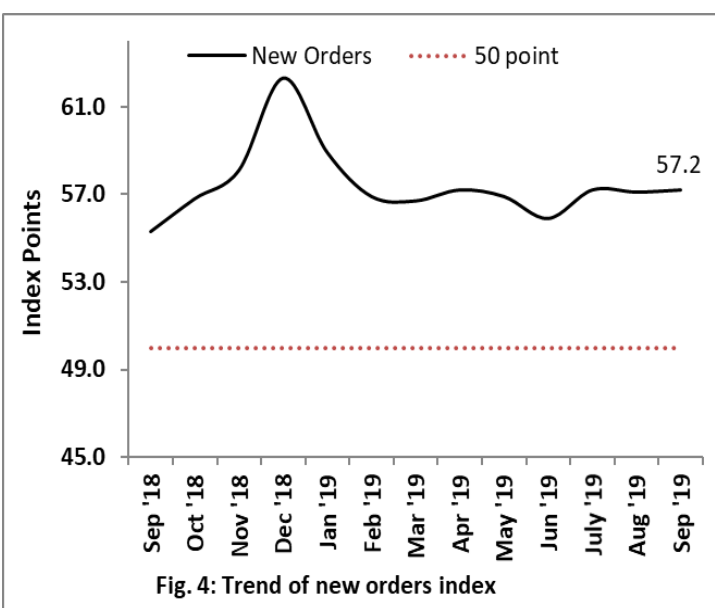
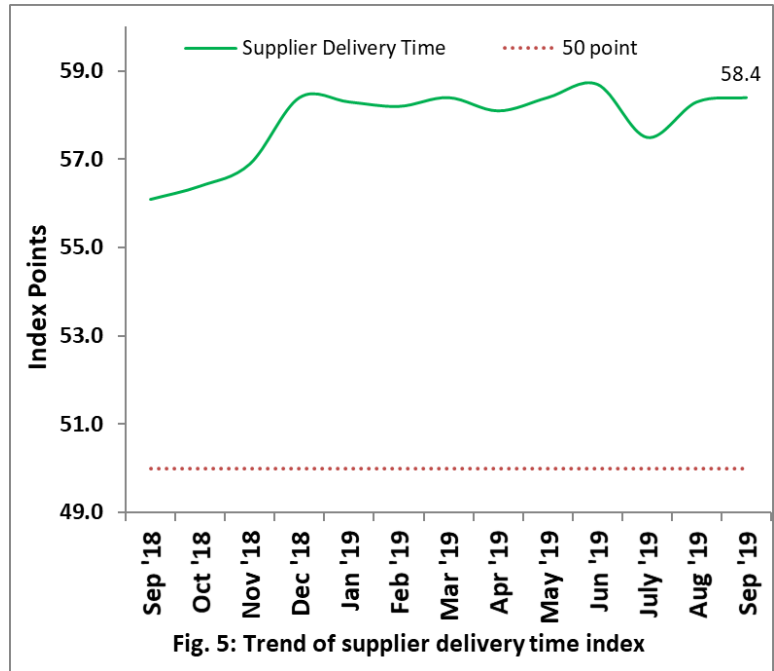


Fig. 4: Trend of new orders index

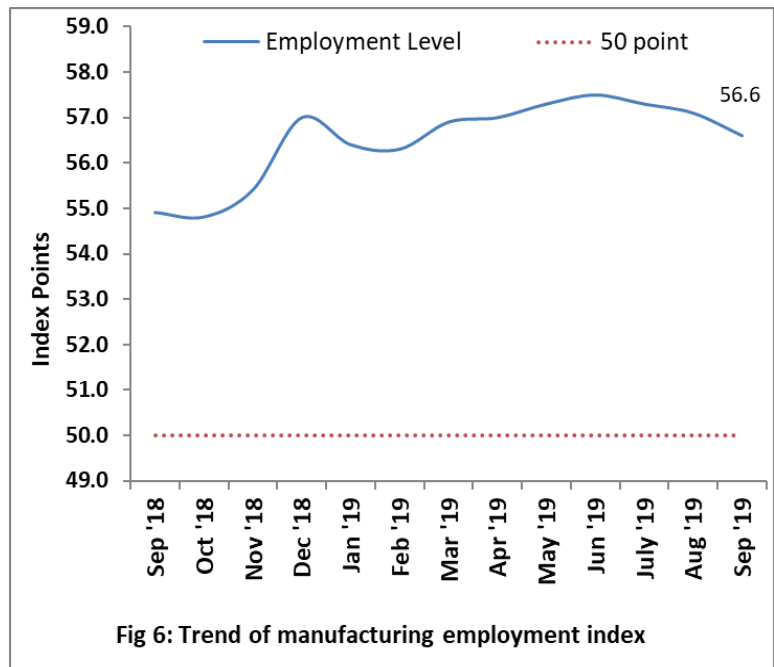
2.3 Supplier Delivery Time

The manufacturing supplier delivery time index stood at 58.4 points in September 2019, indicating faster supplier delivery time. The index has recorded growth for twenty-eight consecutive months. Eleven of the 14 subsectors recorded improved suppliers' delivery time, while 2 remained unchanged and 1 recorded decline in the review period (Fig. 5 and Table 4).



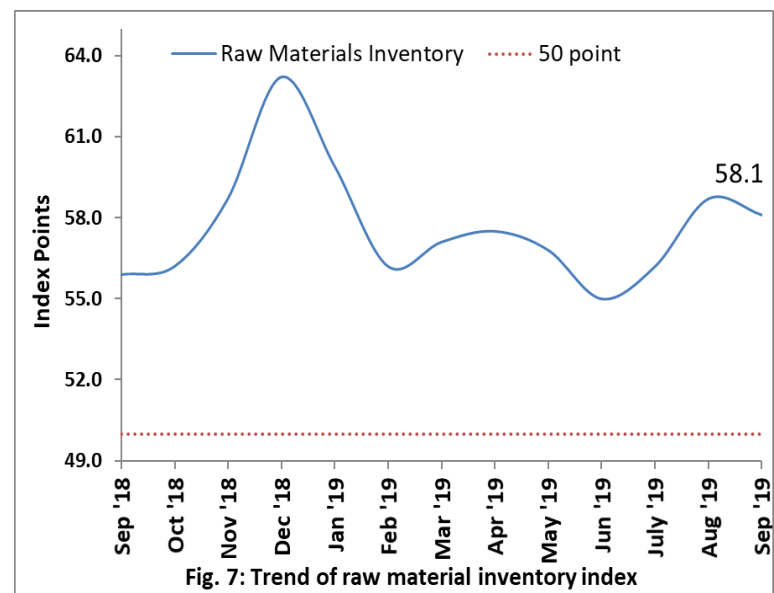
2.4 Employment Level

The employment level index for September 2019 stood at 56.6 points, indicating growth in employment level for the twenty-ninth consecutive month. Of the 14 subsectors, 7 reported increased employment level, 4 reported unchanged employment level while 3 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 thirtieth consecutive month in September 2019. At 58.1 points, the index grew at a slower rate when compared to its level in August 2019. Thirteen of the 14 subsectors recorded growth, while 1 subsector reported unchanged raw material inventories in the review month (Fig. 7 and Table 6).



3.0 Non-Manufacturing PMI Report

Business activity, new orders and inventories grew at a slower rate, while employment level grew at a faster rate in September 2019

The *composite PMI* for the *non-manufacturing* sector stood at 58.0 points in September 2019, indicating expansion in the Non-manufacturing PMI for the twenty-ninth consecutive month. The index grew at a slower rate when compared to its level in August 2019. Fourteen of the 17 surveyed subsectors recorded growth in the following order: utilities; information & communication; wholesale/retail trade; arts, entertainment & recreation; transportation & warehousing; agriculture; repair, maintenance/washing of motor vehicles; construction; finance & insurance; accommodation & food services; educational services; health care & social assistance; real estate rental & leasing; and electricity, gas, steam & air conditioning supply. The management of companies subsector remained unchanged, while the water supply, sewage & waste management; and professional, scientific, & technical services sub-sectors contacted in the review period (Fig. 9 and Table 7).

3.1 Business Activity

At 57.2 points, the business activity index grew for the thirtieth consecutive month, indicating expansion in non-manufacturing business activity in September 2019. Thirteen subsectors recorded growth in business activity, 1

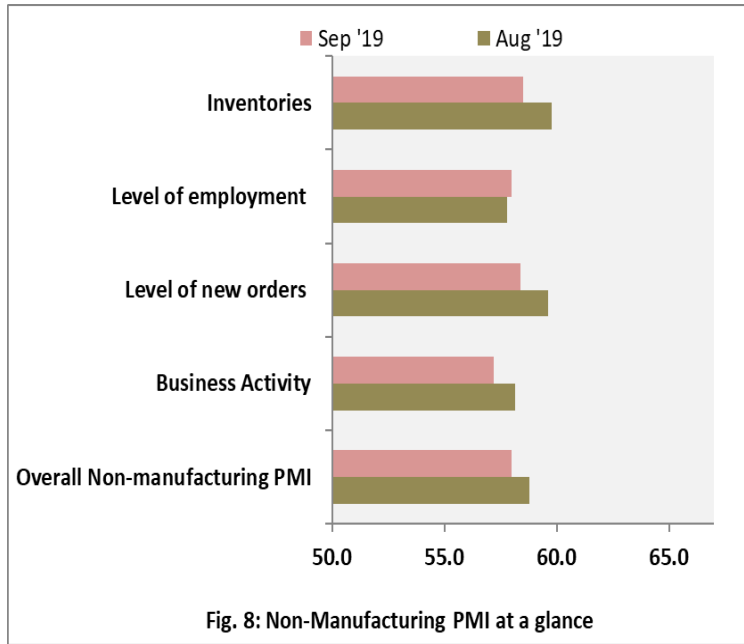


Fig. 8: Non-Manufacturing PMI at a glance

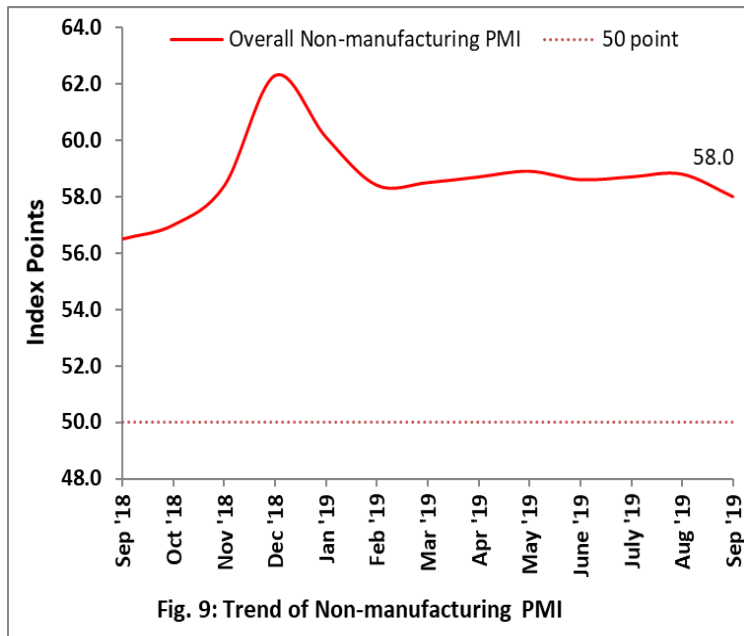


Fig. 9: Trend of Non-manufacturing PMI

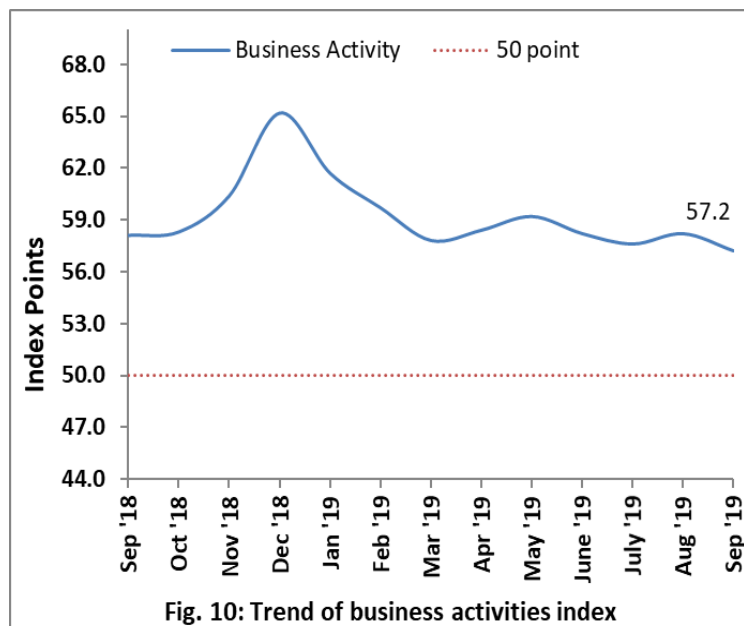
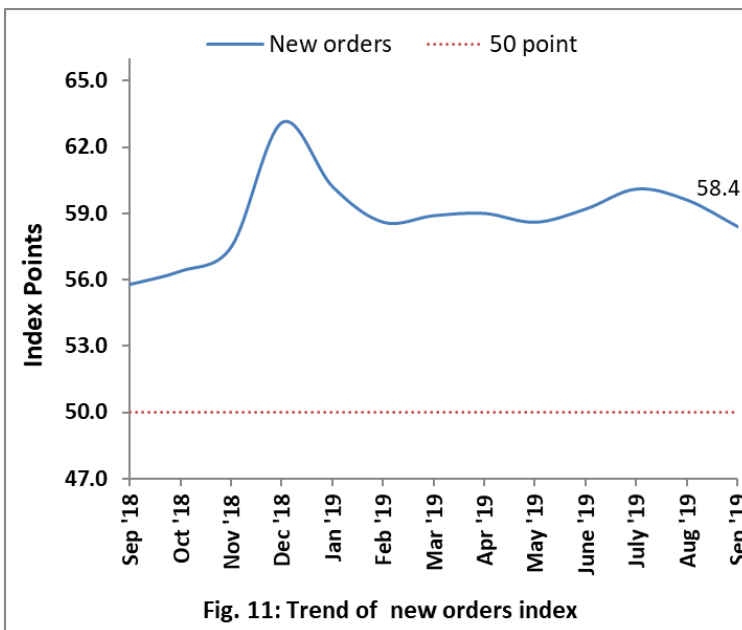


Fig. 10: Trend of business activities index

remained unchanged, while 3 declined in the review month (Fig 10 Table 8).

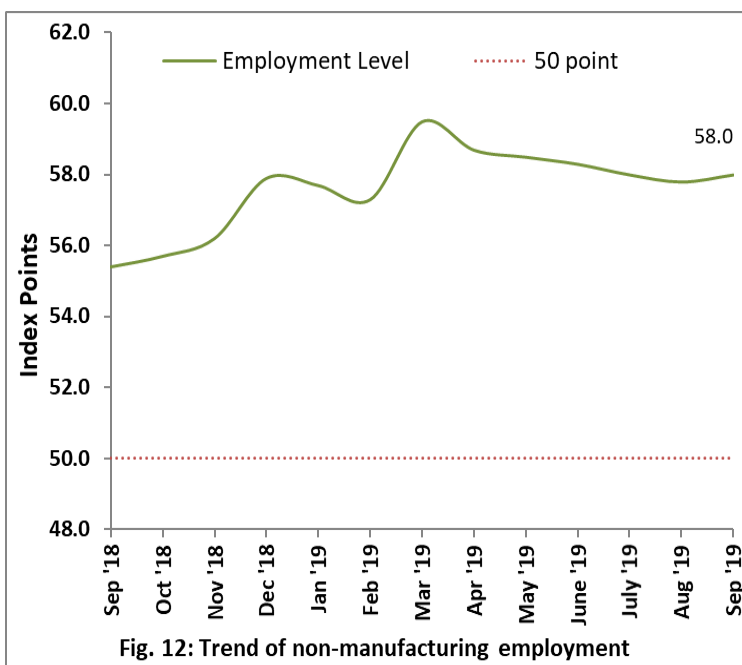
3.2 New Orders

At 58.4 points, new orders index grew for the thirtieth consecutive month in September 2019. Eleven of the 17 surveyed subsectors recorded growth in new orders, 3 remained unchanged, while 3 recorded decline during the review period (Fig 11 Table 9).



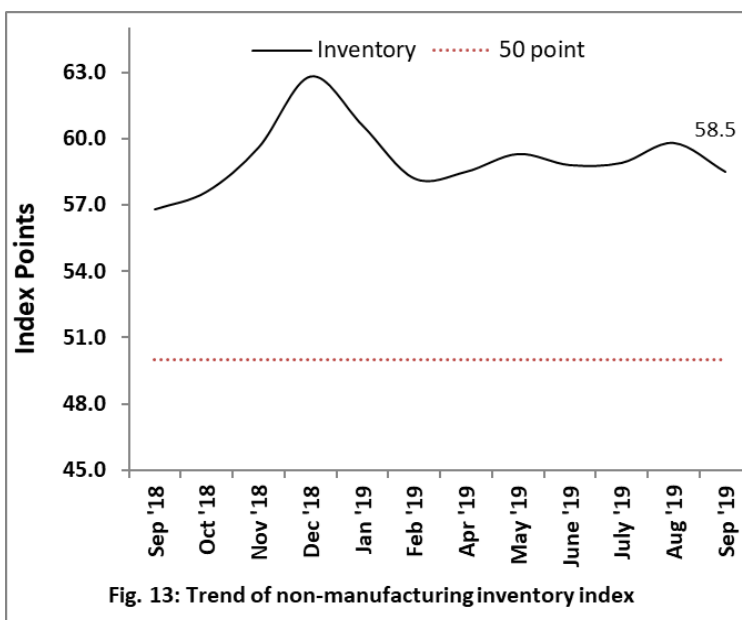
3.3 Employment Level

The employment level Index for the non-manufacturing sector stood at 58.0 points, indicating growth in employment for the twenty-ninth consecutive month. Eleven subsectors recorded growth in employment level, while 6 subsectors declined in the review period (Fig 12 Table 10).



3.4 Non-manufacturing Inventory

At 58.5 points, non-manufacturing inventory index grew for the twenty-ninth consecutive month, indicating growth in inventories in the review period. Of the 17 surveyed subsectors, 13 recorded higher inventories, 2



remained unchanged, while 2 recorded declining inventories in September 2019 (Fig 13, Table 11).

APPENDICES

Table 1: Details of Overall Manufacturing PMI

Index	Aug 2019 Index*	Sept 2019 Index*	Difference	Direction	Rate of Change	Trend** (Months)
Composite PMI \1	57.9	57.7	-0.2	Growing	Slower	30
Production level	58.7	58.5	-0.2	Growing	Slower	31
New orders	57.1	57.2	0.1	Growing	Faster	30
Supplier delivery time	58.3	58.4	0.1	Growing	Faster	28
Employment level	57.1	56.6	-0.5	Growing	Slower	29
Raw materials/WIP Inventory	58.7	58.1	-0.6	Growing	Slower	30
New Export Orders	39.9	39.0	-0.9	Declining	Faster	55
Output Prices	50.3	51.9	1.6	Growing	Faster	45
Input Prices	57.0	58.8	1.8	Growing	Faster	63
Quantity of Purchases	51.2	50.7	-0.5	Growing	Slower	12
Outstanding Business/Backlog of Work	42.4	43.9	1.5	Declining	Slower	22
Stock of Finished Goods	52.1	53.5	1.4	Growing	Faster	18
Manufacturing Sub-Sectors						
Cement	74.4	74.4	70.0	Growing	Flat	12
Chemical & pharmaceutical products	58.4	58.4	57.5	Growing	Flat	20
Electrical equipment	54.0	54.0	49.5	Growing	Flat	20
Fabricated metal products	57.7	57.7	52.2	Growing	Flat	15
Food, beverage & tobacco products	61.7	61.7	59.3	Growing	Flat	36
Furniture & related products	58.2	58.2	61.6	Growing	Flat	16
Nonmetallic mineral products	56.3	56.3	59.0	Growing	Flat	3
Paper products	42.7	42.7	59.2	Declining	Flat	2
Petroleum & coal products	62.5	62.5	61.3	Growing	Flat	6
Plastics & rubber products	50.9	50.9	57.6	Growing	Flat	14
Primary metal	50.8	50.8	48.2	Growing	Flat	3
Printing & related support activities	58.5	58.5	61.7	Growing	Flat	18
Textile, apparel, leather & footwear	52.5	52.5	53.9	Growing	Flat	2
Transportation equipment	60.8	60.8	49.4	Growing	Flat	13

\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	Aug 2019 Index	Sept 2019 Index	Difference	Direction	Rate of Change	Trend (Months)
PRODUCTION PMI	58.7	58.5	-0.2	Growing	Slower	31
Cement	100.0	100.0	0.0	Growing	Flat	7
Chemical & pharmaceutical products	60.5	57.7	-2.8	Growing	Slower	20
Electrical equipment	50.0	40.0	-10.0	Declining	From No Change	1
Fabricated metal products	63.2	54.1	-9.1	Growing	Slower	7
Food, beverage & tobacco products	65.0	60.6	-4.4	Growing	Slower	36
Furniture & related products	53.8	55.8	2.0	Growing	Faster	16
Nonmetallic mineral products	53.1	58.3	5.2	Growing	Faster	3
Paper products	44.4	61.1	16.7	Growing	From Contraction	1
Petroleum & coal products	75.0	100.0	25.0	Growing	Faster	6
Plastics & rubber products	47.9	54.2	6.3	Growing	From Contraction	1
Primary metal	40.0	45.5	5.5	Declining	Slower	3
Printing & related support activities	58.3	72.0	13.7	Growing	Faster	4
Textile, apparel, leather & footwear	50.0	50.0	0.0	No Change	Flat	2
Transportation equipment	50.0	62.5	12.5	Growing	From No Change	1

Table 3: Details of New Orders PMI

Index	Aug 2019 Index	Sept 2019 Index	Difference	Direction	Rate of Change	Trend (Months)
NEW ORDERS PMI	57.1	57.2	0.1	Growing	Faster	30
Cement	75.0	62.5	-12.5	Growing	Slower	3
Chemical & pharmaceutical products	54.8	57.7	2.9	Growing	Faster	19
Electrical equipment	50.0	40.0	-10.0	Declining	From No Change	1
Fabricated metal products	55.9	51.4	-4.5	Growing	Slower	4
Food, beverage & tobacco products	60.4	58.3	-2.1	Growing	Slower	36
Furniture & related products	65.4	65.4	0.0	Growing	Flat	4
Nonmetallic mineral products	53.1	63.9	10.8	Growing	Faster	3
Paper products	31.3	61.1	29.8	Growing	From Contraction	1
Petroleum & coal products	50.0	25.0	-25.0	Declining	From No Change	1
Plastics & rubber products	56.3	54.2	-2.1	Growing	Slower	3
Primary metal	50.0	45.5	-4.5	Declining	From No Change	1
Printing & related support activities	58.3	68.0	9.7	Growing	Faster	4
Textile, apparel, leather & footwear	50.0	48.2	-1.8	Declining	From No Change	1
Transportation equipment	66.7	50.0	-16.7	No Change	From Expansion	1

Table 4: Details of Supplier Delivery Time PMI

Index	Aug 2019 Index	Sept 2019 Index	Difference	Direction	Rate of Change	Trend (Months)
SUPPLIER DELIVERY TIME PMI	58.3	58.4	0.1	Growing	Faster	28
Cement	37.5	50.0	12.5	No Change	From Contraction	1
Chemical & pharmaceutical products	65.1	53.8	-11.3	Growing	Slower	3
Electrical equipment	50.0	50.0	0.0	No Change	Flat	2
Fabricated metal products	55.9	54.1	-1.8	Growing	Slower	2
Food, beverage & tobacco products	61.4	59.6	-1.8	Growing	Slower	15
Furniture & related products	55.8	76.9	21.1	Growing	Faster	10
Nonmetallic mineral products	59.4	61.1	1.7	Growing	Faster	17
Paper products	55.6	55.6	0.0	Growing	Flat	3
Petroleum & coal products	75.0	75.0	0.0	Growing	Flat	2
Plastics & rubber products	50.0	56.3	6.3	Growing	From No Change	1
Primary metal	65.0	54.5	-10.5	Growing	Slower	10
Printing & related support activities	58.3	54.0	-4.3	Growing	Slower	3
Textile, apparel, leather & footwear	47.9	60.7	12.8	Growing	From Contraction	1
Transportation equipment	66.7	25.0	-41.7	Declining	From Expansion	1

Table 5: Details of Employment Level PMI

Index	Aug 2019 Index	Sept 2019 Index	Difference	Direction	Rate of Change	Trend (Months)
EMPLOYMENT LEVEL PMI	57.1	56.6	-0.5	Growing	Slower	29
Cement	75.0	62.5	-12.5	Growing	Slower	4
Chemical & pharmaceutical products	59.3	59.0	-0.3	Growing	Slower	2
Electrical equipment	70.0	70.0	0.0	Growing	Flat	10
Fabricated metal products	58.8	50.0	-8.8	No Change	From Expansion	1
Food, beverage & tobacco products	59.1	61.0	1.9	Growing	Faster	17
Furniture & related products	55.8	55.8	0.0	Growing	Flat	3
Nonmetallic mineral products	59.4	50.0	-9.4	No Change	From Expansion	1
Paper products	38.9	44.4	5.5	Declining	Slower	2
Petroleum & coal products	50.0	50.0	0.0	No Change	Flat	2
Plastics & rubber products	47.9	62.5	14.6	Growing	From Contraction	1
Primary metal	55.0	45.5	-9.5	Declining	From Expansion	1
Printing & related support activities	58.3	48.0	-10.3	Declining	From Expansion	1
Textile, apparel, leather & footwear	56.0	58.9	2.9	Growing	Faster	2
Transportation equipment	50.0	50.0	0.0	No Change	Flat	2

Table 6: Details of Raw Materials Inventory PMI

Index	Aug 2019 Index	Sept 2019 Index	Difference	Direction	Rate of Change	Trend (Months)
RAW MATERIALS INVENTORY PMI	58.7	58.1	-0.6	Growing	Slower	30
Cement	62.5	62.5	0.0	Growing	Flat	3
Chemical & pharmaceutical products	52.3	59.0	6.7	Growing	Faster	6
Electrical equipment	50.0	60.0	10.0	Growing	From No Change	1
Fabricated metal products	50.0	51.4	1.4	Growing	From No Change	1
Food, beverage & tobacco products	62.8	55.5	-7.3	Growing	Slower	36
Furniture & related products	55.8	53.8	-2.0	Growing	Slower	2
Nonmetallic mineral products	62.5	61.1	-1.4	Growing	Slower	2
Paper products	61.1	83.3	22.2	Growing	Faster	4
Petroleum & coal products	75.0	75.0	0.0	Growing	Flat	4
Plastics & rubber products	50.0	68.8	18.8	Growing	From No Change	1
Primary metal	50.0	59.1	9.1	Growing	From No Change	1
Printing & related support activities	60.4	56.0	-4.4	Growing	Slower	5
Textile, apparel, leather & footwear	66.0	60.7	-5.3	Growing	Slower	2
Transportation equipment	83.3	50.0	-33.3	No Change	From Expansion	1

Table 7: Non-Manufacturing at a Glance

Index	Aug 2019 Index	Sept 2019 Index	Difference	Direction	Rate of Change	Trend (Months)
Composite PMI \1	58.8	58.0	-0.8	Growing	Slower	29
Business Activity	58.2	57.2	-1.0	Growing	Slower	30
Level of new orders/customers/incoming business	59.6	58.4	-1.2	Growing	Slower	30
Employment Level	57.8	58.0	0.2	Growing	Faster	29
Inventories	59.8	58.5	-1.3	Growing	Slower	29
Average price of Inputs (volume weighted)	51.2	51.9	0.7	Growing	Faster	47
Level of outstanding business/ Backlog of work	45.1	45.5	0.4	Declining	Slower	63
New Exports orders	44.1	42.4	-1.7	Declining	Faster	63
Imports	45.2	45.7	0.5	Declining	Slower	63
Inventory (sentiments)	48.1	48.7	0.6	Declining	Slower	63
Non-manufacturing sub-sectors						
Accommodation & food services	58.8	56.8	-2.0	Growing	Slower	15
Agriculture	56.5	63.7	7.2	Growing	Faster	40
Arts, Entertainment & Recreation	60.0	64.4	4.4	Growing	Faster	6
Construction	56.9	59.9	3.0	Growing	Faster	12
Educational services	55.9	55.3	-0.6	Growing	Slower	15
Electricity, gas, steam & air conditioning supply	60.2	51.0	-9.2	Growing	Slower	11
Finance & insurance	57.8	58.6	0.8	Growing	Faster	31
Health care & social assistance	57.8	55.3	-2.5	Growing	Slower	29
Information & communication	63.4	65.7	2.3	Growing	Faster	30
Management of companies	41.7	50.0	8.3	No Change	From Contraction	1
Professional, scientific, & technical services	57.6	42.6	-15.0	Declining	From Expansion	1
Real estate rental & leasing	59.4	51.8	-7.6	Growing	Slower	19
Repair, Maintenance/Washing Of Motor Vehicles...	70.5	63.5	-7.0	Growing	Slower	16
Transportation & warehousing	70.4	63.8	-6.6	Growing	Slower	4
Utilities	45.0	70.8	25.8	Growing	From Contraction	1
Water supply, sewage & waste management	46.3	41.3	-5.0	Declining	Faster	2
Wholesale/Retail trade	61.1	64.8	3.7	Growing	Faster	28

\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	Aug 2019 Index	Sept 2019 Index	Difference	Direction	Rate of Change	Trend (Months)
BUSINESS ACTIVITY PMI	58.2	57.2	-1.0	Growing	Slower	30
Accommodation & food services	61.8	55.8	-6.0	Growing	Slower	15
Agriculture	59.7	59.7	0.0	Growing	Flat	3
Arts, Entertainment & Recreation	60.0	70.0	10.0	Growing	Faster	5
Construction	64.5	60.3	-4.2	Growing	Slower	11
Educational services	54.7	56.3	1.6	Growing	Faster	25
Electricity, gas, steam & air conditioning supply	65.6	54.2	-11.4	Growing	Slower	5
Finance & insurance	54.2	59.6	5.4	Growing	Faster	30
Health care & social assistance	53.6	53.5	-0.1	Growing	Slower	12
Information & communication	62.5	65.0	2.5	Growing	Faster	5
Management of companies	66.7	50.0	-16.7	No Change	From Expansion	1
Professional, scientific, & technical services	50.0	38.6	-11.4	Declining	From No Change	1
Real estate rental & leasing	53.8	46.3	-7.5	Declining	From Expansion	1
Repair, Maintenance/Washing Of Motor Vehicles.	75.0	75.0	0.0	Growing	Flat	12
Transportation & warehousing	73.7	63.2	-10.5	Growing	Slower	4
Utilities	50.0	66.7	16.7	Growing	From No Change	1
Water supply, sewage & waste management	35.0	30.0	-5.0	Declining	Faster	2
Wholesale/Retail trade	58.4	65.5	7.1	Growing	Faster	15

Table 9: New Orders at a Glance

Index	Aug 2019 Index	Sept 2019 Index	Difference	Direction	Rate of Change	Trend (Months)
NEW ORDERS PMI	59.6	58.4	-1.2	Growing	Slower	30
Accommodation & food services	59.6	58.4	-1.2	Growing	Slower	15
Agriculture	53.2	61.1	7.9	Growing	Faster	7
Arts, Entertainment & Recreation	70.0	80.0	10.0	Growing	Faster	5
Construction	53.2	63.2	10.0	Growing	Faster	11
Educational services	56.7	62.5	5.8	Growing	Faster	15
Electricity, gas, steam & air conditioning supply	65.6	45.8	-19.8	Declining	From Expansion	1
Finance & insurance	60.0	54.0	-6.0	Growing	Slower	31
Health care & social assistance	56.3	50.0	-6.3	No Change	From Expansion	1
Information & communication	60.7	70.0	9.3	Growing	Faster	30
Management of companies	33.3	50.0	16.7	No Change	From Contraction	1
Professional, scientific, & technical services	50.0	43.2	-6.8	Declining	From No Change	1
Real estate rental & leasing	63.8	56.1	-7.7	Growing	Slower	11
Repair, Maintenance/Washing Of Motor Vehicles..	75.0	66.7	-8.3	Growing	Slower	12
Transportation & warehousing	81.6	71.1	-10.5	Growing	Slower	6
Utilities	40.0	50.0	10.0	No Change	From Contraction	1
Water supply, sewage & waste management	55.0	40.0	-15.0	Declining	From Expansion	1
Wholesale/Retail trade	62.8	66.1	3.3	Growing	Faster	28

Table 10: Employment at a Glance

Index	Aug 2019 Index	Sept 2019 Index	Difference	Direction	Rate of Change	Trend (Months)
EMPLOYMENT LEVEL PMI	57.8	58.0	0.2	Growing	Faster	29
Accommodation & food services	55.5	55.8	0.3	Growing	Faster	13
Agriculture	56.5	72.9	16.4	Growing	Faster	29
Arts, Entertainment & Recreation	40.0	37.5	-2.5	Declining	Faster	2
Construction	51.6	57.4	5.8	Growing	Faster	12
Educational services	53.3	55.1	1.8	Growing	Faster	15
Electricity, gas, steam & air conditioning supply	68.8	54.2	-14.6	Growing	Slower	7
Finance & insurance	58.4	58.5	0.1	Growing	Faster	28
Health care & social assistance	57.0	61.3	4.3	Growing	Faster	28
Information & communication	66.1	63.3	-2.8	Growing	Slower	12
Management of companies	33.3	25.0	-8.3	Declining	Faster	2
Professional, scientific, & technical services	60.9	45.5	-15.4	Declining	From Expansion	1
Real estate rental & leasing	61.3	47.6	-13.7	Declining	From Expansion	1
Repair, Maintenance/Washing Of Motor Vehicles..	64.3	58.3	-6.0	Growing	Slower	5
Transportation & warehousing	60.5	47.4	-13.1	Declining	From Expansion	1
Utilities	50.0	83.3	33.3	Growing	From No Change	1
Water supply, sewage & waste management	50.0	45.0	-5.0	Declining	From No Change	1
Wholesale/Retail trade	61.0	65.9	4.9	Growing	Faster	16

Table 11: Inventory at a Glance

Index	Aug 2019 Index	Sept 2019 Index	Difference	Direction	Rate of Change	Trend (Months)
INVENTORY PMI	59.8	58.5	-1.3	Growing	Slower	29
Accommodation & food services	58.5	57.2	-1.3	Growing	Slower	15
Agriculture	56.5	61.1	4.6	Growing	Faster	12
Arts, Entertainment & Recreation	70.0	70.0	0.0	Growing	Flat	6
Construction	58.1	58.8	0.7	Growing	Faster	15
Educational services	58.9	47.5	-11.4	Declining	From Expansion	1
Electricity, gas, steam & air conditioning supply	40.6	50.0	9.4	No Change	From Contraction	1
Finance & insurance	58.4	62.4	4.0	Growing	Faster	20
Health care & social assistance	64.1	56.3	-7.8	Growing	Slower	29
Information & communication	64.3	64.5	0.2	Growing	Faster	17
Management of companies	33.3	75.0	41.7	Growing	From Contraction	1
Professional, scientific, & technical services	69.6	43.2	-26.4	Declining	From Expansion	1
Real estate rental & leasing	58.8	57.3	-1.5	Growing	Slower	19
Repair, Maintenance/Washing Of Motor Vehicles	67.9	54.2	-13.7	Growing	Slower	2
Transportation & warehousing	65.8	73.7	7.9	Growing	Faster	4
Utilities	40.0	83.3	43.3	Growing	From Contraction	1
Water supply, sewage & waste management	45.0	50.0	5.0	No Change	From Contraction	1
Wholesale/Retail trade	62.1	61.6	-0.5	Growing	Slower	26

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

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