PRESS RELEASE

PRODUCTION INDEX AND NET SALES INDEX
(Monthly Integrated Survey of Selected Industries)
May 2020

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Table A. Year-on-Year Growth Rates for Production Index,
Net Sales Index and Producer Price Index
May 2020, April 2020 and April 2019
(In Percent)

TOTAL MANUFACTURING	MAY 2020^p	APRIL 2020^r	MAY 2019
Production Index (2000=100)			
Value (*VaPI*)	-42.1	-45.5	-6.9
Volume (*VoPI*)	-40.3	-43.6	-7.8
Net Sales Index (2000=100)			
Value (*VaNSI*)	-46.9	-51.0	2.5
Volume (*VoNSI*)	-45.2	-49.3	1.5
Producer Price Index (2000=100)	-3.1	-3.3	1.0

p – preliminary, r- revised
Source: Philippine Statistics Authority

PRODUCTION

Value of Production Index remains at downward trend

Value of Production Index (VaPI) for Manufacturing sector still posted a declining trend with an annual rate of -42.1 percent in May 2020. This was slower than the annual growth rate of VaPI at -45.5 percent in the previous month. In May of the previous year, year-on-year growth was -6.9 percent. (*Table A)*

Pushing down the VaPI this month were the decreases in the indices of all the 20 major industry groups. Among these, the top three industry groups with negative growth rates were **petroleum products** (-92.1%), **transport equipment** (-80.3%), and, **footwear and wearing apparel** (-78.7%). *(Tables 1 and 1-A)*

Volume of Production Index still at a negative two-digit annual growth rate

Volume of Production Index (VoPI), on a year-on-year basis, continued to drop at an annual rate of 40.3 percent in May 2020. This decline was also slower than the reported decrease in the previous month at 43.6 percent but higher than the annual decline in April 2019 at 7.8 percent. *(Table A)*

The reduction in the indices of all industry groups pulled down the VoPI during the month with **petroleum products** (-91.4%), **transport equipment** (-79.3%), and, **footwear and wearing apparel** (-76.6%). *(Tables 1-B and 2)*
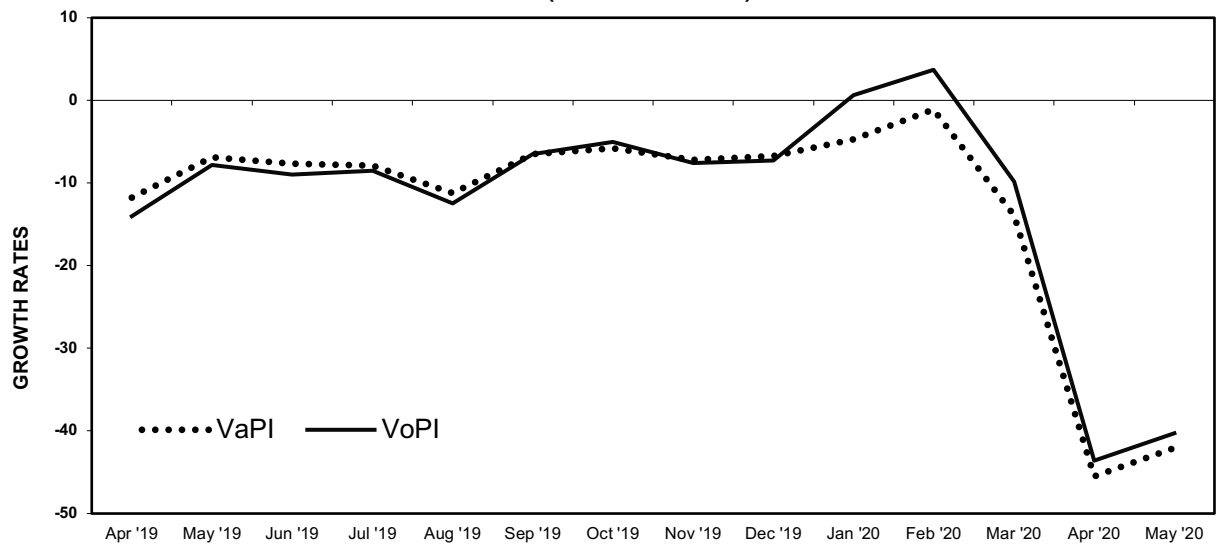
Figure 1. Value of Production Index and Volume of Production Index for Total Manufacturing: April 2019 - May 2020ᵖ
(2000 = 100)
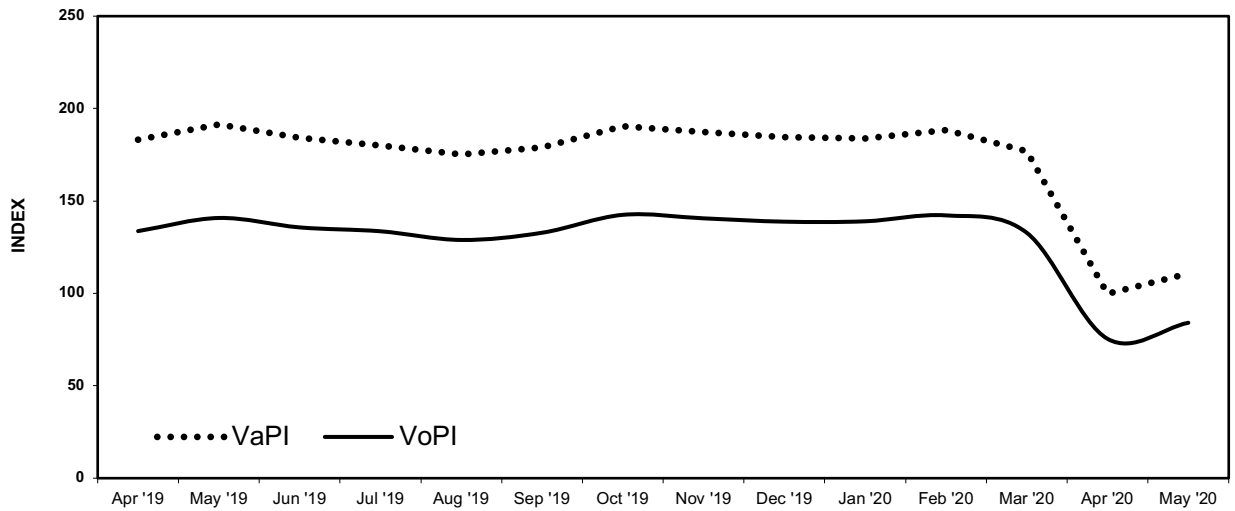
p - preliminary
Source: Philippine Statistics Authority

Figure 2. Year-on-Year Changes in Production: April 2019 - May 2020ᵖ
(2000 = 100)

p - preliminary
Source: Philippine Statistics Authority

NET SALES

Value of Net Sales Index drops further

The Value of Net Sales Index (VaNSI) also continued to drop at an annual rate of 46.9 percent in May 2020, from a negative growth rate of 51.0 percent in the previous month. On the other hand, VaNSI increased with an annual rate of 2.5 percent in May 2019. *(Table A)*

The decline of VaNSI in May 2020 was due to the decreases in the indices of all industry groups led by **footwear and wearing apparel** (-88.7%), **wood and wood products** (-82.4%) and **machinery except electrical** (-79.1%). *(Tables 2-A and 3)*

Volume of Net Sales Index declines

The Volume of Net Sales Index (VoNSI), on a year-on-year basis, maintains its downward trend at -45.2 percent in May 2020. In the previous month, the annual decrease was higher at 49.3 percent. In contrast, VoNSI in May 2019 climbed by 1.5 percent. *(Table A)*

The downturn was brought about by the contractions in the indices of all the industry groups. Two of these industry groups exhibited a decrease of more than 80 percent, namely, **footwear and wearing apparel** (-87.5%) and **wood and wood products** (-80.4%). *(Tables 2-B and 4)*

Figure 3. Year-on-Year Changes in Net Sales: April 2019 - May 2020ᵖ
(2000 = 100)
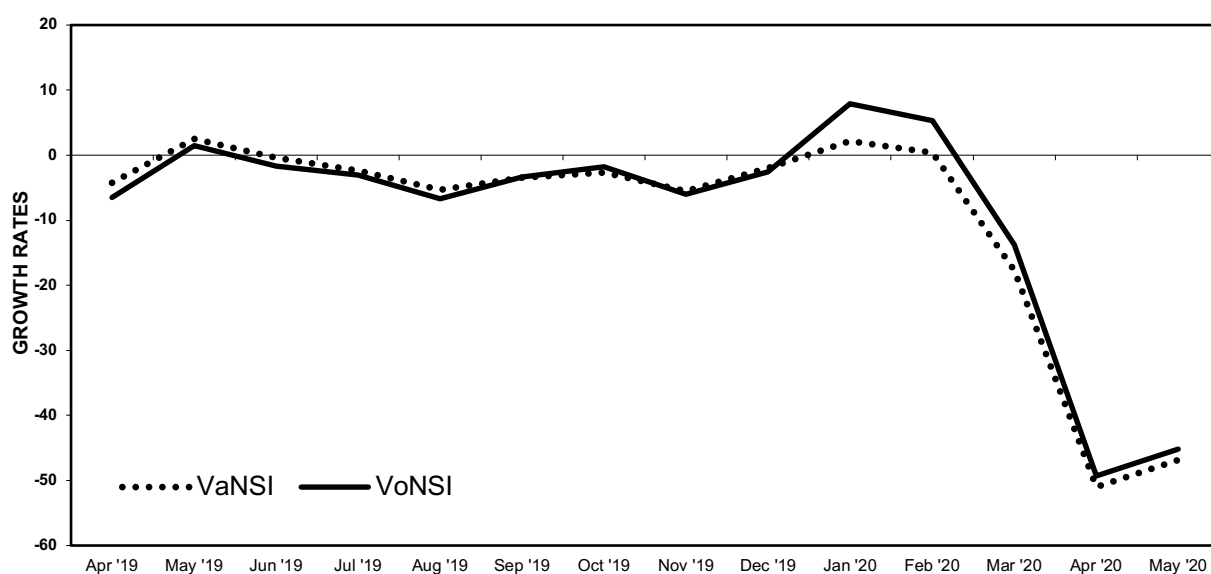
p - preliminary
Source: Philippine Statistics Authority

CAPACITY UTILIZATION

Average Capacity Utilization Rate for manufacturing improves

Based on the responding establishments, average capacity utilization rate for total manufacturing in May 2020 was posted at 73.4 percent which was higher than the April 2020 report of 71.2 percent.

Five of the 20 industry groups had at least 80 percent capacity utilization rate which was led by **wood and wood products** (91.7%), **textiles** (90.6%), **footwear and wearing apparel** (85.8%), **rubber and plastic products** (82.2%) and **electrical machinery** (81.4%). *(Table 6)*

More than one-fifth of total responding manufacturing establishments operate at full capacity

The proportion of establishments that operated at full capacity (90% to 100%) was more than one-fifth (21.8%) of the total number of responding establishments for manufacturing. More than two-fifths (42.0%) operated at 70 to 89 percent capacity while more than a third (36.2%) operated below 70 percent capacity. *(Table B)*

Table B. Distribution of Responding Establishments by Capacity Utilization for Total Manufacturing: May 2020[p]

Capacity Utilization	Number of Responding Establishments	Percent Share to Responding Establishments
TOTAL	298	100.0
Below 50%	40	13.4
50% - 59%	29	9.7
60% - 69%	39	13.1
70% - 79%	61	20.5
80% - 89%	64	21.5
90% - 100%	65	21.8

p - preliminary
Notes:
1) Based on the responses of establishments which were in operation during the reference month.
2) There were additional 41 establishments which responded but were not included in the tabulation as they temporarily ceased their business operations.
Source: Philippine Statistics Authority

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TABLE 1-A. Year-on-Year Growth Rate (%) of Value of Production Index by Industry Group
April and May 2020
(2000 =100)

INDUSTRY GROUP	May 2020ᵖ	April 2020ʳ
Losers		
Petroleum products	-92.1	-57.5
Electrical machinery	-37.8	-50.2
Machinery except electrical	-62.3	-63.0
Food manufacturing	-28.6	-25.8
Transport equipment	-80.3	-82.0
Beverages	-54.6	-73.5
Footwear and wearing apparel	-78.7	-92.0
Basic metals	-46.2	-45.0
Rubber and plastic products	-58.4	-64.0
Tobacco products	-71.9	-85.1
Miscellaneous manufactures	-53.0	-64.3
Fabricated metal products	-59.7	-62.7
Non-metallic mineral products	-28.4	-58.8
Textiles	-43.9	-36.7
Printing	-61.4	-58.1
Chemical products	-9.4	-9.0
Paper and paper products	-34.7	-41.3
Wood and wood products	-17.6	-57.5
Leather products	-40.8	-39.4
Furniture and fixtures	-11.0	-86.7

p - preliminary, r - revised
Source: Philippine Statistics Authority

TABLE 1-B. Year-on-Year Growth Rate (%) of Volume of Production Index by Industry Group
April and May 2020
(2000 = 100)

INDUSTRY GROUP	May 2020ᵖ	April 2020ʳ
Losers		
Petroleum products	-91.4	-48.5
Electrical machinery	-33.7	-49.7
Machinery except electrical	-61.5	-62.4
Food manufacturing	-29.1	-26.1
Transport equipment	-79.3	-81.2
Beverages	-56.2	-74.5
Footwear and wearing apparel	-76.6	-90.9
Basic metals	-43.6	-40.9
Rubber and plastic products	-57.4	-63.1
Tobacco products	-73.1	-85.8
Miscellaneous manufactures	-52.3	-64.3
Fabricated metal products	-61.4	-57.8
Textiles	-43.7	-36.3
Non-metallic mineral products	-27.2	-58.0
Printing	-62.1	-58.8
Paper and paper products	-32.4	-39.3
Chemical products	-4.2	-4.2
Furniture and fixtures	-26.7	-88.9
Leather products	-32.6	-27.6
Wood and wood products	-8.0	-54.0

p - preliminary, r - revised
Source: Philippine Statistics Authority

TABLE 2-A. Year-on-Year Growth Rate (%) of Value of Net Sales Index
by Industry Group
April and May 2020
(2000 =100)

INDUSTRY GROUP	May 2020ᵖ	April 2020ʳ
Losers		
Electrical machinery	-43.5	-53.2
Machinery except electrical	-79.1	-77.8
Petroleum products	-61.6	-63.1
Food manufacturing	-22.6	-23.6
Transport equipment	-74.1	-87.4
Footwear and wearing apparel	-88.7	-93.8
Basic metals	-57.8	-56.3
Beverages	-46.5	-68.8
Chemical products	-23.7	-18.1
Non-metallic mineral products	-62.7	-74.1
Miscellaneous manufactures	-50.0	-64.3
Paper and paper products	-44.4	-52.9
Textiles	-42.0	-41.7
Printing	-64.3	-44.6
Fabricated metal products	-48.5	-63.5
Tobacco products	-24.4	4.1
Rubber and plastic products	-59.3	-70.8
Wood and wood products	-82.4	-87.7
Furniture and fixtures	-56.9	-85.6
Leather products	-41.2	-6.8

p - preliminary, r - revised
Source: Philippine Statistics Authority

TABLE 2-B. Year-on-Year Growth Rate (%) of Volume of Net Sales Index by Industry Group April and May 2020 (2000 = 100)

INDUSTRY GROUP	May 2020ᵖ	April 2020ʳ
Losers		
Machinery except electrical	-78.6	-77.5
Electrical machinery	-39.8	-52.7
Petroleum products	-58.4	-55.4
Food manufacturing	-23.1	-23.9
Transport equipment	-72.8	-86.9
Footwear and wearing apparel	-87.5	-93.0
Basic metals	-55.7	-53.1
Beverages	-48.3	-70.1
Non-metallic mineral products	-62.1	-73.6
Chemical products	-19.3	-13.7
Miscellaneous manufactures	-49.3	-64.3
Paper and paper products	-42.4	-51.3
Printing	-64.9	-45.6
Textiles	-41.7	-41.3
Fabricated metal products	-50.7	-58.7
Rubber and plastic products	-58.4	-70.1
Tobacco products	-27.9	-0.6
Furniture and fixtures	-64.5	-88.0
Wood and wood products	-80.4	-86.8
Leather products	-33.0	11.4

p - preliminary, r - revised
Source: Philippine Statistics Authority

Technical Notes

I.   Introduction

The Monthly Integrated Survey of Selected Industries (MISSI) is one of the designated statistical activities undertaken by the Philippine Statistics Authority with the objective of providing flash indicators on the performance of growth-oriented industries in the manufacturing sector. The survey gathers monthly data on employment, compensation, production, net sales, inventories and capacity utilization from manufacturing establishments.

The indicators generated from the 2020 MISSI at the 3/4-digit 2009 Philippine Standard Industrial Classification (PSIC) level are Value of Production Index (VaPI), Volume of Production Index (VoPI), Value of Net Sales Index (VaNSI), Volume of Net Sales Index (VoNSI) and capacity utilization of industries. The VoPI and VoNSI, however, are derived indicators using the 2020 Producer Price Index (PPI) as deflator.

II.   Method of Index Computation

The MISSI utilizes the Laspeyres-type method of index computation where the weights are based on the value of production from the Census of Philippine Business and Industry (CPBI).

For the 2020 MISSI index series with base year of 2000, the weights of the major industries and sub-industries are based from the results of the 2000 CPBI for manufacturing establishments with average total employment of 20 and over. The weights are computed from the value of products sold plus change in inventories.

The formula in the computation of indices and growth rates are as follows:

1. **Value of Production Index (VaPI)**

   a. **Computation of Index for Industry Class Level**

      i. Initial Index

$$VaPI_{ijm} = \frac{V_{ijm}}{V_{ij0}} x100$$

   where:

   $VaPI_{ijm}$ = VaPI for the ith industry class of the jth industry group at the current month m

   V_{ijm} = total value of production for all sample establishments in the ith industry class of the jth industry group at the current month m

   V_{ijo} = average monthly value of production at base year 0

      ii. Monthly Index

$$VaPI_{ijm} = \frac{V_{ijm}}{V_{ij(m-1)}} x VaPI_{ij(m-1)}$$

   where:

   $VaPI_{ijm}$ = VaPI for the ith industry class of the jth industry group at the current month m

   $VaPI_{ij(m-1)}$ = VaPI for the ith industry class of the jth industry group for the previous month m-1

   V_{ijm} = total value of production for all sample establishments in the ith industry class of the jth industry group at the current month m

   $V_{ij(m-1)}$ = total value of production for all sample establishments in the ith industry class of the jth industry group for the previous month m-1

b. Computation of Index for Industry Group Level

$$VaPI_{jm} = \sum_{i=1}^{n} W_{ij} \times VaPI_{ijm}$$

where:

$VaPI_{jm}$ = VaPI for j^{th} industry group at current month m

$VaPI_{ijm}$ = VaPI for the ith industry class of the jth industry group at the current month m

W_{ij} = Weight for the ith industry class of the jth industry group

n = Number of industry class in the jth industry group

Same formula for industry groups without industry class

c. Computation of Index for Total Manufacturing

$$VaPI_{m} = \sum_{j=1}^{p} W_{j} \times VaPI_{jm}$$

where:

$VaPI_{m}$ = VaPI for the current month m

$VaPI_{jm}$ = VaPI for j^{th} industry group (2/3-digit) at current month m

W_{j} = Weight for the jth industry group

p = Number of industry groups = 20

2. Value of Net Sales Index (VaNSI)

The same methodology is used to compute the Value of Net Sales Index (VaNSI)

3. Volume of Production Index (VoPI)

a. Computation fo Index for Industry Class Level

$$VoPI_{ijm} = \frac{VaPI_{ijm}}{PPI_{ijm}}$$

where:

$VoPI_{ijm}$ = VoPI for the ith industry class of the jth industry group at the current month m

$VaPI_{ijm}$ = VaPI for the ith industry class of the jth industry group at the current month m

PPI_{ijm} = PPI for the ith industry class of the jth industry group at the current month m

b. Computation of Index for Industry Group Level

$$VoPI_{jm} = \frac{VaPI_{jm}}{PPI_{jm}}$$

where:

$VoPI_{jm}$ = VoPI for the jth industry group at the current month m

$VaPI_{jm}$ = VaPI for the jth industry group at the current month m

PPI_{jm} = PPI fot the jth industry group at the current mont m

c. Computation of Index for Total Manufacturing (1-digit PSIC)

$$VoPI_m = \frac{VaPI_m}{PPI_m}$$

where:

$VoPI_m$ = VoPI for total manufacturing at the current month m

$VaPI_m$ = VaPI for total manufacturing at the current month m

PPI_m = PPI for total manufacturing at the current month m

4. Volume of Net Sales Index (VoNSI)

The same methodology is used to compute the Volume of Net Sales Index (VoNSI)

5. Capacity Utilization Rate

Capacity Utilization Rate is the ratio of total output to the maximum rated capacity of the establishment. Rated Capacity refers to the largest volume of output possible at which the factory can operate with an acceptable degree of efficiency taking into consideration unavoidable losses of productive time (i.e. vacation, holiday and repair of equipment) and availability of raw materials.

The formulas in obtaining the Average Capacity Utilization Rate are the following:

a. Computation fo Index for Industry Class Level

$$AveCU_{ijm} = \sum_{k=1}^{n} \left(AveCU_{kijm} \times \frac{Prod_{kijm}}{Prod_{ijm}} \right)$$

where:

$AveCU_{ijm}$ = Average capacity utilization rate of the ith industry class of the jth industry group at the current month m

$AveCU_{kijm}$ = Midpoint of the capacity utilization range reported by the kth sample establishment in the ith industry class of the jth industry group at the current month m

$Prod_{kijm}$ = Production value of the kth sample establishment in the ith industry class of the jth industry group at the current month m

$Prod_{ijm}$ = Total value of production of the ith industry class of the jth industry group

b. Computation of Index for Industry Group Level (without industry classes)

$$AveCU_{jm} = \sum_{k=1}^{n}\left(AveCU_{kjm} \times \frac{Prod_{kjm}}{Prod_{jm}}\right)$$

where:

$AveCU_{jm}$ = Average capacity utilization rate of the jth industry group at the current month m

$AveCU_{kjm}$ = Midpoint of the capacity utilization range reported by the kth sample establishment in the jth industry group at the current month m

$Prod_{kjm}$ = Value of production of the kth sample establishment in the jth industry group at the current month m

$Prod_{jm}$ = Total value of production of the jth industry group at the current month m

c. Computation of Index for Industry Group Level (with industry classes)

$$AveCU_{jm} = \sum_{i=1}^{n}\left(AveCU_{ijm} \times W_{ijm}\right)$$

where:

$AveCU_{jm}$ = Average capacity utilization rate of the jth industry group at the current month m

$AveCU_{ijm}$ = Average capacity utilization rate of the ith industry class of the jth industry group at the current month m

W_{ijm} = Weight of the ith industry class of the jth industry group at the current month m

d. Computation of Index for Total Manufacturing

$$AveCU_m = \sum_{j=1}^{20} \left(AveCU_{jm} \times W_{jm} \right)$$

where:

$AveCU_m$ = Average capacity utilization rate for total manufacturing at the current month m

$AveCU_{jm}$ = Average capacity utilization rate of the jth industry group at the current month m

W_{jm} = Weight of the jth industry group at the current m

III. Computation of Growth Rates

Year-on-year growth rates are computed by dividing the current month index by the index in the same month of the previous year less 1.

IV. Imputation and Revision

Imputation is done for sample establishments that are in operation during the reference period but no response during the release date. Results are revised accordingly when the actual data are received and these revisions are reflected in the next release.

V. Industry Coverage

The 2020 MISSI utilizes the 2009 PSIC to classify major industries and sub-industries. Twenty major industries of the 2009 PSIC were formed to comprise the industry coverage of the 2020 MISSI.

The table below presents the industry coverage of 2020 MISSI by 2009 PSIC code.

2009 PSIC CODE	INDUSTRY DESCRIPTION
C10	Food manufacturing *
C11	Beverages
C12	Tobacco products
C13	Textiles*
C14, C152	Footwear and wearing apparel
C151	Leather products
C16	Wood and wood products*
C17	Paper and paper products
C18	Printing
C19	Petroleum products*
C20,C21	Chemical products*
C22	Rubber and plastic products*
C23	Non-metallic mineral products*
C24	Basic metals*
C25,C3311	Fabricated metal products
C262,C275,C28, C263,C268,C3312,C332	Machinery except electrical*
C261,C264,C27, C29301,C3314,C332	Electrical machinery*
C29 except C29301, C30,C3315	Transport equipment
C31	Furniture and fixtures
C265,C266,C267,C32, C3313,C3319	Miscellaneous manufactures

* Industry groups categorized into industry classes