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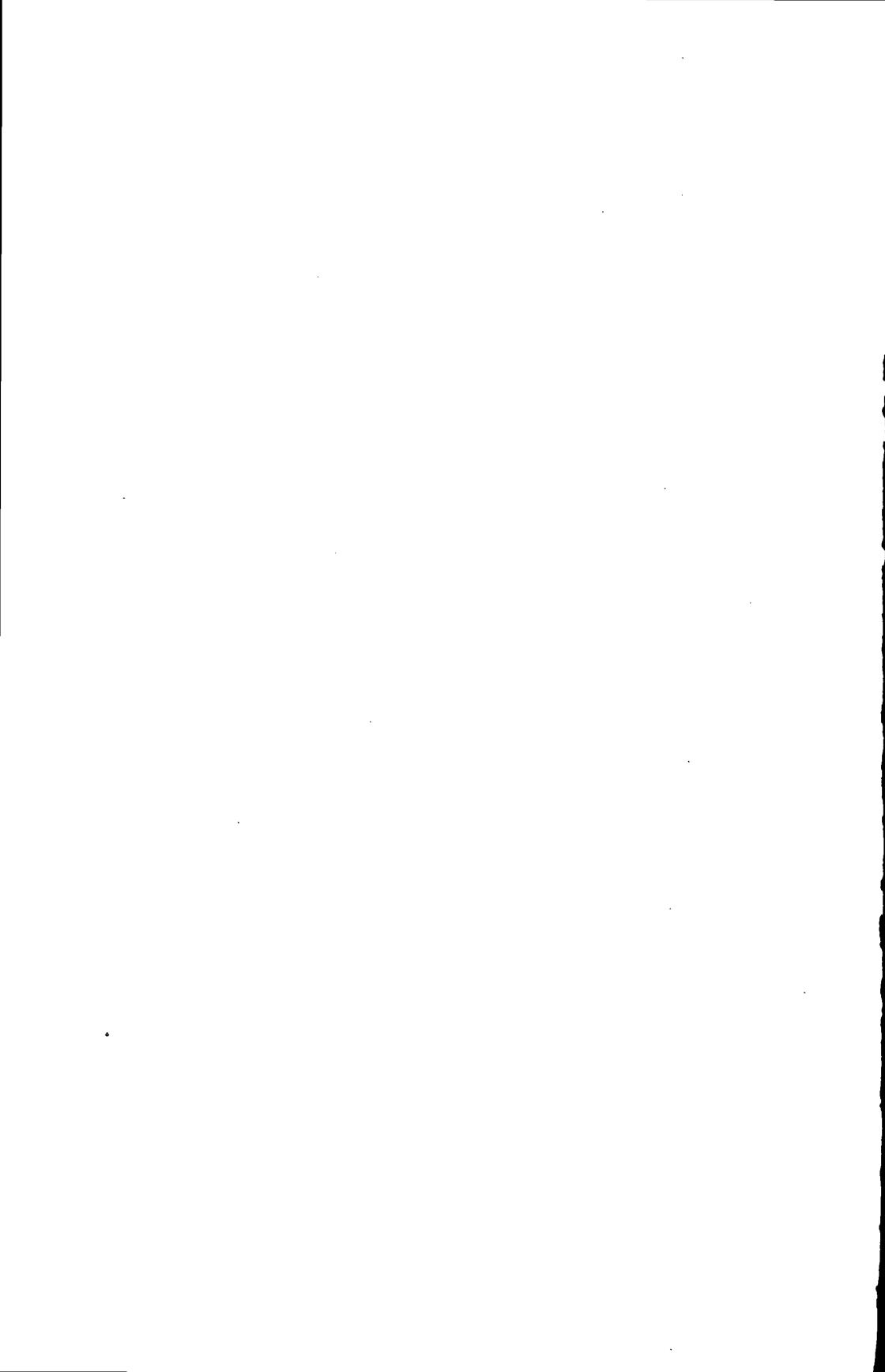
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## APPENDICES



**APPENDIX I**

**INDEXES OF SEASONAL VARIATIONS IN THE FLOW  
AND STOCKS OF COMMODITIES AND IN OTHER  
ASPECTS OF ECONOMIC ACTIVITY IN  
THE UNITED STATES**

**Part One**

**The Seasonal Indexes**

# I. FOOD PRODUCTS

No.	Series	Period Covered	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average Deviation	Range
<b>A. Wheat and Flour</b>																
<b>Wheat</b>																
1.	Harvest, Estimate .....	1909-19	0	0	0	0	6	264	508	341	78	4	0	0	135.4	508
2.	Marketing by Farmers.....	1919-30	72	57	46	42	43	38	154	170	195	170	120	93	51.5	157
			56	54	42	35	39	53	196	229	197	138	92	70	59.9	194
3.	Marketing by Farmers, Principal Wheat Growing States .....	1909-21														
	California .....		19	24	20	16	16	48	206	402	268	106	48	28	96.9	386
	Colorado .....		60	52	32	41	48	20	40	263	247	155	155	88	69.9	243
	Idaho .....		59	38	28	18	26	19	26	170	335	235	143	102	80.9	317
	Illinois .....		60	56	44	37	34	30	331	263	116	100	70	59	68.3	301
	Indiana .....		52	54	44	38	40	31	346	254	118	106	66	52	70.6	315
	Iowa .....		67	52	42	38	46	35	150	277	185	157	79	72	61.5	242
	Kansas .....		77	68	46	54	52	42	215	192	136	134	103	82	46.6	173
	Kentucky .....		34	38	32	28	31	34	402	281	128	88	64	41	85.1	374
	Maryland .....		66	44	47	40	37	30	192	227	178	137	103	100	56.1	197
	Michigan .....		115	95	65	56	55	50	73	151	154	151	112	122	34.2	104
	Minnesota .....		80	62	53	41	60	54	38	96	229	208	161	118	52.7	191
	Missouri .....		52	44	38	31	32	295	258	145	118	92	62	62	69.5	264
	Montana .....		90	49	42	29	25	13	70	205	256	221	172	172	75.6	243
	Nebraska .....		89	65	47	64	73	41	184	180	128	145	90	95	39.4	143
	New York .....		104	83	73	48	49	61	40	162	169	161	132	118	41.0	129
	North Carolina .....		64	67	68	68	67	80	188	180	142	106	91	78	36.1	124
	North Dakota .....		65	52	48	34	44	48	28	83	252	233	192	122	66.4	224
	Ohio .....		72	67	58	54	56	53	228	222	137	107	79	67	49.0	175
	Oklahoma .....		56	43	35	43	38	66	356	188	114	103	86	70	60.3	321
	Oregon .....		23	16	24	18	22	13	64	377	407	160	43	35	107.2	394
	Pennsylvania .....		98	88	80	44	58	53	108	179	148	122	118	104	29.8	135
	South Dakota .....		72	54	50	36	50	49	36	157	245	216	126	108	58.8	209
	Texas .....		41	42	43	34	30	144	337	211	109	82	74	53	66.8	307

Virginia .....	67	68	65	61	50	31	164	186	164	137	118	88	44.9	155	
Washington .....	29	18	14	20	19	12	22	199	436	270	109	52	102.3	424	
4. Receipts at Primary Markets															
1920-24	80	63	61	55	62	61	106	193	161	138	123	97	36.8	138	
1925-31	63	59	54	41	53	63	222	208	165	115	90	67	51.7	181	
5. Receipts at Selected Markets															
1906-16															
Chicago .....	52	57	59	43	66	31	238	287	135	82	86	64	60.0	256	
Kansas City .....	72	62	35	44	56	42	182	191	162	122	139	93	49.3	156	
Minneapolis .....	95	88	93	61	59	62	50	71	162	166	143	149	36.8	116	
6. Shipments from Primary Markets															
1920-24	75	57	63	55	88	82	100	201	155	121	106	97	30.5	146	
1925-31	61	52	59	59	96	80	152	182	147	119	117	75	36.2	130	
7. Visible Supply, U. S.															
1918-22	131	105	89	72	50	32	51	90	131	152	152	144	36.0	120	
1923-31	113	106	95	80	66	53	72	110	123	129	128	125	22.3	76	
8. Visible Supply at Primary Markets, Derived															
1920-24	149	136	119	100	59	22	30	61	93	125	154	153	39.2	132	
1925-31	111	104	91	69	44	28	87	123	145	147	133	118	30.2	119	
9. Exports															
1918-23	70	45	55	52	93	106	110	195	169	130	93	82	35.0	150	
1924-31	55	38	40	49	85	72	102	156	206	176	134	86	45.8	168	
10. Stocks held by Flour Mills, Quarterly															
1926-31															
In country elevators	80				43		144					133	38.5	101	
In transit	59				90		135					116	25.5	76	
In terminal elevators	81				32		139					148	43.5	116	
At mills and in mill elevators	50				50		137					123	30.0	87	
Total	84				50		138					128	33.0	88	
11. Borrowings by 121 Flour Mills															
1919-21	120	109	98	86	67	51	59	86	116	131	137	137	25.2	86	
12. Wheat Grindings by Flour Mills															
1923-31	101	92	95	90	91	90	99	110	113	118	104	97	7.7	28	
No. Series	Period Covered	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average Deviation	Range

No.	Series	Period Covered	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average Deviation	Range
	Wheat Flour															
13.	Production	1918-24	101	86	96	86	86	79	91	112	121	125	113	103	12.6	46
		1924-31	101	92	96	90	90	89	99	110	113	118	104	97	7.8	29
14.	Stocks held by Mills, Quarterly	1926-31			101		86				102			111	7.0	25
15.	Stocks, All Positions	1920-31	99	96	91	92	87	88	104	108	116	116	108	96	8.6	29
16.	Trade Disappearance (Consumption)	1920-31	97	91	98	88	93	83	87	110	111	120	112	110	10.5	37
17.	Sales by Federal Bake Shops	1928-31	98	100	112	101	97	91	89	94	93	107	104	114	6.3	25
<b>B. Livestock and Meats</b>																
Cattle and Calves																
1.	Births of Calves, Estimate	1920-24	83	101	150	176	157	106	73	60	70	73	72	79	31.7	116
2.	Receipts at Primary Markets	1917-22	94	73	84	86	92	91	92	106	123	139	127	93	15.8	66
		1923-31	94	77	87	91	96	88	93	104	119	140	115	94	13.2	63
3.	Receipts at Chicago	1888-1900	101	86	94	86	95	93	98	111	115	120	102	98	8.2	34
		1900-14	110	89	91	90	88	86	90	98	110	124	114	110	11.3	38
		1915-21	112	85	81	78	88	86	83	93	110	134	136	115	17.8	58
		1922-28	106	86	92	86	97	91	91	100	102	128	117	104	9.5	42
4.	Cattle, Federally Inspected Slaughter	1907-19	101	85	87	84	89	91	94	104	115	130	116	105	11.8	46
		1919-27	102	85	92	89	95	92	98	101	110	121	114	104	8.4	36
		1924-30	99	84	90	90	98	93	99	102	108	121	111	105	7.8	37
5.	Calves, Federally Inspected Slaughter	1908-12	75	63	94	118	133	128	110	109	105	102	88	74	17.6	70
		1913-18	87	77	96	126	134	119	104	96	96	101	87	77	14.0	57
		1919-24	91	81	107	111	116	109	101	99	98	105	98	84	8.2	35
		1924-28	93	89	106	110	112	105	97	91	95	107	97	97	6.8	23
Beef and Veal																
6.	Production	1920-31	100	84	94	94	101	100	99	103	107	116	104	99	5.1	32
7.	Cold Storage Holdings	1917-22	134	126	116	98	86	78	76	73	75	91	111	136	20.5	63
		1923-29	143	131	119	101	83	74	63	61	64	86	124	148	27.9	87

No	Series	Period Covered	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average Deviation	Range
			Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.		
8.	Apparent Consumption ..	1916-22 1923-31	103 101	86 86	93 95	94 98	97 104	99 99	98 102	103 103	108 106	115 114	109 98	93 96	6.6 4.8	29 28
	Sheep and Lambs															
	9. Births of Lambs, Estimate	1920-24	42	121	250	324	342	342	32	11	5	6	5	7	106.1	337
10.	Receipts at Primary Markets .....	1917-22 1923-31	83 84	67 75	71 78	70 80	78 95	84 88	84 88	94 91	126 110	151 148	164 172	122 97	27.4 21.6	97 97
11.	Receipts at Chicago.....	1866 1867 1868 1869	77 86 96 106	100 110 123 131	136 137 138 138	127 122 116 112	106 98 92 87	106 98 85 81	94 90 76 72	85 80 99 91	103 99 85 85	87 86 85 85	129 126 123 120	82 85 84 91	16.7 15.9 16.6 17.7	60 57 62 66
		1870 1871 1872 1873 1874	115 124 133 141 146	139 146 150 152 151	139 139 139 139 139	108 105 101 98 97	108 105 74 72 70	82 77 69 66 63	77 73 63 61 58	68 65 80 77 75	87 83 80 85 85	85 85 85 85 110	117 115 112 100 109	94 96 98 101 103	19.4 21.2 22.3 23.7 25.2	71 81 87 91 93
		1875 1876 1877 1878 1879	150 152 149 146 142	146 141 136 132 129	138 138 137 136 134	99 104 110 115 121	69 70 72 74 75	62 61 60 60 60	62 61 60 63 64	57 56 55 54 54	73 72 71 71 71	86 86 85 89 90	108 106 108 109 110	104 106 108 109 110	25.4 25.7 25.6 25.2 25.0	93 96 94 92 88
		1880 1881 1882 1883 1884	138 135 131 129 126	128 126 124 122 119	132 130 128 126 122	125 125 123 119 113	125 125 78 79 81	76 77 62 63 65	60 61 62 61 65	54 55 57 61 65	72 73 74 77 80	92 94 95 96 98	104 112 112 111 111	110 109 109 108 108	24.5 23.5 22.3 20.8 18.6	84 80 74 68 61
		1885 1886 1887 1888 1889	122 119 117 113 108	116 109 99 102 92	118 112 106 102 99	109 103 99 94 88	83 85 87 90 88	68 73 78 83 88	69 73 79 94 88	84 89 94 102 103	100 101 102 126 130	117 122 108 106 106	110 105 105 105 103	107 106 105 103 100	16.2 13.4 10.7 9.8 9.3	54 49 48 48 51

No.	Series	Period Covered	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average Deviation	Range
11.	(Continued)	1890-95	104	94	100	103	103	96	88	100	108	121	91	92	6.5	33
		1896-01	104	87	98	96	97	89	91	106	122	122	99	92	8.8	35
		1902-09	93	80	82	80	75	80	87	106	136	159	118	101	20.2	84
		1910-20	96	77	74	71	68	76	90	107	142	166	124	107	24.5	98
		1921-29	106	88	90	85	86	80	85	110	139	137	93	100	15.4	59
		1908-12	104	89	94	81	83	94	99	108	118	120	109	101	10.0	39
		1913	105	88	88	84	86	92	99	108	117	123	108	103	10.6	39
12.	Federally Inspected Slaughter	1914	105	88	88	84	85	92	98	108	117	121	109	105	10.8	37
		1915	104	88	88	85	83	92	97	109	117	119	110	106	11.0	36
		1916	104	88	88	84	82	92	97	110	116	119	111	108	11.4	37
		1917	103	87	88	83	81	91	98	110	115	121	112	109	11.8	40
		1918	102	86	89	82	80	91	101	111	115	123	112	107	11.9	43
		1919	102	85	89	82	81	92	104	112	116	123	110	103	11.8	42
		1920	102	84	89	84	84	95	105	112	116	121	106	100	10.5	37
		1921	102	85	91	86	89	98	105	111	115	117	101	97	8.8	32
		1922	103	87	92	89	93	100	104	110	114	113	97	95	7.6	27
		1923	104	88	95	92	96	101	103	108	111	111	94	95	6.5	23
		1924	104	89	98	93	97	101	102	106	110	109	93	98	5.3	21
		1925	104	90	98	94	96	100	101	104	110	110	94	100	4.8	20
		1926-30	101	94	97	93	94	97	97	105	112	115	97	98	5.5	22
Mutton and Lamb																
13. Production .....																
14. Cold Storage Holdings....																
15. Apparent Consumption ..																
1920-31																
1917-22																
1923-29																
1916-22																
1923-31																
Hogs																
16. Births of Pigs, Estimate..																
1920-24																
1917-22																
1923-31																
17. Receipts at Primary Markets .....																
1920-24																
1917-22																
1923-31																

18. Receipts at Chicago.....	1861-70	122	61	47	57	82	73	63	64	71	122	196	241	46.9	194
	1871-85	140	95	71	76	91	95	74	67	69	97	163	162	27.5	96
	1885-1900	118	98	92	82	100	105	84	77	82	106	132	123	14.1	55
	1901-14	135	119	103	87	98	98	85	81	71	86	106	132	15.8	64
	1915-24	150	120	100	82	89	94	86	70	63	82	120	144	22.3	87
19. Commercial Slaughter ....	1880-86	129	85	70	76	95	99	76	70	72	102	165	165	26.5	95
	1887-95	146	101	72	71	98	103	81	69	63	90	142	160	25.7	97
	1895-1905	129	106	85	85	108	109	88	76	71	92	116	136	17.2	65
	1906-12	130	104	97	86	104	110	89	75	72	92	114	128	14.9	58
	1913-21	144	117	101	86	100	103	83	65	64	84	108	141	19.3	80
	1922-29	134	108	104	91	96	100	89	76	71	93	109	130	14.1	63
Pork Products															
20. Pork Production .....	1920-31	133	109	100	92	98	103	93	80	74	88	103	126	12.4	59
21. Cold Storage Holdings.....	1917-22	98	116	114	119	121	125	121	104	79	61	62	76	20.3	64
	1923-29	99	113	119	121	118	121	117	104	82	64	62	83	18.6	59
22. Apparent Consumption ..	1916-21	117	96	80	76	100	96	95	96	100	119	114	110	10.1	43
	1922-31	109	88	94	89	101	101	96	97	99	112	105	106	5.9	24
Total Meat															
23. Production .....	1920-31	120	99	98	93	99	101	95	90	87	99	102	115	6.5	33

**C. Dairy Products**

1. Winter Dairies .....	1921-25														
Cows Freshening .....		82	54	80	74	34	12	8	38	197	258	217	145	69.6	250
Cows Dry .....		67	77	54	23	10	23	118	227	238	181	113	68	62.9	228
Cows Milking .....		107	105	109	115	118	115	96	75	72	84	97	106	12.6	46

**Milk**

2. Production, Minneapolis District .....	1920-31	105	101	114	108	124	123	104	88	77	80	81	94	13.2	47
3. Daily Deliveries per Dairy, New York District....	1922-30	90	95	104	114	126	136	111	90	86	84	78	84	15.3	58
4. Receipts at N. Y. C.....	1894-98	95	88	100	99	109	107	109	104	99	99	96	97	4.7	21
	1899-1903	95	87	100	99	109	109	112	102	99	99	95	94	5.3	25
	1904-08	94	87	98	97	108	109	112	106	100	100	95	95	5.8	25

No. Series Period Covered Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Average Deviation Range

No.	Series	Period Covered	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average Deviation	Range	
4.	(Continued)	1909-13	95	89	101	98	108	109	110	102	98	99	95	96	5.0	21	
		1914-20	95	88	100	98	109	109	111	107	100	100	97	92	5.9	23	
		1920-31	96	89	101	98	105	107	107	102	101	101	101	95	96	4.2	18
5.	Receipts at Boston.....	1920-31	95	88	101	99	107	111	109	103	98	99	94	94	5.3	23	
6.	Cream and Condensed Milk Receipts at N. Y. C. ...	1895-1904	69	74	80	96	132	153	143	143	125	101	82	75	70	25.7	84
		1905-09	65	67	79	98	138	163	154	123	98	98	77	72	66	29.7	98
		1910	65	69	80	96	147	157	153	120	96	80	70	67	67	29.5	92
		1911	65	69	79	97	147	158	151	122	97	80	69	69	67	29.6	93
		1912	64	69	79	98	147	159	149	124	98	79	69	66	66	29.8	95
		1913	64	68	79	100	146	161	148	126	99	78	68	65	65	29.9	97
		1914	63	68	79	101	146	162	148	128	100	76	68	63	63	30.7	99
		1915	62	67	79	102	145	164	149	129	101	74	66	61	61	31.8	103
		1916	60	67	80	103	145	167	151	130	101	72	64	59	59	32.9	108
		1917	58	67	80	104	144	168	153	131	101	70	62	59	62	33.8	110
		1918	57	67	81	105	144	168	153	130	101	71	62	60	62	33.6	111
		1919	57	68	82	105	144	168	152	127	101	74	62	61	62	32.8	111
		1920	58	68	83	106	144	167	149	123	101	77	62	62	62	31.7	109
		1921	60	69	84	107	143	166	146	120	101	78	63	63	63	30.6	106
		1922	62	69	85	107	143	165	143	118	100	78	64	64	64	29.5	103
		1923	64	70	86	108	143	164	142	117	98	77	66	65	65	29.0	100
		1924	65	71	87	108	142	163	141	117	98	76	67	65	65	28.5	98
1925	66	72	88	108	141	161	140	117	97	75	67	66	66	28.0	95		
1926	68	73	89	108	139	159	140	116	98	76	68	66	66	27.0	93		
1927	69	75	90	108	138	157	139	113	98	77	70	67	67	25.8	90		
1928	70	77	91	107	137	154	138	111	98	78	71	68	71	24.5	86		
1929	71	78	93	107	137	151	136	109	97	79	72	70	72	23.3	81		
1930	72	80	94	106	138	147	133	107	96	81	72	72	72	22.0	75		
1931	74	82	96	105	139	143	129	105	95	83	73	75	75	20.2	70		
7.	Milk, Wholesale Sales, N. Y. C. ....	1920-24	81	81	85	91	100	114	129	129	115	100	89	83	14.8	48	
		Grade B, quarts.....															

Grade B, pints.....	79	81	88	99	113	127	127	118	106	94	85	80	15.4	48
Grade B, bulk.....	90	93	97	100	104	114	116	108	101	96	92	90	7.1	26
Grade A, quarts.....	90	92	98	102	105	112	110	107	104	97	91	90	6.8	22
Buttermilk .....	48	47	56	72	107	192	223	164	106	76	58	51	48.7	176
8. Cream, Wholesale Sales, 1920-24														
N. Y. C. ....	78	80	88	99	117	146	141	115	96	84	78	77	19.9	69
Light cream .....	81	85	94	108	129	131	117	105	95	88	83	80	15.3	51
Extra heavy cream.....														
9. Milk, Retail Sales, N. Y. C. 1919-24														
Grade B, quarts.....	98	98	99	100	102	104	101	98	101	102	99	98	1.7	6
Grade B, pints.....	92	91	92	97	103	110	109	106	103	102	99	95	5.6	19
Grade A, quarts.....	98	99	102	104	105	105	96	89	100	103	100	99	3.2	16
Certified, quarts .....	102	101	101	104	105	101	93	91	97	102	101	102	3.2	14
Buttermilk .....	64	67	75	90	114	156	170	139	104	82	70	65	30.8	106
10. Cream, Retail Sales, 1919-24														
N. Y. C. ....	103	103	104	104	107	104	92	83	92	102	104	104	5.7	24
Light cream .....	97	99	102	106	116	116	94	85	93	98	98	97	6.6	31
Extra heavy cream.....														
Evaporated Milk														
11. Bulk Goods, Production... 1922-30	64	66	85	103	139	164	158	128	99	75	61	58	32.0	106
12. Case Goods, Production... 1918-23	81	80	93	107	135	152	122	107	92	88	72	72	20.4	80
1924-31	79	80	100	116	147	159	130	98	80	78	63	69	25.4	96
13. Case Goods, Mfrs'. Stocks														
Total .....	75	67	67	76	97	124	139	127	119	113	103	93	20.8	72
Unsold .....	69	65	66	77	98	122	132	135	119	116	110	91	22.3	70
14. Case Goods, Shipments, 1924-31														
Derived .....	103	91	100	104	119	123	110	114	91	86	76	82	12.2	47
Condensed Milk														
15. Production														
Bulk Goods .....	82	75	97	114	156	167	115	94	83	81	64	71	25.4	103
Case Goods .....	98	89	113	124	132	118	101	81	78	95	82	90	14.6	54
16. Sales														
Wholesale .....	69	74	83	97	116	143	149	135	108	83	71	68	25.5	81

Average Deviation Range

Period Covered Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec.

No. Series

No.	Series	Period Covered	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average Deviation	Range
16.	(Continued)															
	Retail	1919-24	107	109	110	110	110	100	83	75	88	100	104	106	9.2	35
17.	Total Mfrs'. Stocks															
	Bulk Goods	1923-31	64	58	61	74	110	149	149	138	123	105	93	76	29.0	91
	Case Goods	1923-31	68	64	60	70	108	137	146	140	124	108	93	80	27.3	86
18.	Unsold Mfrs'. Stocks															
	Bulk Goods	1922-31	71	64	70	71	109	162	143	135	117	100	80	77	27.8	98
	Case Goods	1922-31	60	48	48	63	112	145	156	152	128	112	93	81	34.3	108
19.	Shipments, Derived															
	Bulk Goods	1923-31	94	81	94	101	120	128	115	105	98	99	76	88	11.6	52
	Case Goods	1923-31	119	96	120	107	67	68	86	91	106	123	108	112	15.6	56
	Butter															
20.	Factory Production	1917-22	73	67	80	91	135	158	146	123	100	88	68	68	27.2	91
		1923-31	81	77	88	99	131	146	135	115	94	87	72	75	21.2	74
21.	Factory Production, by States	1921-25														
	Arizona		84	86	106	134	133	117	97	98	94	95	68	87	15.1	66
	California		87	85	111	129	125	110	103	108	98	83	80	83	14.2	49
	Colorado		82	79	90	94	119	148	140	125	97	82	69	75	22.0	79
	Idaho		95	88	92	101	119	125	112	100	89	99	86	95	9.4	39
	Illinois		77	69	72	88	136	145	133	123	101	99	76	79	23.2	76
	Indiana		77	67	73	82	129	143	131	122	108	103	84	81	22.7	76
	Iowa		76	72	80	92	134	154	144	120	100	90	69	71	25.2	85
	Kansas		82	76	86	102	141	149	143	117	85	75	66	79	25.2	83
	Kentucky		68	58	60	78	123	139	150	140	117	111	79	77	30.0	92
	Massachusetts		81	69	89	108	140	199	144	91	85	80	56	59	31.8	143
	Michigan		82	75	83	88	128	154	133	115	102	95	73	73	21.9	81
	Minnesota		88	84	96	97	128	152	139	117	88	75	63	72	22.8	89
	Mississippi		54	49	61	94	143	137	148	149	116	98	82	69	32.2	100
	Missouri		73	62	67	86	140	145	145	128	103	97	77	76	26.9	83
	Montana		74	67	71	78	108	163	165	136	107	93	71	67	29.8	98
	Nebraska		77	74	84	95	136	161	149	128	90	74	62	69	29.1	99

Nevada .....	86	76	90	102	114	123	124	107	101	104	87	86	125	48
New York .....	61	56	79	98	155	184	133	119	102	94	63	58	32.0	128
North Dakota .....	53	55	67	75	114	182	204	158	107	82	54	49	44.2	155
Ohio .....	72	63	69	79	129	153	139	128	110	103	81	74	27.0	90
Oklahoma .....	79	71	81	104	147	155	148	114	85	79	64	72	28.1	91
Oregon .....	85	77	89	112	144	119	95	83	89	80	81	80	20.0	67
Pennsylvania .....	87	79	93	98	128	134	114	112	102	97	76	79	15.1	58
South Dakota .....	66	69	82	127	124	165	163	129	92	68	54	61	34.7	111
Tennessee .....	67	61	68	84	132	137	141	145	121	103	75	66	29.8	84
Texas .....	80	68	84	119	146	134	125	98	84	93	85	84	20.7	78
Utah .....	98	85	90	102	124	142	115	101	90	87	79	87	14.0	63
Virginia .....	72	61	62	72	112	139	142	152	133	113	78	64	31.8	91
Washington .....	85	74	86	101	136	139	122	103	96	92	81	85	16.8	65
Wisconsin .....	78	74	87	94	132	150	136	119	98	90	70	72	22.8	80
Wyoming .....	71	63	69	72	114	158	159	137	108	99	77	73	29.3	96
22. Receipts at 5 Primary Markets .....	1920-24	79	73	87	85	120	170	149	118	97	84	68	26.1	102
1925-31 .....	85	83	95	98	123	149	136	108	89	83	74	77	19.3	75
23. Cold Storage Holdings....	1915-22	63	37	19	11	26	108	178	197	187	160	125	88	186
1923-31 .....	46	27	15	12	37	123	193	210	193	158	114	73	65.1	198
24. Apparent Consumption ..	1917-23	84	76	88	94	124	121	116	115	106	100	88	13.7	48
1924-31 .....	90	82	92	98	121	115	108	109	103	100	89	92	9.4	39
25. Retail Sales along Milk Routes, N. Y. C. ....	1919-24	92	106	106	102	104	103	98	98	104	102	95	4.5	16
Oleomargarine														
26. Raw Milk Consumption...	1922-31	108	100	106	98	92	81	79	86	103	116	116	10.6	37
27. Production .....	1920-31	108	101	108	99	91	80	78	88	103	116	115	10.8	38
28. Consumption .....	1920-31	108	102	106	98	89	78	74	89	105	117	119	12.0	45
Cheese														
29. Production														
Total .....	1920-31	69	70	87	100	133	153	134	116	103	96	73	23.1	86

No. Series Period Covered Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Average Deviation Range

No.	Series	Period Covered	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average Deviation	Range	
29. (Continued)	American .....	1920-24	58	61	83	95	137	164	148	126	109	98	65	56	30.7	108	
		1925-29	65	67	83	99	135	163	148	123	104	88	88	63	60	29.0	103
		1920-29	82	82	94	106	128	134	106	98	98	98	102	90	84	12.3	52
30. Receipts at 5 Primary Markets	.....	1920-24	75	73	90	90	113	139	136	115	99	105	89	77	17.9	66	
		1925-31	85	82	86	90	103	126	131	120	109	106	86	77	15.8	54	
31. Cold Storage Holdings	Total .....	1917-23	85	65	51	44	52	96	138	160	150	135	119	105	34.5	116	
		1924-31	89	78	68	64	73	98	125	137	130	123	112	102	21.6	73	
		1919	80	60	41	38	38	95	145	168	164	144	122	105	41.3	130	
		1920	81	62	44	40	42	95	143	165	160	142	121	105	39.3	125	
		1921	82	63	47	43	46	95	141	162	157	140	120	104	37.3	119	
		1922	83	65	49	45	49	95	139	159	154	138	119	104	35.6	114	
		1923	83	67	52	48	53	96	138	156	150	135	119	103	33.5	108	
		1924	84	68	55	51	56	96	136	152	147	133	118	103	31.6	101	
		1925	85	70	58	53	60	96	134	149	144	132	117	102	29.7	96	
		1926	85	71	61	56	64	96	132	146	141	129	116	102	27.8	90	
32. Apparent Consumption	All Other, Derived.....	1927	86	73	63	58	68	97	130	143	137	127	115	101	25.7	85	
		1928	87	75	66	61	71	97	129	140	134	125	114	100	23.8	79	
		1929	88	76	69	64	75	97	127	137	131	123	113	100	21.8	73	
		1930	88	78	72	66	79	97	125	133	128	121	112	99	20.0	67	
		1931	89	80	74	69	83	97	123	130	125	119	111	99	18.1	61	
		1924-31	100	93	82	82	82	89	100	107	118	107	111	104	107	9.0	36
		1920-31	93	88	99	103	117	104	86	98	109	113	98	90	90	7.8	31
		Ice Cream	.....	46	50	69	93	130	167	194	170	114	71	52	44	45.8	150
D. Fruits	1. Apples	Harvest Estimate .....	0	0	0	0	1	30	86	150	332	546	54	0	121.4	546	
		Carlot Shipments .....	72	71	57	32	20	11	29	39	161	419	209	80	80	81.5	408
		.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	1924-26	65	62	52	32	22	10	30	36	184	426	209	72	86.5	416
Unloads, 12 Markets.....	1918-22	75	84	87	56	43	18	34	68	131	269	206	128	55.8	251
2. Pears															
Harvest Estimate .....		0	0	0	0	1	5	90	301	533	258	12	0	132.0	533
Carlot Shipments .....	1924-26	8	6	4	1	0	22	251	372	332	164	30	10	119.8	372
3. Mixed Deciduous Fruits, Carlot Shipments.....	1924-26	4	4	5	1	28	190	324	371	166	78	24	7	108.3	370
4. Grapes															
Harvest Estimate .....		0	0	0	0	0	1	42	182	576	358	41	0	136.0	576
Carlot Shipments .....	1924-31	0	0	0	0	0	2	24	99	433	535	101	6	128.2	535
	1924-26	0	0	0	0	0	1	26	110	476	485	98	5	128.4	485
5. Peaches															
Harvest Estimate .....		0	0	0	0	19	95	281	412	323	71	0	0	119.2	412
Carlot Shipments .....	1918-31	0	0	0	0	5	98	411	422	253	11	0	0	131.0	422
	1924-26	0	0	0	0	4	78	470	416	209	23	0	0	132.5	470
Unloads, 12 Markets.....	1918-22	0	0	0	0	0	184	455	256	237	68	0	0	122.0	455
6. Cherries, Carlot Shipments	1924-26	0	0	0	13	318	467	287	114	1	0	0	0	131.0	467
7. Plums and Prunes, Carlot Shipments .....	1924-26	0	0	0	0	38	310	203	312	304	34	0	0	121.4	312
8. Oranges, Carlot Shipments	1924-31	126	120	138	130	113	79	67	60	54	59	108	144	30.0	90
	1924-26	133	130	144	139	102	79	55	46	44	40	130	158	39.3	118
9. Lemons, Carlot Shipments	1924-26	64	60	101	115	191	182	144	107	62	62	52	60	40.0	139
10. Grapefruit, Carlot Ship- ments .....	1924-26	170	182	174	164	103	23	8	2	4	73	172	124	64.9	180
11. Citrus Fruits, Carlot Ship- ments															
All .....	1920-31	133	124	145	135	117	83	64	49	43	65	111	132	32.8	102
Mixed .....	1924-26	175	162	159	127	79	51	44	25	19	26	121	213	59.4	194

No. Series Period Covered Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Average Deviation Range

No.	Series	Period Covered	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average Deviation	Range
12.	Cantaloupes		0	0	0	1	22	104	251	440	343	36	0	0	123.2	440
	Harvest Estimate															
	Carlot Shipments	1924-26	0	0	0	0	119	394	348	233	102	5	0	0	115.9	394
	Unloads, 12 Markets	1918-22	0	0	0	0	0	204	400	321	203	61	10	0	121.4	400
13.	Watermelons		0	0	0	0	5	62	328	478	289	38	0	0	132.5	478
	Harvest Estimate															
	Carlot Shipments	1924-26	0	0	0	0	10	246	610	277	55	2	0	0	138.8	610
14.	Other Melons, Carlot Shipments	1924-26	0	0	0	0	4	140	295	232	356	151	19	2	112.4	356
15.	Strawberries		0	0	0	58	283	593	220	37	7	1	1	0	132.7	593
	Harvest Estimate															
	Carlot Shipments	1924-26	12	13	16	161	659	310	29	1	0	0	0	0	138.2	659
	Unloads, 12 Markets	1918-22	2	7	40	201	645	305	0	0	0	0	0	0	141.8	645
16.	Cranberries		0	0	0	0	0	0	0	88	805	307	0	0	152.0	805
	Harvest Estimate															
	Carlot Shipments	1924-26	8	7	6	0	0	0	0	0	216	412	446	104	129.7	446
17.	Harvest Estimate		0	0	0	1	22	185	571	325	74	20	1	0	130.2	571
	Blackberries		0	0	0	0	6	198	701	260	34	1	0	0	143.2	701
	Raspberries															
<b>E. Vegetables</b>																
1.	White Potatoes		0	0	0	2	16	40	82	145	404	470	40	1	119.8	470
	Harvest Estimate															
	Carlot Shipments	1920-31	91	90	107	94	96	113	99	80	113	165	89	63	16.3	102
	Unloads, 12 Markets	1918-22	62	63	80	92	109	159	120	90	102	128	122	73	23.3	97
2.	White Potatoes, Carlot Shipments		12	9	11	53	148	337	358	166	61	21	14	11	101.4	349
	Early	1924-26														
	Late	1924-26	125	122	140	102	73	25	12	46	130	225	119	82	43.8	213



No.	Series	Period Covered	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average Deviation	Range
11.	Cucumbers, Carlot Shipments	1924-26	0	0	8	62	286	394	286	90	61	8	4	1	111.0	394
12.	Eggplant, Carlot Shipments	1924-26	16	20	16	91	259	325	259	46	5	36	91	36	90.5	320
13.	Cauliflower, Carlot Shipments	1924-26	169	209	208	44	18	4	2	32	66	151	143	154	72.3	207
14.	Carrots, Carlot Shipments	1924-26	164	96	102	126	155	104	12	26	56	86	161	110	37.2	152
15.	Turnips, Carlot Shipments	1924-26	125	76	52	40	18	29	28	53	125	335	229	92	68.8	317
16.	Spinach, Carlot Shipments	1924-26	145	205	245	258	68	2	1	1	4	28	101	142	82.7	257
17.	Pepper, Carlot Shipments.	1924-26	41	18	32	50	108	194	139	74	187	202	89	64	55.2	184
18.	Mixed Vegetables, Carlot Shipments	1924-26	83	88	106	127	142	101	97	116	112	86	64	79	17.2	78
<b>F. Miscellaneous</b>																
<b>Corn</b>																
1.	Harvest, Estimate	1919-30	0	0	0	0	0	1	1	18	190	340	520	131	130.1	520
2.	Marketing by Farmers	1919-30	155	134	94	66	82	87	69	79	79	79	111	164	27.4	98
3.	Receipts at Primary Markets	1920-31	150	132	111	69	69	93	80	87	86	89	91	143	22.7	81
4.	Visible Supply	1920-31	131	175	197	155	101	88	62	47	44	46	55	99	43.2	153
<b>Dressed Poultry</b>																
5.	Receipts at 5 Principal Markets	1920-24	128	80	59	47	55	60	64	62	70	95	202	279	51.4	232
		1925-31	101	71	58	52	60	69	69	77	83	104	216	239	43.4	187
6.	Cold Storage Holdings	1916-22	177	153	127	98	75	64	53	50	52	74	105	164	38.8	127
		1923-31	167	152	121	87	68	60	56	57	62	81	124	167	38.3	111
<b>Eggs</b>																
7.	Receipts at 5 Principal Markets	1919-24	54	78	142	198	197	148	101	83	69	57	36	37	47.7	162
		1925-31	69	87	146	191	177	138	100	79	70	54	42	48	41.9	149
8.	Cold Storage Holdings	1915-21	8	2	14	78	152	191	194	185	161	122	69	25	67.4	192
		1922-31	7	2	24	89	151	186	195	184	158	114	66	25	64.6	193



No.	Series	Period Covered	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average Deviation	Range
<b>Raw Sugar</b>																
19.	Receipts	1920-30	74	121	154	142	121	103	96	92	85	76	76	61	23.4	83
20.	Meltings	1924-31	79	86	119	110	101	111	114	105	103	104	85	82	11.2	40
21.	Mfrs' Stocks	1920-30	55	49	86	105	145	154	146	124	113	92	67	63	31.2	105
<b>Coffee</b>																
22.	Imports	1920-30	108	106	115	103	89	88	93	93	87	104	103	111	8.3	28
23.	Visible Supply	1920-30	95	109	109	102	93	98	103	104	97	94	98	101	4.4	16
<b>Raw Wool</b>																
24.	Stocks, Quarterly Held by Dealers	1923-29			74			122			113		91		17.5	48
	By Manufacturers	1918-29			101			100			101		98		1.0	3

II. TEXTILES

A. Production, Shipments and Stocks of Cotton and Cotton Textiles

Cotton	1.	2.	3.	4.	5.	6.	7.	8.
Harvest, Estimate	5	0	0	0	0	0	0	0
Ginnings	73	0	0	0	0	0	0	0
Marketing by Farmers	72	53	48	35	32	27	25	25
Receipts into Sight	107	60	55	47	51	37	39	40
Visible Supply	81	53	54	44	33	15	12	53
Exports	129	121	109	98	82	68	52	50
Deliveries to Textile Mills, Derived	140	124	109	94	76	58	40	43
Stocks at Public Warehouses	121	96	92	73	65	50	44	47
United States	117	101	109	83	76	64	53	54
Alabama	132	124	110	96	81	66	54	52
Georgia	141	121	100	82	67	52	41	45
	143	121	98	77	59	45	34	35
	140	120	99	77	62	50	40	45

North Carolina .....	1923-30	152	141	129	108	84	65	46	31	44	100	139	161	38.3	130
South Carolina .....	1923-30	140	131	119	102	83	68	54	43	63	111	137	148	31.4	105
Massachusetts .....	1923-30	113	119	121	122	116	109	97	85	71	68	80	98	16.8	54
Rhode Island .....	1923-30	112	116	126	127	119	109	99	84	74	66	72	96	18.2	61

9. Stocks at Mills

United States .....	1912-19	123	120	119	119	110	97	83	58	65	82	104	121	19.2	65
Alabama .....	1919-27	122	122	122	114	104	93	80	66	67	86	105	119	18.0	56
Georgia .....	1923-30	139	134	128	115	96	77	60	37	60	100	122	130	28.2	102
North Carolina .....	1923-30	136	130	126	115	98	80	64	41	55	101	122	130	26.8	95
South Carolina .....	1923-30	129	126	122	112	106	90	75	55	56	92	114	126	22.2	74
Massachusetts .....	1923-30	135	135	132	122	109	90	73	47	47	80	105	125	27.2	88
Rhode Island .....	1923-30	113	119	122	117	110	100	90	82	72	73	89	109	15.3	50
	1923-30	110	112	118	114	109	101	92	89	77	76	92	108	12.2	42

10. Consumption by Textile Mills

United States .....	1922-31	109	101	109	105	103	94	88	92	95	104	102	96	5.7	21
Alabama .....	1923-30	112	104	108	106	105	97	86	92	94	103	103	94	6.5	26
Georgia .....	1923-30	110	103	110	106	103	94	86	93	95	105	102	95	6.3	24
North Carolina .....	1923-30	116	106	110	105	103	93	85	88	95	104	104	93	7.8	31
South Carolina .....	1923-30	113	102	108	104	99	92	86	94	96	105	104	98	5.9	27
Massachusetts .....	1923-30	107	100	109	104	98	88	83	96	96	111	104	102	6.3	28
Rhode Island .....	1923-30	109	100	104	102	95	92	81	98	100	113	100	104	5.5	32

11. Cotton Manufacturing, Total Spindle Hours....

1921-31	108	99	108	104	102	97	88	94	96	104	102	97	4.8	20
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Cotton Textiles

12. Production .....	1926-31	102	98	114	97	107	100	80	89	101	99	105	108	6.2	34
13. Shipments .....	1926-31	104	105	115	92	100	93	87	99	111	100	95	98	5.9	28

14. Manufacturers' Stocks

Computed .....	1926-31	104	98	94	98	104	107	104	99	90	93	100	108	4.6	18
Derived .....	1926-31	103	98	97	100	105	110	105	98	91	90	97	104	4.7	20

15. New Orders

Computed .....	1926-31	113	104	122	84	85	79	81	109	128	113	85	95	15.0	49
Derived .....	1926-31	110	104	118	85	76	92	88	98	136	109	85	99	12.8	60

No.	Series	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average Deviation	Range
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No.	Series	Period Covered	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average Deviation	Range
16.	Unfilled Orders	1926-31	108	107	109	104	88	87	88	87	104	110	103	104	8.2	23
	Finished Cotton Goods															
17.	Billings (Production)	1921-31	98	102	118	110	102	97	84	89	93	108	97	102	7.0	34
18.	Shipments	1921-31	104	104	117	104	103	95	90	93	97	104	94	97	5.8	27
19.	Manufacturers' Stocks	1921-31														
	Computed		99	95	96	100	100	102	102	100	97	100	103	105	2.1	10
	Derived		99	97	99	105	105	107	101	96	91	96	100	105	3.8	16
20.	New Orders	1924-31	109	109	119	105	97	85	89	95	100	106	93	93	8.0	34
21.	Unfilled Orders	1924-31	115	116	118	104	93	76	85	95	106	101	100	91	10.0	42
	Fine Cotton Goods															
22.	Production, New Bedford.	1922-30	104	98	114	99	102	98	88	93	93	103	102	107	5.2	26
	Knit Underwear															
23.	Production	1924-31	94	100	113	110	104	102	86	95	96	110	101	90	6.6	27
24.	Shipments	1920-31	92	93	107	91	90	93	90	115	122	122	101	84	11.2	38
25.	Stocks at Manufacturers.	1924-31														
	Computed		89	92	98	108	114	118	120	112	96	86	80	85	12.2	40
	Derived		86	91	96	110	121	128	125	109	89	80	80	85	15.5	48
26.	Orders Received	1924-31														
	Computed		123	101	109	86	92	94	76	99	108	124	104	85	11.4	48
	Derived		128	108	109	85	90	95	77	106	103	120	99	80	12.3	51
27.	Unfilled Orders	1924-31	103	111	112	109	109	110	103	98	88	87	86	84	9.5	28
	Hosiery															
28.	Production	1923-31	102	99	108	100	100	98	86	96	100	111	105	95	4.3	25
29.	Shipments	1924-31	87	90	106	97	95	100	85	104	112	117	110	96	8.2	32
30.	Stocks at Manufacturers.	1924-31														
	Computed		98	101	101	100	105	105	106	103	98	96	94	93	3.5	13
	Derived		101	105	106	107	105	104	104	100	95	92	90	90	5.4	17
31.	New Orders	1924-31														
	Computed		93	91	102	101	102	103	82	94	112	121	110	88	8.6	39
	Derived		95	89	106	100	103	104	78	97	109	125	111	81	9.8	47
32.	Unfilled Orders	1924-31	98	97	97	99	105	108	103	98	96	102	103	92	3.7	16

<b>Working Clothes</b>															
33. Number Cut	1923-30	102	104	112	103	97	96	92	102	108	114	95	75	7.5	39
34. Net Shipments	1924-30	101	103	111	101	100	95	95	110	114	110	88	72	8.3	42
<b>Stocks at Plants</b>															
35. Computed	1923-27	102	106	106	108	103	103	99	91	91	92	96	103	5.2	17
Derived	1924-30	102	102	103	104	102	103	101	96	92	95	99	101	3.0	12
<b>Artificial Leather</b>															
36. Pyroxylin Spread	1923-31	93	99	123	106	109	112	95	98	98	98	82	86	8.4	41
<b>Shipments Billed</b>															
37. Total	1923-31	95	99	126	106	108	106	93	97	97	101	84	86	8.0	42
Light Goods	1925-31	92	104	123	110	106	98	88	90	100	108	91	90	8.5	35
Heavy Goods	1925-31	90	99	132	106	113	114	98	104	99	90	72	82	11.6	60
<b>New Orders, Derived</b>															
38. New Orders, Derived	1923-31	115	112	123	105	102	105	84	95	97	93	83	84	10.5	40
39. Unfilled Orders	1924-31	103	115	112	111	106	105	97	95	95	88	87	85	8.8	30
<b>Fresh-Water Pearl Buttons</b>															
40. Production	1922-31	96	108	111	109	105	101	79	90	97	105	105	97	7.1	32
<b>Stocks at Manufacturers</b>															
41. Stocks at Manufacturers	1922-31	101	100	100	100	101	102	99	98	99	99	100	101	0.8	4
<b>Elastic Webbing</b>															
42. Shipments	1922-31	98	103	117	107	104	98	90	96	100	109	94	85	6.6	32

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### B. Production, Shipments and Stocks of Other Textiles, Leather and Leather Products

#### Wool

<b>1. Receipts, Domestic and Foreign, Boston</b>														
1915-27	97	88	122	114	112	114	158	125	64	57	61	86	24.3	101
<b>2. Consumption</b>														
1918-23	96	96	107	104	110	101	92	99	98	106	99	94	4.5	18
1924-31	105	100	103	97	93	91	93	99	105	113	104	96	5.1	22
<b>3. Woolen, Spindle Hours Active</b>														
1921-31	97	99	100	99	102	102	96	97	103	106	102	96	2.6	10
<b>4. Worsted, Spindle Hours Active</b>														
1921-31	105	104	97	91	91	91	93	99	108	113	110	99	6.6	22
<b>5. Carpets and Rugs, Loom Hours Active</b>														
1924-31	101	103	106	105	102	97	89	96	100	103	104	96	3.8	17

No.	Series	Period Covered	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average Deviation	Range
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No.	Series	Period Covered	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average Deviation	Range
<b>Silk</b>																
6.	Imports .....	1918-29	103	90	84	86	101	92	102	110	108	107	108	109	8.0	26
7.	Stocks at Warehouses.....	1920-29	125	117	91	78	84	81	82	89	104	106	118	126	15.9	48
8.	Deliveries to American Mills .....	1920-28	109	100	109	96	95	94	94	108	104	105	98	92	5.5	17
9.	Percentage of Broad Looms Active .....	1922-31	104	105	105	100	96	94	95	95	98	101	103	103	3.6	11
10.	Percentage of Narrow Looms Active .....	1922-31	95	99	103	104	106	105	97	98	100	98	100	94	3.1	12
11.	Stocks at Manufacturing Plants .....	1921-28	114	108	103	104	95	87	85	93	98	104	107	103	7.1	29
<b>Leather</b>																
12.	Total Production, Upper..	1921-31	104	99	106	96	94	97	94	103	100	107	96	102	3.8	13
13.	Calf and Kip, Upper Production .....	1922-30	103	97	100	88	86	87	98	111	108	115	101	105	7.2	29
14.	Sole and Belting Leather, Production .....	1921-31	100	94	101	102	99	103	102	104	98	106	95	97	2.9	12
15.	Bag, Case and Strap Leather Production .....	1921-31	97	101	108	101	91	90	96	105	106	115	101	89	6.2	26
16.	Glove Leather, Sheep and Cabretta, Production..	1922-30	102	104	106	104	100	91	85	99	96	112	107	96	5.7	27
17.	Shoes, Production .....	1922-26	99	99	112	106	96	91	87	103	106	113	97	92	6.6	26
		1926-31	91	96	109	101	93	94	98	120	117	114	89	77	10.2	43
		1923-31	96	97	103	95	97	95	91	101	108	120	100	100	5.1	29
18.	Production .....		100	101	105	107	110	107	100	97	92	93	93	95	5.0	18
19.	Stocks at Dealers.....		93	97	106	104	102	102	94	109	102	110	98	84	5.8	26
<b>Gloves</b>																
20.	Production .....	1924-29	93	97	106	104	102	102	94	109	102	110	98	84	5.8	26
<b>C. Wholesale and Retail Sales of Textiles, Leather and Other Products</b>																
<b>1. Cotton Goods Sales, N. Y.</b>																
	F. R. D.		74	97	97	89	87	91	94	111	123	131	106	99	11.9	57
	Jobbers .....	1923-31														

Commission Houses	1924-28	99	100	112	88	91	101	87	97	113	103	102	107	6.3	26
2. Dry Goods Stocks at Wholesalers, 3 Federal Reserve Districts															
Philadelphia	1924-31	96	101	101	100	98	98	102	107	109	104	96	89	3.9	20
Richmond	1925-31	100	101	100	99	95	104	111	107	101	107	91	86	5.0	25
Dallas	1924-31	99	99	101	101	100	105	119	111	104	96	85	80	6.8	39

3. Sales of New England De- partment Stores, by Departments and Spe- cialty Stores	Period Covered	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average Deviation	Range
Cotton Dress Goods....	1923-25	91	95	120	115	138	176	127	72	59	67	62	77	29.4	117
	1926-30	102	98	127	119	140	153	108	66	61	76	71	79	24.8	92
Woolen Dress Goods....	1923-25	106	89	130	108	73	46	30	48	132	182	142	115	35.8	152
	1926-30	109	85	131	110	74	56	34	55	132	176	132	103	32.7	145
Silks and Velvets, Dress Goods	1923-25	90	88	127	116	131	124	80	61	85	103	95	100	16.8	70
	1926-30	110	97	132	121	125	115	77	59	78	101	91	95	17.2	73
Linens	1923-25	150	80	88	70	83	90	71	68	106	107	104	184	25.1	116
	1926-30	161	80	81	67	86	92	70	73	92	119	111	178	26.6	111
Women's Dresses	1923-25	113	83	88	104	125	154	86	62	86	109	102	88	17.8	92
	1926-30	114	80	98	125	142	149	81	58	80	100	90	83	21.7	91
Misses' Dresses	1923-25	89	83	91	107	118	138	73	61	110	124	103	103	17.2	77
	1926-30	95	78	92	109	127	134	70	61	108	116	103	108	17.4	73
Women's Coats	1923-25	121	56	96	174	128	55	30	43	72	163	163	97	41.7	144
	1926-30	132	59	87	155	119	73	35	83	84	163	129	81	33.0	128
Misses' Coats	1923-25	89	42	86	211	140	61	32	44	74	170	150	98	45.4	179
	1926-30	85	42	92	157	110	67	40	101	106	187	131	81	32.1	147
Juniors' and Girls' Ready-to-Wear	1923-25	78	56	103	156	100	94	46	46	92	136	143	151	31.4	110
	1926-30	72	56	101	136	106	99	52	55	105	137	131	150	27.7	98

No.	Series	Period Covered	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average Deviation	Range
3.	(Continued)															
	Aprons and House Dresses	1923-25	86	74	86	103	137	179	124	74	65	67	72	132	29.2	114
		1926-30	89	75	84	87	131	154	107	65	69	78	86	176	27.9	111
	Waists and Blouses	1923-25	90	88	114	143	144	136	84	65	80	85	73	98	22.8	79
	Waists, Blouses and Sweaters	1926-30	97	62	87	100	128	127	88	78	109	93	85	147	18.4	85
	Petticoats	1923-25	84	80	89	97	104	119	71	59	68	84	101	244	28.0	185
	Men's Clothing	1923-25	92	91	102	118	107	103	60	66	92	125	126	118	16.5	66
		1926-30	121	73	104	112	101	105	72	57	94	119	126	116	17.3	69
	Boys' Wear	1923-25	67	58	107	133	100	109	50	53	104	120	125	174	28.7	124
		1926-30	66	55	105	133	97	105	51	51	108	117	128	184	30.0	133
	Infants' Wear	1923-25	68	61	89	109	101	86	61	65	104	136	120	199	28.2	138
		1926-30	74	61	90	106	99	87	59	66	102	137	125	195	27.4	136
	Muslin Underwear	1923-25	89	62	77	91	115	142	94	78	66	77	89	223	29.8	161
	Silk and Muslin Underwear	1923-25	94	70	76	94	106	137	92	67	66	78	95	227	28.2	161
		1926-30	92	71	73	85	105	123	85	69	67	78	100	252	30.0	185
	Knit Underwear	1923-25	124	67	67	77	94	103	64	50	70	122	152	210	35.2	160
		1926-30	100	68	74	78	93	99	69	57	69	117	134	242	32.2	185
	Women's and Children's Hosiery	1923-25	71	62	89	103	106	114	80	71	82	101	112	210	24.2	148
		1926-30	75	69	92	98	106	108	77	70	85	103	114	202	22.2	133
	Corsets and Brassieres	1923-25	103	88	109	113	116	128	96	83	92	95	85	91	11.6	45
		1926-30	107	87	104	109	117	125	91	82	93	99	91	95	10.3	43
	Men's Furnishings	1923-25	73	59	70	79	90	118	80	65	76	94	108	288	35.7	229
		1926-30	80	63	72	80	82	107	79	66	75	90	109	297	35.5	234
	Laces and Trimmings	1923-25	112	80	98	104	109	124	65	50	79	121	126	131	21.2	81
		1926-30	114	86	105	118	112	99	51	53	82	114	119	147	21.5	96
	Ribbons	1923-25	78	72	92	113	114	118	82	61	76	95	104	196	24.1	135
		1926-30	86	75	93	109	109	113	64	55	71	95	120	208	26.7	163

No.	Series	Period Covered	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average Deviation	Range
			58	49	56	54	48	60	46	49	61	73	115	530		
	Handkerchiefs .....	1923-25	62	49	54	58	52	69	43	54	57	79	126	497	70.5	454
	Neckwear and Veilings..	1923-25	93	72	89	118	119	115	86	65	72	91	95	211	37.2	146
	Millinery .....	1926-30	64	66	138	160	108	101	55	64	148	138	92	67	32.1	105
	Domestics .....	1926-30	132	76	92	72	89	97	74	83	122	125	103	134	32.4	104
	Notions .....	1926-30	171	72	84	63	89	95	70	82	113	124	106	132	19.4	62
	Art Goods, including	1923-25	96	88	101	97	103	125	95	71	90	104	96	134	24.2	108
	Needlework .....	1926-30	99	90	101	96	107	121	92	74	89	105	95	130	11.2	63
		1923-25	106	91	96	74	76	70	62	71	104	124	134	192	10.8	56
		1926-30	110	89	94	73	75	74	57	72	97	124	139	197	26.7	130
	Women's and Children's															
	Shoes .....	1923-25	95	60	102	119	113	121	78	68	94	110	101	139	17.5	79
		1926-30	81	69	101	119	107	117	70	69	101	113	106	148	18.6	79
	Men's and Boys' Shoes..	1923-25	100	71	96	114	106	107	68	61	90	106	102	181	19.2	120
		1926-30	86	73	97	101	91	107	65	63	95	96	104	220	22.2	157
	Women's and Children's															
	Gloves .....	1923-25	97	67	103	125	89	58	23	19	58	124	142	296	48.2	277
		1926-30	86	65	100	129	85	57	28	29	74	123	139	285	46.1	258
	Leather Goods .....	1923-25	62	58	72	80	83	84	70	73	88	89	104	337	40.2	279
		1926-30	67	50	72	95	90	87	65	67	84	92	114	318	38.6	268
	Luggage .....	1923-25	72	60	65	72	108	144	104	97	106	70	74	228	31.7	168
		1926-30	77	59	64	69	91	142	96	99	94	65	79	267	34.7	208
	Furs .....	1923-25	150	142	47	40	24	13	19	148	64	193	216	145	65.6	203
		1926-30	201	107	46	34	26	9	31	181	65	148	190	162	64.8	192
	Umbrellas, Parasols and															
	Canes .....	1923-25	59	46	79	68	90	83	65	68	82	74	85	400	50.1	354
		1926-30	74	53	62	61	82	76	63	63	65	93	118	389	51.2	336
	Furniture, Beds, etc.....	1923-25	106	119	79	82	88	83	79	170	103	114	83	94	18.7	91
		1926-30	120	119	80	81	88	79	77	183	92	109	87	85	21.8	106

No.	Series	Period Covered	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average Deviation	Range	
3. (Continued)	Floor Coverings .....	1923-25	94	84	106	100	107	89	64	104	128	138	107	80	14.9	74	
		1926-30	124	78	96	96	106	82	62	62	114	119	142	111	68	19.5	90
	Draperies, Lamps, etc....	1923-25	78	71	89	91	104	92	62	62	73	118	152	137	132	23.9	80
		1926-30	93	74	91	93	107	96	61	68	68	112	153	135	117	20.7	92
	Housefurnishings .....	1923-25	80	72	91	107	108	108	74	74	74	125	118	110	132	18.1	60
		1926-30	103	73	97	100	112	97	59	69	69	106	111	108	165	17.5	106
	Silverware and Jewelry.	1923-25	72	70	72	74	77	96	60	60	66	80	100	107	326	38.8	266
		1926-30	78	66	63	78	79	100	60	74	81	106	111	304	36.8	244	
	Toilet Articles and Drugs	1923-25	90	80	94	84	78	100	83	80	91	96	95	229	21.5	151	
		1926-30	94	79	94	79	88	97	79	75	87	98	103	226	21.6	151	
	Toys and Sporting Goods	1923-25	32	38	48	55	65	78	61	54	56	61	118	533	75.2	501	
		1926-30	30	30	42	49	65	89	58	44	49	59	125	560	80.8	530	
	Musical Instruments ...	1923-25	85	118	115	79	79	59	56	82	88	115	113	211	28.7	155	
		1926-30	307	74	62	53	55	38	40	68	85	124	134	160	54.2	269	
	Musical Instruments and Radios .....	1923-25	72	66	65	56	59	64	53	50	77	83	124	432	59.2	382	
		1926-30	75	65	67	59	59	65	48	53	69	91	136	413	58.2	365	
4. Sales of Cleveland Department Stores .....	Cotton Dress Goods....	1924-25	87	106	113	114	128	185	138	75	54	64	54	81	30.8	131	
		Aprons and House Dresses .....	101	112	103	101	125	188	112	67	67	49	59	67	115	26.2	139
	Waists and Blouses....	1924-25	81	105	112	164	145	116	84	67	82	91	59	95	23.6	105	
		1926-30	97	93	81	84	86	135	99	52	55	80	97	241	29.3	189	
	Underwear, Muslin and Silk .....	1924-25	102	74	66	81	109	134	93	73	59	76	82	250	32.6	191	
		1926-30	106	66	67	81	86	101	64	47	62	146	160	215	37.9	168	
	Underwear, Knit .....	1924-25	63	76	85	108	104	107	86	80	82	109	102	198	21.3	135	
		1926-30	74	79	87	114	93	84	68	73	108	140	106	176	23.8	108	
	Hosiery, Women's and Children's .....	1924-25	62	48	48	51	56	55	53	54	61	75	108	529	72.8	481	
		1926-30	62	48	48	51	56	55	53	54	61	75	108	529	72.8	481	
	Infants' Wear .....	1924-25	62	48	48	51	56	55	53	54	61	75	108	529	72.8	481	
		1926-30	62	48	48	51	56	55	53	54	61	75	108	529	72.8	481	
	Handkerchiefs .....	1924-25	62	48	48	51	56	55	53	54	61	75	108	529	72.8	481	
		1926-30	62	48	48	51	56	55	53	54	61	75	108	529	72.8	481	

Domestics ..... 124 94 82 67 92 98 77 94 107 126 103 138 16.2 71  
 Notions ..... 94 93 100 97 105 114 95 76 93 101 95 138 9.6 62

III. AUTOMOBILES AND RELATED PRODUCTS

A. Crude Rubber and Its Products

Crude Rubber  
 1. Imports ..... 1919-24 109 121 110 110 89 99 85 86 76 102 104 109 10.8 45  
 1925-31 116 94 107 111 98 92 98 90 92 96 104 102 6.7 26  
 1925-30

2. Stocks .....  
 Total Domestic  
 Computed ..... 105 109 112 111 108 99 99 92 88 88 91 96 7.7 24  
 Derived ..... 110 108 108 109 104 97 97 90 88 89 96 104 7.2 22

Manufacturers' ..... 103 107 114 110 110 103 103 93 84 85 90 97 8.4 30  
 Dealers' ..... 120 122 111 113 102 87 90 79 94 93 97 92 11.3 43  
 Afloat ..... 104 105 101 97 94 97 93 94 99 101 101 113 4.2 20

3. Consumption  
 Total ..... 1925-30 103 99 108 111 111 109 99 108 95 92 86 78 8.4 33  
 In Tires ..... 1921-31 100 100 110 112 114 110 99 106 93 94 80 78 9.0 36

Inner Tubes  
 4. Production ..... 1921-26 99 99 106 98 100 99 95 110 105 104 94 91 4.2 19  
 1925-31 93 98 110 113 115 109 99 113 99 96 76 78 10.1 39  
 1924-31 94 79 92 102 110 116 136 132 107 85 69 76 17.3 67

5. Shipments .....  
 6. Manufacturers' Stocks  
 Computed ..... 1921-31 94 102 109 115 117 112 99 89 87 91 93 92 9.2 30  
 Derived ..... 1924-31 93 102 110 115 117 114 97 89 86 90 93 93 9.8 31

Pneumatic Casings  
 7. Production ..... 1921-31 96 101 114 113 116 112 97 104 91 91 82 83 10.0 34  
 1924-31 89 81 98 110 113 120 129 123 104 87 72 74 16.5 57

8. Shipments .....  
 9. Manufacturers' Stocks  
 Computed ..... 1924-31 96 105 110 112 114 111 100 94 88 89 92 91 8.5 26  
 Derived ..... 96 105 113 114 116 113 99 91 85 86 90 93 10.1 31

No.	Series	Period Covered	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average Deviation	Range
71	Domestics	1919-24	124	94	82	67	92	98	77	94	107	126	103	138	16.2	71
62	Notions	1925-31	94	93	100	97	105	114	95	76	93	101	95	138	9.6	62
45	Crude Rubber Imports	1919-24	109	121	110	110	89	99	85	86	76	102	104	109	10.8	45
26	Crude Rubber Stocks	1925-31	116	94	107	111	98	92	98	90	92	96	104	102	6.7	26
24	Total Domestic Computed	1925-30	105	109	112	111	108	99	99	92	88	88	91	96	7.7	24
22	Derived		110	108	108	109	104	97	97	90	88	89	96	104	7.2	22
30	Manufacturers'		103	107	114	110	110	103	103	93	84	85	90	97	8.4	30
43	Dealers'		120	122	111	113	102	87	90	79	94	93	97	92	11.3	43
20	Afloat		104	105	101	97	94	97	93	94	99	101	101	113	4.2	20
33	Consumption Total	1925-30	103	99	108	111	111	109	99	108	95	92	86	78	8.4	33
36	In Tires	1921-31	100	100	110	112	114	110	99	106	93	94	80	78	9.0	36
19	Inner Tubes Production	1921-26	99	99	106	98	100	99	95	110	105	104	94	91	4.2	19
39		1925-31	93	98	110	113	115	109	99	113	99	96	76	78	10.1	39
67		1924-31	94	79	92	102	110	116	136	132	107	85	69	76	17.3	67
30	Manufacturers' Stocks Computed	1921-31	94	102	109	115	117	112	99	89	87	91	93	92	9.2	30
31	Derived	1924-31	93	102	110	115	117	114	97	89	86	90	93	93	9.8	31
34	Pneumatic Casings Production	1921-31	96	101	114	113	116	112	97	104	91	91	82	83	10.0	34
57	Shipments	1924-31	89	81	98	110	113	120	129	123	104	87	72	74	16.5	57
26	Manufacturers' Stocks Computed	1924-31	96	105	110	112	114	111	100	94	88	89	92	91	8.5	26
31	Derived		96	105	113	114	116	113	99	91	85	86	90	93	10.1	31

No.	Series	Period Covered	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average Deviation	Range
<b>Solid and Cushion Tires</b>																
10.	Production	1921-31	96	93	103	105	109	111	99	105	94	101	89	93	5.8	22
11.	Shipments	1921-31	78	85	107	108	112	110	107	114	106	109	86	79	12.1	36
12.	Manufacturers' Stocks	1921-31	102	104	103	101	103	105	101	98	96	95	95	97	3.2	10
	Computed		103	105	104	103	102	103	101	99	95	93	94	98	3.5	12
	Derived															
<b>Fabric</b>																
13.	Consumed in Tires	1921-25	101	101	116	110	114	103	92	103	91	94	86	89	8.0	30
		1924-31	98	98	110	115	117	114	108	107	91	91	78	73	11.8	44
14.	Rubberized Automobile Fabrics, Production	1924-31	86	94	100	106	123	116	99	106	103	109	86	71	10.6	52
<b>B. Petroleum and Gasoline</b>																
<b>1. Crude Petroleum Output</b>																
		1913-22	96	90	102	101	102	100	104	103	101	101	100	100	2.3	14
		1923-30	97	93	100	99	104	100	104	103	100	103	98	98	2.4	11
<b>Gasoline</b>																
		1917-23	97	88	98	97	104	103	104	103	101	105	100	100	3.3	17
		1924-30	100	92	100	98	101	100	104	104	100	102	97	98	2.2	12
		1918-25	79	70	84	92	107	113	123	128	114	109	95	85	15.8	58
3.	Domestic Consumption	1926-30	79	79	92	100	107	109	119	120	110	103	94	88	11.3	41
<b>4. Consumption by States</b>																
	Alabama		86	84	95	100	104	102	109	112	105	108	97	95	6.9	28
	Connecticut		69	69	79	96	110	116	127	125	113	109	98	89	16.7	58
	Florida		112	109	120	104	99	98	86	88	85	91	98	108	9.0	35
	Indiana		76	72	90	99	109	107	118	122	115	111	95	86	13.7	50
	Maine		38	40	49	68	113	135	161	174	141	122	95	64	41.0	136
	Ohio		73	71	89	104	116	109	116	122	114	108	95	86	14.6	51
	Oklahoma		86	79	93	96	98	110	119	114	108	104	97	96	9.2	40
	Texas		90	83	96	96	101	105	111	111	104	105	99	99	6.2	28
	Virginia		77	72	89	100	107	106	115	121	110	110	99	94	11.5	49
	Washington		69	73	94	98	107	112	124	128	112	104	92	85	14.7	59
	Wisconsin		58	59	73	93	115	121	136	139	121	113	96	76	24.2	81

5. Retail Distribution, 41 States .....	1922-31	81	76	85	97	106	109	118	120	112	109	97	91	12.2	44
6. Refineries' Stocks															
Computed .....	1919-24	100	112	123	127	122	114	101	85	76	72	76	87	16.9	55
Derived .....	1918-24	100	109	117	120	119	114	103	88	81	79	82	90	13.5	41
Computed .....	1924-28	100	110	118	118	113	108	99	89	84	83	87	90	11.2	35
Derived .....	1924-30	104	111	115	115	111	107	99	91	85	84	85	91	10.7	31
<b>C. Sundry Automobile Materials</b>															
1. Steel Ingot Production															
Daily Average .....	1920-25	105	108	113	106	99	92	88	89	93	103	103	100	6.4	25
	1926-31	98	109	114	112	109	99	93	97	97	97	90	83	7.5	31
2. Steel Sheets, Production...	1919-24	109	109	115	107	103	92	83	103	91	109	100	81	9.0	34
	1924-28	109	104	115	106	98	98	85	97	95	104	96	93	6.3	30
3. Steel Sheets, Shipments...	1919-28	100	98	116	103	105	93	85	96	91	110	102	100	6.1	31
4. Malleable Castings															
Production .....	1923-31	105	109	120	112	108	99	91	92	88	98	85	95	8.8	35
Shipments .....		103	107	121	115	112	105	93	93	91	91	82	87	10.5	39
5. Total Hardwood															
Production .....	1925-31	100	104	104	99	98	100	95	102	104	103	100	91	2.8	13
Shipments .....		98	105	106	103	102	95	95	101	105	107	98	85	4.8	22
6. Upholstery Leather, Splits.															
Production .....	1922-30	91	101	112	114	100	98	88	95	100	107	97	95	5.8	26
Shipments .....		85	103	122	105	105	94	94	101	92	115	94	90	8.5	37
Automobile Parts and Accessories															
7. Sales to Dealers.....	1919-26	81	90	89	97	105	98	113	128	115	100	97	87	10.2	47
8. Shipments															
Replacement Parts .....	1925-31	90	85	95	104	111	100	101	109	113	112	93	87	8.3	28
Accessories .....		80	86	108	114	112	107	98	103	108	105	93	87	9.4	34
Original Equipment .....		92	105	127	127	124	108	98	101	98	87	66	69	15.2	61
Service Equipment .....		91	103	130	130	120	110	92	95	91	89	76	73	15.5	57
9. Automobile Rims, Production															
.....	1924-31	91	100	124	133	126	109	102	104	101	88	63	59	16.5	74
No.	Series	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average Deviation	Range

No.	Series	Period Covered	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average Deviation	Range
<b>D. Automobiles: Production, Sales, Registration and Exports</b>																
1.	Passenger Cars, Production	1919-25	76	85	109	115	117	118	110	108	98	102	86	76	13.2	42
		1925-31	79	100	127	137	136	117	107	108	93	84	56	57	21.9	81
2.	Trucks, Production	1915-27	80	89	113	112	113	103	99	106	109	108	89	78	10.8	35
3.	Taxicabs, Production	1925-31	112	98	113	97	69	72	62	65	62	109	152	189	29.2	127
4.	G. M. Cars Sold to Dealers	1924-31	83	104	130	140	137	117	97	109	103	79	49	51	23.4	91
5.	G. M. Cars Sold to Users	1922-31	64	80	119	152	144	122	105	109	97	92	62	54	25.2	98
6.	Automobile Financing, Retail	1928-31														
	New Cars		56	70	108	136	133	136	129	115	97	88	69	65	26.0	80
	Used Cars		70	77	107	124	126	125	118	110	91	98	78	76	18.3	56
<b>New Passenger Cars</b>																
7.	Registration, Total	1925-31	70	73	112	146	145	122	124	112	90	91	62	52	26.9	94
8.	Registration by Price Groups	1925-29														
	First Highest		64	60	106	150	139	114	110	109	104	110	73	59	23.8	91
	Second Highest		65	64	106	143	135	117	122	132	106	96	63	51	26.8	92
	Third Highest		66	68	111	148	146	127	132	112	93	87	62	48	29.3	100
	Lowest		72	73	109	143	142	122	129	113	88	94	65	49	26.4	94
9.	Registration, High Price Group	1926-31														
	Lincoln		77	67	110	151	142	108	111	97	99	110	74	54	22.0	97
	Cadillac		79	66	107	150	136	104	87	74	103	126	97	71	21.0	84
	Packard		63	66	106	145	125	105	119	118	114	114	69	54	24.5	91
10.	Registration, Medium High Price Group	1926-31														
	Nash		65	61	106	147	136	117	139	120	99	94	66	50	27.5	97
	Buick		69	62	100	132	124	100	97	158	122	110	70	56	24.3	102
	Chrysler		66	60	106	147	153	129	119	109	101	96	65	49	27.3	104
11.	Registration, Medium Price Group	1926-31														
	Hupmobile		69	72	114	149	148	122	121	111	93	86	63	50	27.7	99
	Dodge		72	76	119	155	149	122	120	103	82	82	67	51	28.2	104
	Hudson		80	83	129	155	143	117	122	102	84	74	57	54	28.0	101

12. Registration, Low Price															
Group	1926-31	75	74	114	146	150	119	123	109	93	85	60	52	26.8	98
Ford		70	85	122	150	150	124	120	104	84	87	57	47	28.3	103
Chevrolet		68	83	129	170	158	131	124	97	71	67	53	48	35.4	122
Essex															
New Trucks															
13. Total Registration	1925-30	78	78	110	130	120	102	118	116	106	111	75	56	18.8	74
14. Registration by Makes															
Mack	1926-31	73	67	106	145	145	111	120	108	88	102	73	62	22.8	83
Chevrolet		73	82	110	128	119	100	114	120	116	120	71	47	21.2	81
Exports															
15. Passenger Cars	1923-31	94	105	136	139	122	86	88	93	83	83	81	88	17.2	58
16. Trucks	1923-31	103	92	111	125	110	89	94	102	90	91	108	84	9.9	41

IV. CONSTRUCTION AND CONSTRUCTION MATERIALS

A. Construction Activity																
1. Building Permits Issued,																
20 Cities		1905-14	1915-21	1922-28	72	119	132	121	124	109	102	93	93	83	79	60
		83	91	119	133	108	106	100	102	94	94	88	82	88	82	51
		84	96	136	116	106	108	93	96	85	98	92	94	10.7	52	
Building Contracts Awarded																
2. Total Value		1911-18	74	111	122	117	116	104	107	101	103	88	85	13.3	48	
		1919-23	71	72	113	126	127	117	115	110	94	99	81	18.0	56	
		1923-31	77	76	113	119	113	115	105	101	102	104	88	12.1	43	
3. Value by Groups																
a. Residential		1915-20	70	62	102	125	127	128	109	114	102	113	77	20.4	66	
		1919-23	72	72	114	129	128	103	95	99	100	101	95	12.5	57	
		1923-31	75	78	115	126	114	105	95	97	95	109	97	11.5	51	
b. Commercial		1919-23	77	88	117	131	134	113	108	102	101	94	72	17.7	71	
		1923-31	96	91	124	108	112	113	104	98	95	90	82	10.2	42	

No.	Series	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average Deviation	Range
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No.	Series	Period Covered	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average Deviation	Range
3.	(Continued)															
	c. Public Works and Utilities	1919-23	60	58	105	127	141	149	139	118	93	92	59	59	29.8	91
		1923-31	72	64	111	135	114	124	120	109	103	104	70	74	20.0	71
	d. Educational	1919-23	54	54	108	137	121	129	152	134	95	100	55	61	30.2	98
		1923-31	57	68	110	105	118	133	134	106	104	94	86	83	18.5	77
	e. Public and Semi-Public	1919-23	63	62	82	119	119	134	153	111	114	101	78	64	25.2	91
		1923-31	67	76	108	116	111	119	106	117	115	98	80	85	15.5	52
	Total Construction															
4.	Index of Construction Volume	1924-31	71	65	68	86	102	117	121	124	127	119	115	87	20.7	62
	Federal-Aid Highways															
5.	Miles Completed	1922-31	74	63	42	51	76	123	80	98	140	164	151	140	36.2	122
	(a) Relative Deviations.		76	62	47	53	78	119	87	97	139	154	150	137	33.2	107
	(b) Absolute Deviations.															
6.	Miles Under Construction.	1922-31	94	93	94	96	100	103	106	107	108	106	100	96	4.8	15
7.	Miles Initiated, Derived	1922-31	43	48	57	82	138	169	126	113	155	133	58	78	39.0	126
	Pavements															
8.	Concrete, New Orders	1923-31	53	58	100	156	158	134	129	120	93	78	51	69	32.9	107
	<b>B. Construction Materials: Asphalt, Cement, Brick and Tile</b>															
	Petroleum Asphalt															
1.	Production	1925-31	70	68	83	98	115	122	123	125	121	122	87	66	21.3	59
2.	Producers' Stocks	1925-31	98	102	108	109	110	108	102	98	90	88	90	95	6.7	22
3.	Shipments, Derived	1925-31	67	65	78	97	114	124	128	128	128	124	85	62	24.3	66
	Portland Cement															
4.	Production	1912-24	64	61	80	102	117	116	113	120	117	119	108	85	18.5	59
		1924-30	64	58	76	96	118	121	122	127	120	118	99	79	21.2	69
5.	Shipments	1912-24	43	45	82	107	121	128	125	136	134	130	93	54	30.3	93
		1922-28	45	48	75	102	129	133	135	142	132	129	84	46	33.7	97

6. Shipments to Selected States 1924-30

Alabama	108	89	108	101	100	102	88	103	102	100	96	102	91	71	140	58
Arizona	95	82	99	100	110	107	103	110	105	111	94	84	94	84	4.4	20
California	102	99	104	104	104	96	95	97	96	107	104	92	104	92	7.7	29
Florida	26	34	56	91	133	141	158	164	152	146	69	30	30	49.0	138	15
Illinois	26	57	93	122	133	117	116	133	128	142	89	43	43	31.9	116	116
Kansas	82	93	108	109	102	102	110	118	106	105	91	74	74	10.0	44	44
Louisiana	38	44	76	103	126	124	131	148	135	135	92	46	46	33.8	110	110
Maryland	26	43	75	103	128	123	142	150	140	140	90	38	38	38.0	124	124
Missouri	41	40	77	113	127	129	131	126	132	139	96	49	49	32.8	99	99
New Jersey	39	39	71	101	125	141	141	146	137	127	83	51	51	36.2	109	109
New York	30	35	63	98	129	141	150	159	145	138	78	34	34	43.7	127	127
Ohio	36	36	64	95	123	142	144	155	147	132	85	42	42	40.4	119	119
Pennsylvania	74	82	103	111	110	109	119	121	102	106	91	72	72	13.5	49	49
Texas	114	125	126	126	123	112	98	82	68	58	70	96	96	21.2	68	68
Computed	114	126	124	120	117	107	97	85	73	64	75	98	98	18.0	62	62
Derived	116	123	126	124	118	107	95	81	69	63	77	101	101	19.2	63	63
Computed	115	122	123	119	112	104	95	84	76	69	79	102	102	16.2	54	54
Derived	99	119	137	142	133	119	104	84	68	58	62	78	78	25.4	84	84

7. Producers' Stocks, Clinker 1923-31

Common Brick	64	68	99	116	114	117	110	111	93	108	112	88	88	14.7	53	53
Computed	114	106	95	85	80	81	83	95	105	113	126	117	117	13.5	46	46
Derived	72	74	81	87	98	96	109	112	125	124	129	92	92	16.6	57	57
Burned	57	49	73	92	102	119	115	140	117	127	143	66	66	27.2	94	94
Unburned	83	92	108	122	111	115	103	99	92	86	96	93	93	9.8	39	39
Production, Derived	49	82	124	138	97	123	92	105	82	99	127	83	83	19.4	89	89
Unfilled Orders	72	78	95	108	108	109	110	122	103	113	98	84	84	12.2	50	50
New Orders, Derived	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14

No.	Series	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average Deviation	Range
14.	Face Brick Production	72	78	95	108	108	109	110	122	103	113	98	84	12.2	50

No.	Series	Period Covered	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average Deviation	Range
15.	Shipments	1923-31	48	63	102	128	134	126	120	115	106	110	88	58	23.7	86
16.	Producers' Stocks	1923-31	111	115	112	105	98	95	91	91	91	93	96	104	7.7	24
	Computed	1923-31	110	114	112	106	98	93	90	93	92	93	96	103	7.5	24
	Derived	1923-31	97	96	116	119	118	117	106	102	93	88	77	72	12.9	47
17.	Unfilled Orders	1923-31	87	61	133	133	132	124	103	109	92	102	71	50	22.9	83
18.	New Orders, Derived	1923-31														
	Floor and Wall Tile															
19.	Production	1924-31	89	90	99	99	99	103	104	107	106	111	98	95	5.2	22
20.	Shipments	1924-31	80	84	97	103	103	107	107	115	111	112	92	89	9.7	35
21.	Producers' Stocks	1924-31	101	104	107	105	103	100	99	96	94	95	95	100	3.4	13
	Computed		102	104	105	103	102	101	100	97	95	95	97	99	2.8	10
	Derived															
<b>C. Construction Materials: Lumber and Flooring</b>																
<b>Southern Yellow Pine</b>																
1.	Production	1917-23	94	93	105	102	109	100	103	105	101	100	96	88	4.5	21
	1923-31		99	95	106	103	105	97	99	103	100	104	98	91	3.5	15
2.	Shipments	1922-31	97	94	105	106	107	95	100	106	103	108	97	85	5.6	23
3.	Mill Stocks	1922-29	101	102	102	101	100	99	100	99	99	98	97	101	1.2	5
	Computed		101	102	102	101	100	100	100	100	99	98	98	100	0.9	4
	Derived		105	97	103	104	101	92	101	106	103	106	95	86	4.9	20
4.	New Orders	1922-31														
<b>Western Pine</b>																
5.	Production	1917-24	45	50	83	113	133	136	128	134	119	114	92	53	29.5	91
	1924-31		52	60	99	118	123	125	120	126	110	108	92	68	21.6	74
6.	Shipments	1921-31	84	85	102	104	109	108	107	116	107	110	88	81	10.4	35
7.	Mill Stocks	1922-31	98	95	94	96	98	100	102	102	103	104	105	104	3.2	11
	Computed		98	94	94	96	98	100	102	104	104	104	105	103	3.5	11
	Derived															
<b>Maple Flooring</b>																
8.	Production	1922-31	106	99	105	100	91	93	91	102	105	106	97	105	4.8	15

9. Shipments	1924-31	84	86	100	106	108	109	116	124	111	102	82	73	12.6	51
10. Producers' Stocks	1923-31	106	109	110	107	105	101	97	92	90	90	93	101	6.4	20
Computed		108	112	114	112	107	102	94	87	85	86	91	101	9.4	29
Derived		105	98	99	102	104	103	104	123	98	93	86	85	6.8	38
11. New Orders	1923-31														
Lumber															
12. Retail Sales															
Chicago F. R. D.	1926-31	69	61	87	109	119	116	106	114	122	129	97	72	19.1	68
Minneapolis F. R. D.	1920-31	45	38	63	89	119	148	129	138	129	142	108	52	35.5	110
Kansas City F. R. D.															
All Lumber Building															
Materials and Sup-															
plies	1926-31	85	83	105	112	110	94	98	105	110	121	102	75	10.8	46
Lumber	1926-31	79	82	104	108	108	98	106	109	110	121	103	73	11.4	48
13. Stocks at Retailers															
Chicago F. R. D. Derived	1927-31	97	100	103	103	103	103	103	103	100	96	95	96	2.8	8
Minneapolis F. R. D.	1922-31	97	103	105	109	107	104	103	103	99	93	88	89	5.7	21
Kansas City F. R. D.	1926-31	99	101	102	103	103	102	101	101	100	98	95	95	2.2	8
14. Sales at Wholesale															
Chicago F. R. D. (dol-															
lars)	1925-31	83	92	109	109	109	111	102	108	101	104	89	83	8.8	28
Chicago F. R. D. (board															
feet)	1927-31	78	87	108	111	117	117	106	115	100	99	84	76	12.5	41
Minneapolis F. R. D.,															
Derived	1922-31	109	86	79	121	103	124	121	138	97	94	68	60	19.3	78
Kansas City F. R. D.,															
Derived	1926-31	108	96	111	115	108	91	99	109	103	107	81	73	10.1	42
<b>D. Construction Materials: Heating and Plumbing Fixtures</b>															
Radiators															
1. Production	1925-31	108	109	116	104	100	92	85	101	102	114	92	77	9.0	39
2. Shipments	1925-31	75	65	60	65	81	85	104	130	138	164	133	102	28.3	104
No.	Series	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average Deviation	Range

No.	Series	Period Covered	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average Deviation	Range
3.	Producers' Stocks															
	Computed	1926-31	80	91	104	112	118	119	115	108	101	90	83	78	12.9	41
	Derived	1925-31	84	93	105	113	117	118	114	108	101	90	81	77	12.6	41
4.	New Orders	1926-31	70	62	67	69	87	89	107	132	138	157	130	91	27.4	95
Cast Iron Boilers, Square																
5.	Production	1925-31	99	105	111	102	93	94	85	105	104	133	94	73	10.2	60
6.	Shipments	1925-31	69	62	58	61	75	80	103	132	155	187	127	93	33.8	129
7.	Producers' Stocks															
	Computed	1926-31	88	94	104	110	115	116	112	107	100	90	84	79	10.8	37
	Derived	1925-31	87	94	103	110	113	116	113	108	99	90	85	82	10.5	34
Cast Iron Boilers, Round																
8.	Production	1925-31	89	102	109	111	104	94	84	97	105	132	104	69	11.2	63
9.	Shipments	1925-31	70	64	67	75	88	84	99	119	139	178	125	92	26.8	114
10.	Producers' Stocks															
	Computed	1926-31	88	96	104	107	110	113	110	107	102	92	87	85	8.8	28
	Derived	1925-31	88	95	102	108	111	113	110	106	100	92	88	84	8.6	29
Baths																
11.	Shipments	1917-24	84	85	100	94	109	107	112	116	112	100	102	82	9.4	34
		1924-30	86	85	104	109	115	115	116	118	104	98	79	71	13.5	47
12.	Producers' Stocks	1919-24	111	128	140	132	120	100	83	70	62	69	82	104	22.4	78
		1924-30	107	113	116	114	104	95	88	84	86	92	98	103	9.5	32
13.	Production, Derived	1919-24	89	98	109	88	100	92	99	106	106	105	112	99	6.1	24
		1924-30	92	95	109	106	99	100	105	112	107	108	89	79	7.8	33
14.	New Orders	1918	55	35	58	99	157	193	157	134	111	78	69	55	41.9	158
		1919	70	54	70	101	141	166	137	126	108	85	74	70	29.7	112
		1920	85	72	78	102	128	142	122	118	105	91	78	78	19.6	70
		1921	97	88	86	103	118	124	111	111	101	95	80	86	11.3	44
		1922	109	100	94	105	109	109	105	105	97	94	82	92	6.9	27
		1923	113	107	103	107	103	99	101	101	96	93	83	97	5.6	30
		1924	115	107	109	109	99	95	99	99	94	91	84	95	7.0	31
		1925	111	105	115	113	101	95	101	101	93	91	81	91	8.0	34



No.	Series	Period Covered	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average Deviation	Range
22.	(Continued)	1929	82	87	114	124	112	105	115	119	100	92	79	70	14.9	54
		1930	72	82	114	127	117	109	122	125	102	91	76	64	19.2	63
	Vitreous China, Plumbing Fixtures															
23.	Shipments	1926-31	107	103	106	100	105	108	103	108	98	102	82	78	7.0	30
24.	Producers' Stocks	1926-31	100	98	99	100	102	102	100	97	96	99	101	107	1.9	11
25.	Production, Derived	1926-31	91	99	108	102	109	108	99	101	96	109	86	91	6.2	23
26.	New Orders	1926-31	108	140	96	85	92	102	99	102	92	100	93	90	8.8	55
<b>E. Construction Materials: Miscellaneous</b>																
1.	Sand, Gravel and Stone, Car Loadings	1923	48	37	58	84	113	142	133	145	130	137	110	64	34.9	108
2.	Lime, Sales by 15 Manufacturers	1923	54	55	89	108	138	118	133	126	118	109	91	61	25.0	84
Fabricated Structural Steel																
3.	Shipments	1924-31	84	86	94	100	101	105	109	111	107	112	96	97	7.3	28
4.	New Orders	1915-21	76	78	103	99	102	99	105	97	96	107	111	125	9.0	49
		1922-28	82	92	100	104	101	103	108	106	100	101	93	108	5.3	26
Dry Roofing Felt																
5.	Production	1923-31	88	84	103	110	111	109	107	106	112	111	86	72	11.6	40
6.	Producers' Stocks	1924-31	111	113	110	100	90	87	98	97	92	99	100	103	6.2	26
7.	Shipments, Derived	1924-31	87	84	104	112	113	110	105	106	113	110	86	71	12.1	42
Roofing																
8.	Prepared, Shipments	1920-23	79	78	107	100	106	107	96	118	126	120	90	74	13.9	52
		1928-31	69	64	111	119	120	112	99	110	128	125	83	60	20.8	68
Paint, Varnish and Lacquer																
9.	Sales	1928-31														
	Total		80	84	108	124	128	121	100	105	102	100	80	67	14.8	61
	Industrial		87	91	107	115	118	110	103	108	101	102	80	78	10.7	40
	Trade		74	83	107	130	147	127	96	99	98	97	80	62	18.5	85

Furniture  
10. Plant Operations, Grand Rapids .....

1923-31 100 100 98 97 97 98 94 101 102 107 104 102 2.7 13

V. MISCELLANEOUS

A. Prices

1. Wheat, Chicago ..... 1885-1900 101 101 101 102 107 107 99 95 98 100 99 99 2.0 12  
1919-27 98 101 102 101 105 101 100 99 98 98 99 1.7 7

2. Flour, Wholesale, Minneapolis .....

1913-17 101 100 99 104 113 103 100 103 97 95 94 91 4.0 22  
1919-23 92 96 99 102 107 105 109 103 102 99 94 92 4.7 17  
1924-31 99 99 99 101 102 104 100 100 98 99 99 100 1.2 6

3. Flour, Retail, Minneapolis.

1914-23 97 99 100 103 104 103 103 98 98 96 94 2.8 10  
1924-30 99 98 98 96 98 99 103 103 102 102 101 101 2.0 7

4. Corn, Chicago .....

1901-14 91 92 95 97 103 102 104 109 109 104 102 97 5.1 18  
1915-27 89 90 93 97 102 105 110 113 106 100 98 6.0 24

5. Cattle, Chicago .....

1912-24 96 96 98 98 98 98 101 102 106 108 104 98 3.4 12  
1924-28 95 94 97 97 98 100 104 103 105 107 103 3.6 13

6. Hogs, Chicago .....

1908-24 95 98 102 103 100 100 103 105 108 102 94 3.7 16  
1924-28 98 99 101 103 100 100 103 103 108 101 93 3.1 16

7. Lard, Wholesale, N. Y. C..

1911-15 103 101 98 101 100 98 95 98 102 100 103 101 1.8 8  
1916-21 94 92 97 96 100 97 97 101 106 109 111 4.5 19  
1922-31 97 97 98 96 98 100 100 103 105 105 102 2.5 9

8. Lard, Retail, N. Y. C.....

1911-15 104 101 101 98 98 99 99 97 97 100 100 102 1.5 7  
1916-21 101 98 98 99 97 97 97 97 99 105 108 104 3.0 11  
1922-30 100 99 98 98 97 99 100 102 103 103 102 1.7 6

9. Bacon, Retail, Chicago.....

1912-16 100 96 96 99 98 100 103 102 102 103 101 100 1.8 7  
1919-26 96 95 97 100 101 101 103 104 103 102 100 98 2.3 9  
1927-30 99 98 98 98 98 100 102 101 103 103 101 99 1.7 5

10. Butter, Wholesale, N. Y. C.

1911-15 112 102 97 98 92 91 89 89 96 103 112 118 7.9 29  
1923-31 100 101 104 99 93 93 94 97 103 105 104 106 3.9 13  
1916-21 106 102 106 104 91 88 90 92 99 104 110 109 6.8 22  
1922-29 105 106 106 95 91 92 92 100 103 109 112 6.8 22

Average Deviation Range

No. Series Period Covered Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec.

No.	Series	Period Covered	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average Deviation	Range
11.	Butter, Retail, Chicago...	1911-15	110	105	101	100	93	92	91	92	96	101	107	112	6.0	21
		1916-21	109	100	103	103	91	88	92	94	100	105	108	107	5.8	21
		1922-30	103	103	105	98	94	93	93	95	99	102	106	110	4.8	17
12.	Cheese, Wholesale, Chicago	1923-31	106	102	98	94	94	95	93	100	104	105	105	104	4.3	13
13.	Bananas, Wholesale, N. Y. C.	1921-26	88	90	100	105	110	118	113	99	93	96	92	95	7.8	30
14.	Bananas, Retail, N. Y. C....	1920-30	102	103	103	101	100	100	97	95	95	100	102	102	2.2	8
15.	Oranges, Wholesale, Chicago	1920-30	81	79	85	91	96	100	105	112	121	125	118	87	13.5	46
16.	Oranges, Retail, Chicago..	1919-30	94	90	93	97	100	100	101	102	107	113	107	95	5.1	23
17.	Prunes, Retail, N. Y. C....	1921-29	99	99	99	99	99	100	101	102	102	101	99	100	1.0	3
18.	Potatoes, Wholesale, Chicago	1913-17	99	94	91	87	95	115	121	110	107	93	93	95	8.8	34
		1918-24	96	89	75	77	100	105	129	150	120	88	87	85	17.2	75
		1925-30	91	94	95	99	111	115	95	105	101	100	99	96	5.2	24
19.	Potatoes, Retail, Chicago.	1913-21	97	97	90	93	91	114	128	119	105	88	90	87	11.1	41
		1922-30	96	95	94	93	102	117	129	107	100	91	88	88	9.2	41
20.	Eggs, Wholesale, New York	1923-31	120	100	79	81	80	83	84	91	102	112	134	135	17.1	56
21.	Coffee, Wholesale, N. Y. C.	1913-17	98	102	104	104	107	110	102	97	97	93	94	92	4.8	18
		1918-31	98	102	104	102	100	101	100	99	99	101	99	95	1.7	9
22.	Cotton, New York.....	1915-21	99	91	95	100	97	104	106	101	100	102	104	101	3.0	15
		1922-28	96	96	96	99	99	102	104	101	100	101	103	103	2.3	8
23.	Anthracite Coal, Wholesale, N. Y. C. ....	1921-28	102	102	98	97	97	98	99	99	101	102	102	102	1.9	5
		1927-31	101	102	101	98	97	98	99	99	101	101	101	102	1.5	5
24.	Anthracite Coal, Retail, N. Y. C. ....	1923-31	103	103	102	97	96	97	98	99	100	101	102	102	2.2	7
		1927-31	101	102	102	99	97	98	99	99	101	101	101	101	1.4	5
25.	Bituminous Coal, Wholesale, U. S. ....	1924-30	104	102	101	96	95	95	95	100	103	104	102	103	3.2	9
26.	Bituminous Coal, Retail, U. S. ....	1924-31	103	104	102	99	96	96	97	97	99	101	102	104	2.7	8

**B. Volume of Production and Trade**

No.	Series	Period Covered	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average Deviation	Range
1.	Production, Total															
	Industrial	1925	100	103	104	102	101	98	96	98	100	103	101	94	2.3	10
	Manufacturing	1925	101	104	105	103	101	98	94	97	100	102	101	95	2.8	11
	Mineral	1925	96	95	94	89	101	103	103	105	109	109	103	96	5.2	20
2.	Cars Loaded, Revenue															
	Freight	1918-24	89	92	97	92	98	101	104	108	113	114	102	90	7.0	25
		1925-29	90	92	96	96	102	100	100	108	111	115	101	87	6.3	28
3.	Passengers Carried by the Pullman Company	1915-21	95	86	97	97	99	106	112	119	112	96	86	94	8.2	33
		1921-28	98	86	92	93	94	108	109	118	111	101	91	98	7.9	32
		1897-1912	105	95	114	100	96	94	86	89	101	106	102	115	6.9	29
		1912-24	102	95	113	102	97	93	84	89	94	106	101	120	7.7	36
		1924-29	98	93	109	101	97	94	86	88	95	107	102	130	8.2	44
5.	Magazine Advertising	1907-14	83	97	109	117	118	105	80	67	87	110	114	112	14.2	51
		1915-24	79	97	107	119	119	107	82	72	89	110	111	107	13.4	47
		1924-29	79	94	106	118	120	106	88	71	92	112	114	100	12.7	49
6.	Volume of Retail Trade, Copeland	1919-27	91	86	102	103	99	96	84	86	94	112	108	137	10.5	53
7.	Wholesale Trade, 9 Lines	1919-27	91	96	109	94	91	91	92	112	117	119	99	86	9.8	33
8.	Exports															
	Crude Foodstuffs	1921-27	76	66	70	77	96	73	72	124	168	154	131	93	29.5	102
	Manufactured Foodstuffs	1921-29	108	99	108	93	90	86	85	93	101	114	110	113	9.0	29
	Crude Materials	1921-29	114	91	90	79	66	63	59	58	110	160	168	143	32.4	110
	Semi-Manufactures	1922-29	106	93	107	106	105	103	101	96	92	96	96	98	4.8	15
	Finished Manufactures	1922-28	98	91	109	112	109	102	98	103	94	96	94	94	5.8	21
	Total	1921-27	104	91	101	97	92	90	86	91	102	120	117	111	9.0	34
9.	Imports															
	Crude Foodstuffs	1922-28	104	99	117	106	94	91	94	92	84	106	107	108	7.8	33
	Manufactured Foodstuffs	1922-29	79	104	125	130	110	105	96	89	94	104	86	77	13.1	53
	Crude Materials	1922-29	115	106	114	109	101	92	89	95	89	94	94	101	7.8	26
	Semi-Manufactures	1922-28	106	102	110	101	94	94	94	99	94	104	97	103	4.5	16
	Finished Manufactures	1924-29	94	92	104	97	94	98	97	102	103	113	105	102	4.8	21
	Total	1924-28	103	101	112	105	97	94	92	96	95	103	100	101	4.2	20

No.	Series	Period Covered	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average Deviation	Range
<b>C. Credit, Interest Rates and Speculation</b>																
1.	Bank Debits, N. Y. C.	1919-24	107	89	104	100	105	106	97	90	91	103	99	109	5.7	20
		1924-29	107	90	113	102	104	103	93	90	93	103	98	104	6.0	23
2.	Bank Debits, Outside N. Y. C.	1919-29	104	89	104	99	99	101	100	93	96	106	98	110	4.2	21
3.	Commercial Credit Advanced by the F. R. System	1921-28	88	83	86	91	96	100	110	109	113	108	104	112	9.3	30
	Bills Discounted	1922-28	120	113	108	98	88	81	73	70	80	101	126	141	18.2	71
	Bills Bought on Open Market	1922-28	99	93	93	93	94	98	98	96	102	106	111	122	6.8	29
	All Bills Combined, Derived	1922-28	99	99	99	99	99	99	99	99	101	101	102	102	1.2	3
4.	Total Loans, Reporting Member Banks	1919-27	100	99	99	99	99	99	100	100	101	101	101	102	0.8	3
	Notes in Circulation	1919-30	99	97	98	98	98	97	98	98	101	103	104	109	2.8	12
	Federal Reserve Notes	1919-27	105	99	105	94	93	91	108	111	105	96	95	98	5.7	20
	U. S. Postal Savings, New Deposits	1916-21	107	100	103	96	97	100	108	105	97	102	92	93	4.2	16
		1922-28	92	99	96	93	95	98	100	95	102	105	108	113	5.0	21
	Call Money Rates	1919	98	106	100	99	100	95	94	96	101	101	100	110	3.0	16
		1925	98	98	100	100	100	100	100	95	100	100	100	110	1.6	15
		1930	95	101	98	100	101	102	100	102	100	100	101	98	1.3	7
8.	90-day Time Money Rates	1919	102	102	105	102	100	95	94	97	100	101	100	103	2.4	11
		1925	98	100	100	100	100	97	97	100	104	104	100	100	1.3	7
		1931	98.1	98.6	99.1	99.1	99.5	100.2	100.3	101.3	101.2	101.1	100.2	100.6	0.9	3.2
	Commercial Paper Rates	1919	99.2	99.4	99.6	99.7	99.8	100.1	100.1	100.5	100.5	100.4	100.1	100.3	0.4	1.3
		1922	99.8	99.9	99.9	99.9	100.0	100.0	100.0	100.0	100.1	100.1	100.1	100.0	0.1	0.3
		1925	99.8	99.9	99.9	99.9	100.0	100.0	100.0	100.0	100.1	100.1	100.1	100.0	0.1	0.3
10.	Sales on the N. Y. Stock Exchange	1919-31	97	95	122	108	103	99	75	83	95	105	105	113	9.3	47
	Number of Shares	1919-31	114	90	108	104	102	103	87	80	91	107	102	112	8.7	34
	Par Value of Bonds	1919-31														

**D. Failures and Earnings**

**Failures**

1. Manufacturing Concerns

Number	110	95	101	92	96	93	96	98	89	105	110	115	6.8	26
Liabilities	113	96	112	101	102	96	93	95	85	102	98	107	6.2	28
	143	92	94	104	90	85	76	112	89	94	114	105	13.2	67
	122	94	119	108	98	80	90	97	83	87	95	126	12.6	46

2. Trading Concerns

Number	132	107	103	93	98	91	92	93	87	97	95	113	9.1	45
Liabilities	139	109	108	106	99	94	90	88	79	91	92	105	11.2	60
	142	116	105	102	99	88	86	80	88	90	90	114	13.2	62
	138	114	117	108	98	85	80	85	74	85	92	125	16.9	64

**Earnings**

3. Dividend Disbursements,

Total	133	93	109	115	67	82	131	96	84	119	85	85	17.9	66
	174	95	102	108	78	84	128	82	73	109	82	84	20.2	101

4. Interest Disbursements,

Total	131	46	96	131	90	108	122	49	89	133	90	115	23.3	87
	152	61	84	120	74	106	149	58	82	123	76	115	27.5	94

5. Railroads, Net Operating

Income	77	51	93	76	86	102	118	132	131	147	110	78	23.2	96
	67	71	92	77	90	98	104	130	138	146	104	82	20.4	79

6. Telegraph Companies, Net

Operating Income	84	77	110	95	101	107	84	107	116	119	95	103	10.7	42
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7. Telephone Companies, Net

Operating Income	100	104	105	103	100	98	86	93	99	109	101	101	3.9	23
	107	99	104	103	102	102	90	95	100	107	102	89	4.5	18

8. Gas and Electric Com-

panies, Net Earnings	117	108	105	102	97	94	83	82	91	99	107	116	9.1	35
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9. U. S. Steel Corporation

Net Earnings	93	90	112	102	111	111	102	101	92	99	96	90	6.6	22
	91	95	108	97	103	97	104	108	103	107	97	90	5.5	18

No. Series

Period Covered Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec.

Average Deviation

Range

No.	Series	Period Covered	1923-31												Average Deviation	Range
			Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.		
<b>E. Employment and Payrolls</b>																
<b>Factory Payrolls</b>																
1.	Flour		99	99	98	94	95	96	100	103	105	107	103	100	3.1	13
2.	Slaughtering and Meat Packing		105	102	96	95	97	100	100	98	99	100	102	105	2.4	10
3.	Cane Sugar Refining		91	98	104	102	104	105	105	105	101	100	96	93	4.0	14
4.	Cigars and Cigarettes		92	93	97	93	98	101	99	99	105	108	109	107	4.9	17
5.	Cotton Goods		103	105	104	104	101	98	92	92	96	100	101	104	3.7	13
6.	Dyeing and Finishing Textiles		101	106	106	103	100	94	91	94	98	102	102	103	3.8	15
7.	Hosiery and Knit Goods		98	103	104	102	102	99	89	94	97	105	105	104	4.0	16
8.	Woolen and Worsted Manufactures		102	103	100	97	98	98	94	98	99	103	104	105	2.8	11
9.	Silk Manufactures		97	105	105	102	101	97	92	98	98	104	100	102	3.1	13
10.	Men's Clothing		103	109	106	90	88	101	103	107	103	99	92	99	5.3	21
11.	Women's Clothing		102	116	128	107	89	77	73	91	110	116	95	96	13.2	55
12.	Leather		101	103	102	99	98	98	98	100	101	101	99	101	1.4	5
13.	Boots and Shoes		99	105	105	96	93	94	103	112	109	105	89	92	6.3	23
14.	Furniture (lumber)		96	101	102	99	96	94	90	98	103	109	108	105	4.6	19
15.	Automobile Tires and Tubes		95	103	104	107	110	104	102	102	100	95	87	91	5.3	23
16.	Petroleum Refining		97	99	99	100	101	102	101	102	100	100	99	98	1.2	5
17.	Glass		94	101	104	103	103	102	92	97	98	103	103	100	3.2	12
18.	Automobiles		81	105	112	116	115	103	95	98	97	100	89	88	8.6	35
19.	Clay Products		87	91	96	103	106	107	102	104	103	104	101	98	4.8	20
20.	Cement		85	87	93	100	105	107	106	110	107	106	100	95	6.8	25

No.	Series	Period Covered	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average Deviation	Range
21.	Lumber, Sawmills .....		90	93	97	100	104	105	101	102	105	105	102	98	3.8	15
22.	Steel Works and Rolling Mills, etc. ....		97	105	107	107	105	101	93	96	95	99	97	98	4.2	14
23.	Structural Iron Works. ....		94	97	97	98	101	103	101	105	102	103	99	101	2.6	11
24.	Steamfitting .....		91	102	102	101	101	99	91	98	101	110	103	100	3.4	19

## Part Two

## Notes on the Seasonal Indexes

## GENERAL

*Units.* All series on production, shipments, stocks, consumption, exports, new orders and unfilled orders are, unless otherwise stated, in quantity volume units, that is, in bushels, tons, cases, pieces, dozens, etc. All series on sales are, unless otherwise stated, in dollars.

*Stocks and Unfilled Orders.* All series on stocks (including cold storage holdings) and unfilled orders record them as of end of month or end of quarter. The terms 'manufacturers' and 'producers' are used interchangeably.

*Method.* Unless otherwise stated, the method of computing the seasonal index is that described in Chapter II, namely, the method of positional means of relative deviations from a two- by a twelve-month moving average. When any other method has been used it is indicated or a note is made to the effect that the index has been taken from the Business Cycles study.

*Derived Indexes.* If seasonal indexes are available for production and shipments, or shipments and stocks, or production and stocks, a seasonal index can be derived for stocks, production or shipments, provided the comparative volumes of production, shipments and stocks are given or may be assumed. Similarly, if seasonal indexes are available for shipments and new orders, or new orders and unfilled orders, or shipments and unfilled orders, a seasonal index can be derived for unfilled orders, shipments or new orders, provided the comparative volumes of shipments, new orders and unfilled orders are given or may be assumed.

## EXAMPLE SHOWING DERIVATION OF A SEASONAL INDEX FOR STOCKS FROM THE SEASONAL INDEXES FOR PRODUCTION AND SHIPMENTS

	J	F	M	A	M	J	J	A	S	O	N	D	
Portland Cement, Seasonal Index of Production, 1924-30 ..	64	58	76	96	118	121	122	127	120	118	99	79	(I)
Portland Cement, Seasonal Index of Shipments, 1922-28 ....	45	48	75	102	129	133	135	142	132	129	84	46	(II)

Production and shipments are assumed to be equal in volume. Hence the difference between the seasonal swings of the two may be obtained by direct subtraction of II from I:

Difference between Production and Shipments .....	19	10	1	-6	-11	-12	-13	-15	-12	-11	15	33	(III)
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The ratio of stocks to production or shipments is 1.5. Hence the difference between production and shipments, when interpreted as changes in stocks, must be reduced by dividing III by 1.5:

Changes in Stocks....	13	7	1	-4	-7	-8	-9	-10	-8	-7	10	22	(IV)
Changes in Stocks Cumulated, Stocks at the end of December taken as 100.....	113	120	121	117	110	102	93	83	75	68	78	100	(V)

The deviations from 100 of this derived index are 83 and -103. Centering the index about 100 we obtain:

Derived Seasonal Index for Stocks .....	115	122	123	119	112	104	95	84	76	69	79	102	(VI)
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EXAMPLE SHOWING DERIVATION OF A SEASONAL INDEX FOR NEW ORDERS FROM THE SEASONAL INDEXES FOR SHIPMENTS AND UNFILLED ORDERS

Common Brick, Seasonal Index for Unfilled Orders, end of month, 1921-31 ....	83	92	108	122	111	115	103	99	92	86	96	93	(I)
Month to Month Changes in Unfilled Orders (Net Change in Orders) .....	-10	9	16	14	-11	4	-12	-4	-7	-6	10	-3	(II)

The ratio of unfilled orders to shipments is 1.54. Hence the changes in unfilled orders in terms of shipments are equal to II multiplied by 1.54:

Common Brick, Seasonal Net Changes in Orders in Units of Shipments .....	-15	14	25	22	-17	6	-18	-6	-11	-9	15	-5	(III)
Index of Shipments, 1924-31 (deviations from 100) .....	-36	-32	-1	16	14	17	10	11	-7	8	12	-12	(IV)
Seasonal Changes in New Orders in Units of Shipments (III plus IV) .....	-51	-18	24	38	-3	23	-8	5	-18	-1	27	-17	(V)

If we assume that the average volume of new orders is equal to the average monthly volume of shipments (which is reasonable, if order cancellations are not extensive) then the changes described under V are seasonal variations in new orders. Hence

Derived Seasonal Index for New Orders....	49	82	124	138	97	123	92	105	82	99	127	88
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In this study indexes for stocks and new orders have usually been *derived* and are so designated to distinguish them from those *computed* from original data.

SOURCE AND COMPOSITION OF SERIES, METHODS USED IN THE ANALYSIS  
AND OTHER COMMENTS

## I. FOOD PRODUCTS

## A. WHEAT AND FLOUR

1. Estimate of the U. S. Department of Agriculture, *Yearbook, 1922*, p. 988.
2. U. S. Department of Agriculture, Statistical Bulletin No. 12, *Wheat and Rye Statistics*, p. 31, and *Yearbook of Agriculture, 1931*, p. 592. The series covers percentage of year's sales as reported by about 3,500 mills and elevators. Method: selected means of relatives to annual average.
3. U. S. Department of Agriculture, Statistical Bulletin No. 12, *Wheat and Rye Statistics*, p. 31. Method: arithmetic means of relatives to annual average.
4. *Survey of Current Business*, data collected by the Chicago Board of Trade. Cover 11 principal primary markets.
5. Federal Trade Commission, *Report on the Grain Trade*, Vol. VI, 1924, pp. 83-84.
6. As under (4).
7. *Bradstreet's, Yearbook of Agriculture and Survey of Current Business*. The series covers grain stored at approximately 50 interior and seaboard points of accumulation and grain in transit by canals and lakes. Index computed in the Business Cycles study.
8. *Derived* from receipts and shipments. Stocks assumed to be equal to one month's receipts.
9. U. S. Department of Agriculture, Statistical Bulletin No. 12, *Wheat and Rye Statistics*, and *Survey of Current Business*.
10. Department of Commerce, Bureau of the Census. Reports cover over 1,000 mills, representing 88 per cent of the industry in 1923 and over 91 per cent in 1925. Method: selected means of relatives to the average for each calendar year.
11. Federal Trade Commission, *Report on the Wheat Flour Milling Industry*, May 19, 1924, p. 30. Method: monthly averages for three years, adjusted for trend.
12. *Survey of Current Business*. Reports cover the same area as under (10).
13. *Survey of Current Business*. For 1918-July 1920, U. S. Grain Corporation; from July 1920 through 1923, Russell's estimates; prior to July 1920, data cover entire industry; after July 1920, Russell's figures prorated for entire industry. After 1923, data of the Bureau of the Census, covering the same area as under (10) and (12).
14. Source as in (10) and (12). Stocks include flour owned by mills, whether at mills, in elevators or in transit.
15. *Survey of Current Business*, Russell's estimates.

16. *Survey of Current Business*, U. S. Grain Corporation data prior to July 1920, Russell's estimates thereafter.
17. *Commercial and Financial Chronicle*.

## B. LIVESTOCK AND MEATS

1. U. S. Department of Agriculture, Department Circular No. 241, *Food Animals and Meat Consumption in the United States*, by J. Roberts, April 1929, Table 4, p. 7. Index, monthly ratios multiplied by 12.
2. Data of the Bureau of Agricultural Economics as reported in the *Yearbook of Agriculture* and the *Survey of Current Business*. Cover receipts at public stockyards as reported by 60 to 70 markets.
3. *Annual Report, Chicago Board of Trade*. Covers receipts at Union Stock Yards. Computed in the Business Cycles study.
4. Data collected by U. S. Department of Agriculture, Bureau of Animal Industry, and reported in the *Yearbook of Agriculture*. The series represents number of animals; computed in the Business Cycles study.
5. As under (4).
6. Data collected by the Bureau of Animal Industry and reported in the *Survey of Current Business*. Include only meat produced under Federal inspection and exclude condemned animals—about 82 per cent of total production, according to the Census of 1919. The series represents dressed weight of beef and veal.
7. Data collected by the Bureau of Agricultural Economics and reported in the *Survey of Current Business*. Include beef frozen, cured and in process of cure.
8. Data collected by the Bureau of Agricultural Economics and reported in the *Survey of Current Business*. Include only meat produced under Federal inspection. Computed from inspected slaughter, less condemned animals, plus net imports, less exports and re-exports and the change in cold storage holdings.
9. As under (1).
10. As under (2).
11. Source as under (3).
12. Source as under (4).
13. As under (6). The series represents about 91 per cent of total production in the country, according to the Census of 1919.
14. As under (7). Include frozen mutton and lamb.
15. As under (8).
16. As under (1).
17. As under (2).
18. Source and method as under (3).
19. Prior to 1908 estimates from the Department of Agriculture, Bureau of Agricultural Economics. After 1908, Federally inspected slaughter.

20. As under (6). The series represents 68 per cent of total slaughter, according to the Census of 1919.

21. As under (7).

22. As under (8).

23. As under (6). The series includes only meat produced under Federal inspection and excludes condemned animals. In 1919 covers 82 per cent of beef produced, 91 per cent of lamb, and 68 per cent of pork products.

#### C. DAIRY PRODUCTS

1. Data from *Farm Economics*, No. 55, p. 981. The farms studied were in Chenango and Madison Counties in New York State. Percentages converted into seasonal indexes.

2. *Survey of Current Business*. Covers the production of whole milk by members of the Twin City Milk Association, including most of the area within a 40 mile radius of Minneapolis and St. Paul.

3. New York State College of Agriculture, Bulletin 69, p. 1496. The data are part of an unpublished study of the New York milk supply made by the New York State College of Agriculture in cooperation with the New York Central Railroad. Cover 259 plants supplying New York City.

4. Data collected by the *Milk Reporter* and published in the Department of Agriculture Statistical Bulletin 25 and the *Survey of Current Business*. Cover receipts of milk, except cream, in the New York market which includes Greater New York, Jersey City, Hoboken, Weehawken, Newark, Paterson and intervening railroad towns. Indexes for 1894-98, 1899-1903, 1904-08, 1909-13 and 1914-20 are arithmetic averages of original data, corrected for trend.

5. *Survey of Current Business*. Data collected by the Massachusetts Department of Public Utilities. Cover receipts of milk and cream at Boston by rail.

6. *The Milk Reporter*. Daily average receipts of cream and unsweetened condensed milk in New York markets, described under (4). Indexes for 1895-1904 and 1905-09 computed in the Business Cycles study. Indexes for other years computed by standard method.

7. Bureau of Agricultural Economics Technical Bulletin No. 73, *Some Factors Affecting the Demand for Milk and Cream in the Metropolitan Area of New York*, by H. A. Ross, pp. 28-29. Covered Greater New York, Long Island, Westchester County, part of New Jersey and districts around Stamford and Bridgeport, Connecticut. Based on sales records of six of the largest distributors. Included 64 per cent of all milk shipped to the New York market in 1924. Method: monthly average of weekly indexes.

8. As under (7).

9. As under (7), pp. 23-24. Included 94 per cent of all milk sold in the New York market in 1924.

10. As under (7), pp. 23-24. Included 96 per cent of all cream sold in the New York market in 1924.

11. Data collected by the Bureau of Agricultural Economics and reported in the *Survey of Current Business*. Represent practically the entire industry.

12. Data collected by the Bureau of Agricultural Economics, reported in Department of Agriculture Statistical Bulletin 25, 1918-22; the *Survey of Current Business*, 1922-29, and *Crops and Markets*, 1929-31.

13. As under (11).

14. *Derived* from changes in stocks and production, assuming that monthly shipments equal monthly production.

15. As under (11).

16. As under (7), pp. 23, 29.

17. As under (11).

18. As under (11). Data not published after July 1931.

19. As under (14). Ratio of stocks to production 1923-29 is 1.72.

20. Data collected by the Bureau of Agricultural Economics, reported in the *Agriculture Yearbook*, 1925, p. 1083, 1917-19; the *Survey of Current Business*, 1920-31. Represent practically all factory production.

21. Data collected by the Bureau of Agricultural Economics, reported in Department of Agriculture Statistical Bulletin 25. Method: arithmetic means of original data, corrected for trend.

22. Data collected by the Bureau of Agricultural Economics, reported in the *Agriculture Yearbook*, 1920-24, and the *Survey of Current Business*, 1925 to date. Represent receipts at Boston, New York, Philadelphia, Chicago and San Francisco. Total of weekly figures with the first and last weeks of the month prorated.

23. As under (11). Represent about 98 per cent of stocks held in public and private cold storage warehouses.

24. As under (11). Data represent the disappearance of butter into trade. Computed from production (actual factory plus estimated farm output), imports and changes in cold storage holdings.

25. As under (7).

26. Data collected by the U. S. Treasury Department, Bureau of Internal Revenue, and published in the *Survey of Current Business*. Represent total raw milk consumption.

27. U. S. Treasury Department, Bureau of Internal Revenue. Data for 1920-24 from Department of Agriculture Statistical Bulletin 25. Represent total output.

28. As under (27). Based on tax-paid withdrawals of both colored and uncolored oleomargarine, consisting of all withdrawals for domestic use except for the government.

29. As under (11). Total includes cottage, pot and bakers' cheese; American represents practically all factory production from whole milk only, excluding cheese made from part skim milk (about 1 to 2 per cent); All Other *derived* from indexes for production of Total and American cheese.

30. As under (22).

31. Data collected by the Bureau of Agricultural Economics, reported in Department of Agriculture Statistical Bulletin 25, p. 134, and the *Survey of Current Business*. Total and American cover about 98 per cent of stocks held in public and private cold storage warehouses; All Other *derived* from holdings of Total and American cheese.

32. Source as under (11); composition as under (24).

33. Data computed by the Bureau of Agricultural Economics and published in the *Survey of Current Business*. Represent practically all production.

#### D. FRUITS

1. Harvest, U. S. Department of Agriculture, *Yearbook, 1922*, p. 988; estimates of usual harvest. Shipments, 1920-31, data of Bureau of Agricultural Economics, reported in the *Survey of Current Business*; 1924-26, Bureau of Railway Economics, Bulletin 27, p. 6, arithmetic mean of original data corrected for trend. Unloads, Department of Agriculture Bulletin 7, represent total at 12 principal markets: New York, Chicago, Philadelphia, Pittsburgh, St. Louis, Cincinnati, St. Paul, Minneapolis, Kansas City, Washington, Cleveland, Detroit; arithmetic means of original data corrected for trend.

2-4. As under (1).

5. Harvest, shipments, 1924-26, unloads, as under (1). Shipments, 1918-31, Department of Agriculture Statistical Bulletins Nos. 7, 23 and 30, and *Crops and Markets*, selected means of relatives to average of crop year.

6-7. As under (1).

8. Shipments, 1924-26, as under (1); 1924-31, as under (5).

9-17. As under (1).

#### E. VEGETABLES

1-4. As under (D.1).

5. Harvest, shipments, 1924-26, unloads, as under (D.1); shipments, 1918-31, as under (D.5).

6-18. As under (D.1).

#### F. MISCELLANEOUS

1. Estimate of the Department of Agriculture, *Yearbook, 1922*, p. 988.

2. Department of Agriculture, Statistical Bulletin 28, *Corn Statistics*, p. 61, and *Yearbook of Agriculture, 1931*, p. 621. The series covers

percentage of year's sales as reported by about 3,500 mills and elevators. Method: selected means of relatives to annual average.

3. *Survey of Current Business*. At primary markets, as compiled by the Chicago Board of Trade.

4. *Survey of Current Business*. Data from *Bradstreet's*, representing stock carried on Saturday nearest end of month at terminals, elevators, warehouses, docks, etc.

5. Data of Bureau of Agricultural Economics, reported in the *Survey of Current Business*. Cover receipts in Boston, New York, Philadelphia, Chicago and San Francisco. Totals of weekly figures with overlapping weeks prorated.

6. Data of Bureau of Agricultural Economics, reported in the *Survey of Current Business* and the *Yearbook of Agriculture*; cover holdings in principal warehouses.

7. Source as under (6); composition as under (5).

8. Source as under (6); absolute deviations from moving average used instead of relative deviations.

9. Data collected by the U. S. Department of Commerce, Bureau of Fisheries, and published in the *Survey of Current Business*. Fish catch represents total landings of fresh fish from vessels at Boston and Gloucester, Mass., Portland, Me., and Seattle, Wash.

10. Bureau of the Census, *Survey of Current Business*. Covers entire industry and includes seeds later destroyed at mills, but not seeds reshipped.

11. Source as under (10). Covers entire industry.

12. Source as under (10). Covers entire industry. Stocks of crude oil include holdings of crude mills and of refiners and oil in transit to refiners and consumers.

13. Source as under (10). Covers entire industry.

14. Source as under (10). Includes holdings of refineries, brokers, agents and warehousemen, and oil in transit to manufacturers of lard substitutes, oleomargarine, etc.

15. U. S. Department of Agriculture, *Yearbook, 1922*, p. 988. Estimate of usual crop harvest.

16. *Survey of Current Business*. Sales of tobacco from loose-leaf warehouses compiled by the Federal Reserve Board up to 1929, and by the Department of Agriculture since then, from reports of Kentucky, North Carolina, South Carolina and Virginia state authorities; in these states is grown about 75 per cent of the total tobacco crop. Method: absolute deviations from a two- by a twelve-month moving average.

17. Treasury Department, Bureau of Internal Revenue, *Survey of Current Business*. The series represent withdrawals from bonded warehouses on payment of taxes for domestic consumption. Small cigarettes weigh 3 pounds per 1,000 or less; figures represent 90 per cent of total.

Tobacco and snuff figures cover plug, twist, fine-cut and smoking tobacco and snuff. Large cigars weigh more than 3 pounds per 1,000; figures represent 90 per cent of total.

18. *Survey of Current Business*. Stocks of leaf tobacco held by manufacturers and dealers; compiled by Bureau of the Census up to 1929 and by the Department of Agriculture since.

19. *Weekly Statistical Sugar Trade Journal*. Covers all arrivals of sugar at the four Atlantic ports, New York, Boston, Philadelphia and Baltimore. Baltimore is included only since March 1922.

20. Source as under (19). 'Total Meltings' comprise 'meltings by refiners', all raw sugar made or being made into refined sugar, and 'receipts to trade being considered as meltings', sugar going into direct consumption without passing through a refinery.

21. Source as under (19). 'Total Stock' comprises 'importers', all raw sugar arrived in port not owned by refiners and 'refiners' stocks, all raw sugar arrived in port owned by refiners and on hand up to the actual point of melting, but not sugar purchased that is not yet in port.

22. Data collected by U. S. Department of Commerce, Bureau of Foreign and Domestic Commerce and reported in the *Survey of Current Business*.

23. Data collected by the New York Coffee and Sugar Exchange, Inc. and reported in the *Survey of Current Business*.

24. *Survey of Current Business*. Stocks of wool held by about 400 dealers and 600 manufacturers, computed by Department of Agriculture jointly with Bureau of the Census. Stocks include wool, tops and noils and are reduced to grease equivalent.

## II. TEXTILES

### A. PRODUCTION, SHIPMENTS AND STOCKS OF COTTON AND COTTON TEXTILES

1. U. S. Department of Agriculture, *Yearbook, 1922*, p. 988. Estimates of the Department of Agriculture.

2. *Yearbook of Agriculture, 1931*, p. 678. Sept. 1919, 1920, 1921, 1922, 1923, and December 1924, 1925, 1926, 1927, 1928, 1929, 1930 prorated. Method: arithmetic mean of percentages of yearly totals.

3. *Survey of Current Business*. Data collected by the New Orleans Cotton Exchange. Linters excluded. Data calculated from receipts at southern ports, overland movements north of the Ohio and Potomac Rivers, and estimates of amount taken by southern mills, less amount taken from southern ports allowing for change in stocks at interior towns.

4. *Yearbook of Agriculture, 1931*, p. 679. As reported by 7,500 cotton growers, supplemented by state weighers cooperative association and cotton dealers. Method: arithmetic mean of per cent of crop season.

5. Weekly reports of the New York Cotton Exchange. Cover supply at primary markets plus interior markets increasing in number from 41 to 57. Computed in the Business Cycles study.

6. Data collected by the U. S. Department of Commerce, Bureau of Foreign and Domestic Commerce, and reported in the *Survey of Current Business*. Linters included 1919-28, linters excluded 1929 to date.

7. *Derived* from consumption and stocks at mills, upon the assumption that consumption equals deliveries.

8. Data collected by the Bureau of the Census and reported in the *Survey of Current Business*. Domestic stocks only. Exclude linters. Total stocks (at mills and in public warehouses) represent from 85 to 90 per cent of cotton stocks in all positions. Stocks in warehouses were from 65 to 77 per cent of total stocks in the last five years. State indexes: Bureau of the Census, Bulletins on *Cotton Production*. Cover cotton in public storage and at compresses. Exclude linters. Method: arithmetic means of original data, corrected for trend.

9. Source as under (8). Exclude linters. Computed in the Business Cycles study. State indexes as under (8). Cover cotton at all consuming establishments.

10. Source as under (8). From reports of all cotton-consuming plants, textile mills for the most part. Exclude linters. State indexes as under (8).

11. Source as under (8). Represents total cotton spindle activity in hours in textile mills.

12. *Survey of Current Business*. Compiled by the Association of Cotton Textile Merchants of New York from weekly, two-weekly and monthly reports of 46 commission houses and of several additional mills through the Cotton Textile Institute, representing mills manufacturing 23 groups of textile construction. The mills reporting are believed to represent over 60 per cent of the industry and are located chiefly in the South.

13. As under (12). Computed from other series.

14. As under (12).

15. As under (12). Computed from other series.

16. As under (12).

17. *Survey of Current Business*. Compiled by the National Association of Finishers of Cotton Fabrics from reports of about three-fifths of its members, who are estimated, on the basis of cotton finishing done outside regular textile mills, to have an output of 70 per cent of all white goods, 55 per cent of dyed goods and 25 per cent of printed goods. White goods and dyed goods each account for about 40 per cent and printed goods for about 20 per cent of total billings. Goods are billed as completed, hence billings approximate production.

18. As under (17).

19. *Computed* as under (17). *Derived* from shipments and billings upon the assumption that billings equal shipments.

20. As under (17).

21. As under (17). Represent number of days.

22. *Survey of Current Business*. Data compiled by the Fine Cotton Goods Exchange. Reported by 24 identical mills in the New Bedford district, representing about 50 per cent of the fine cotton goods industry in New England and from 20 to 30 per cent throughout the United States. Series discontinued after April 1930.

23. Source as under (8). 1925-30, data compiled from reports of 150 establishments which produced 61 per cent of the total output in 1925, according to the Census of Manufactures. Since 1930 reports have been made by 130 establishments, representing, however, 68 per cent of total output in 1931.

24. Source as under (8); composition as under (23).

25. *Computed*. Source as under (8). Compiled from the reports of 70 to 83 establishments. *Derived* from shipments and production.

26. *Computed*. Source as under (8); composition as under (23). *Derived* from shipments and month-to-month changes in unfilled orders.

27. As under (23).

28. Source as under (8). Reports from 261 identical establishments which produced 44 per cent of the total output of hosiery in 1925, according to the Census of Manufactures.

29. Source as under (8); composition as under (28).

30. *Computed*. Source as under (8); composition as under (28). *Derived* from production and shipments.

31. *Computed*. Source as under (8); composition as under (28). *Derived* from shipments and unfilled orders. Shipments are considered equal in volume to new orders.

32. Source as under (8); composition as under (28).

33. Source as under (8). 1923-24, compiled from reports of 114 establishments; 1924-27, 158 establishments (excludes work shirts); 1928-30, data compiled from reports of 250 establishments; called 'overalls' (work pants and all sport clothes excluded).

34. Source as under (8); composition as under (33).

35. *Computed*. Source as under (8); composition as under (33). *Derived* from production and shipments, which are equal.

36. Source as under (8). Series compiled from the reports of 10 to 16 establishments, the number gradually increasing until 1928. It represents products manufactured by spreading nitrocellulose or pyroxylin preparation on gray goods.

37. Source as under (8); composition as under (36).

38. *Derived* from billings (shipments) and unfilled orders. Billings are equal in volume to new orders.

39. Source as under (8); composition as under (36).

40. *Survey of Current Business*. Data compiled by the National Association of Button Manufacturers. The series is compiled from reports of 17 firms representing 95.2 per cent of the machine capacity of the association members and is given in terms of per cent of capacity used.

41. As under (40). The series is given in gross of buttons on hand.

42. *Survey of Current Business*. Data compiled by the Webbing Manufacturers' Exchange, 1920-27. The series is based upon reports from 8 manufacturers and given in yardage. Shipments for 1923 represent 27 per cent of total production. November 1927-31 data are collected from 19 manufacturers and given in dollars.

B. PRODUCTION, SHIPMENTS AND STOCKS OF OTHER TEXTILES,  
LEATHER AND LEATHER PRODUCTS

1. Data compiled by the Boston Chamber of Commerce to 1925 and the Boston Grain and Flour Exchange thereafter, and published in the *Record Book of Business Statistics, Part I*, and the *Survey of Current Business*. Represent receipts at Boston railroad and steamship terminals, all classes of wool being combined without reduction to grease equivalent. Index computed in the Business Cycles study.

2. Data compiled by the Bureau of Agricultural Economics, 1918-22, and the Bureau of the Census thereafter, and published in the *Survey of Current Business*. The data cover the entire industry until September 1920 and about 80 per cent of it thereafter. The original data are reduced to grease equivalent. The reports include all grease, scoured or pulled wool entering into the process of manufacture.

3. Data compiled by the Bureau of the Census and reported in the *Survey of Current Business*. Given in terms of hours active as per cent of total normal hours of factory operation.

4. As under (3).

5. As under (3).

6. Data compiled by the Department of Commerce, Bureau of Foreign and Domestic Commerce, and published in the *Survey of Current Business*. Represent total imports of manufactured silk, including raw silk, cocoons and waste.

7. Data compiled by the Silk Association of America and reported in the *Survey of Current Business*. Represent stocks of raw silk at principal warehouses in New York City and at railroad terminals.

8. Source as under (7). Delivery figures are computed from the data on stocks and trade figures on imports through New York and Pacific ports, allowing time for Pacific imports to reach New York, and are thus assumed to represent consumption by American mills plus re-exports.

9. Data compiled by the Silk Association of America and published in the *Survey of Current Business*. Collected from manufacturers representing about 50 per cent of the industry they cover the percentages of active

hours to the total hours normally worked. They are weighted averages of each section of the silk industry for which details are given in the association's monthly reports, *i. e.*, New Jersey, Pennsylvania, New England and all other.

10. As under (9).

11. Source as under (7). Data cover from 35 to 60 per cent of the silk manufacturers and throwsters but are prorated up to 100 per cent to make the series consistent.

12. Data compiled by the Bureau of the Census and reported in the *Survey of Current Business*. The data embrace returns from packers, tanners, dealers, importers and manufacturers.

13. Data compiled by the Department of Commerce and published by the Trade Service Bureau of the Tanners' Council of America.

14. As under (12).

15. As under (13).

16. As under (13).

17. Source as under (12). Based upon reports from over 1,000 firms each month.

18. *Survey of Current Business*. Compiled by the Rubber Manufacturers' Association, from reports of from 13 to 16 manufacturers each month, who made 63 per cent of the total output of rubber heels for sale as such, in 1925 and 1927, and 79 per cent in 1929 (Census of Manufacturers). Only salable heels are included.

19. As under (18). Stocks include merchandise constituting domestic stock in factory and in transit to, or at, warehouses, branches, or in possession of dealers on consignment basis, and represent all merchandise still owned by manufacturers as domestic stocks.

20. Source as under (12). Based upon reports by 206 identical factories representing 87 per cent of the leather-glove industry, according to the Census of Manufactures of 1921.

#### C. WHOLESALE AND RETAIL SALES OF TEXTILES, LEATHER AND OTHER PRODUCTS

1. Data compiled by the Federal Reserve Bank, New York district and published in its *Monthly Review of Credit and Business Conditions*.

2. Data compiled by the Federal Reserve banks of the three districts covered and available in their *Monthly Reviews*. Indexes computed by the link relative method.

3. Data compiled by the Federal Reserve Bank of Boston. For 1923-25 these are available in the Bank's *Monthly Review* for October 1926, for 1926-30 in a mimeographed release. Based on sales of New England department stores and specialty shops and cover sales in 20 to 35 stores of each type of commodity; average monthly percentages are converted into seasonal indexes. For a few departments years that did not total to 100 per cent have been omitted.

4. Data compiled by the Federal Reserve Bank of Cleveland and published in its *Monthly Review* for September 1926. Based upon returns from 39 department stores, 12 wearing apparel stores, 1 shoe store and 1 furniture store. Data cover sales in 25 to 40 stores of each type of commodity. Average monthly percentages are converted into seasonal indexes.

### III. AUTOMOBILES AND RELATED PRODUCTS

#### A. CRUDE RUBBER AND ITS PRODUCTS

1. *Survey of Current Business*. Data collected by the Department of Commerce, Bureau of Foreign and Domestic Commerce. Cover the gross imports of crude rubber, including latex.

2. *Computed* indexes, *Survey of Current Business*. Data compiled by the Rubber Manufacturers' Association from reports of about 285 members and non-members, representing the principal manufacturers, importers and reclaimers in the field. *Derived* index from imports and consumption.

3. Same as *computed* indexes under (2).

4. Source same as *computed* indexes under (2). Based upon reports from firms representing 85, 79 and 80 per cent of total output in 1921, 1923 and 1925, according to the Census of Manufactures. Data comprise all kinds of tires, including millimeter sizes.

5. As under (4). Shipments include only tires forwarded to purchasers, not those forwarded to warehouses, branches or on a consignment basis.

6. *Computed* as under (4). Stocks represent domestic tires in factory and in transit to or at warehouses, branches or in possession of dealers on consignment, *i. e.*, all tires still owned by manufacturers as domestic stocks. *Derived* from production and shipments.

7. As under (4). Reports cover 80, 75 and 78 per cent of industry in 1921, 1923 and 1925, according to the Census of Manufactures.

8. As under (5).

9. *Computed* as under (6). *Derived* from production and shipments.

10. As under (4). Reports cover 76 per cent of total output in 1923 and 1925, according to the Census of Manufactures.

11. As under (5).

12. *Computed*. As under (6). *Derived* from production and shipments.

13. As under (4).

14. *Survey of Current Business*. Compiled by the Rubber Manufacturers' Association from reports of manufacturers of 48 and 31 per cent of total output in 1923 and 1925.

## B. PETROLEUM AND GASOLINE

1. 1913-15, *Review of Economic Statistics*. Data compiled by Elizabeth Boody who used data for crude petroleum marketed in certain regions and on that basis estimated total production. 1916-20, *Mineral Resources*. Data compiled by the U. S. Geological Survey. 1921-31, *Survey of Current Business*. Data compiled by the Department of Commerce, Bureau of Mines. Represent output transported from field of production, excluding oil consumed on the leases or oil produced but not transported from producing properties (about 1 per cent of total). Indexes computed in the Business Cycles study.

2. *Survey of Current Business*. Data compiled by the Bureau of Mines. Represent total production, both blended and unblended. Include amount run from California fields through pipe lines. Indexes computed in the Business Cycles study.

3. As under (2). Since June 1923 include withdrawals from marketers' stocks at refineries. Indexes computed in the Business Cycles study.

4. Data compiled by the American Petroleum Institute and published in their *Monthly Bulletin*. Based upon figures supplied by departments of the various state governments.

5. *Survey of Current Business*. Data compiled by the American Petroleum Institute. Cover 41 states including the District of Columbia but excluding Connecticut, Illinois, Maryland, Massachusetts, New Jersey, New York, Vermont and West Virginia. Data for California, Montana, Pennsylvania and Tennessee are available only quarterly and are divided by three to get corresponding monthly figures. Data from January 1922 to April 1925 were prorated from returns for 21 states only.

6. *Computed* as under (2). Since June 1923 include marketers' stocks. *Derived* from production and consumption.

## C. SUNDRY AUTOMOBILE MATERIALS

1. *Iron Age*. Data compiled by American Iron and Steel Institute. Daily average.

2. *Survey of Current Business*. Data compiled by the National Association of Sheet and Tin Plate Manufacturers. Estimated to represent about 63 per cent of hot mill capacity, 1919-21; 67 per cent in 1922; 70 per cent in 1923; 72 per cent in 1924; 75 per cent, 1925-26. Include black, blue, galvanized and full finished sheets. Index computed in the Business Cycles study.

3. As under (2).

4. *Survey of Current Business*. Data compiled by the Bureau of the Census. Data based upon reports from 130 identical establishments, covering most of the industry.

5. *Survey of Current Business*. Data compiled by the Hardwood Manufacturers' Institute. Computed by taking the percentage relation of

actual production and shipments of the mills reporting to their normal production and applying the result to the total normal production of all mills in the southern and Appalachian district.

6. Data collected by the Bureau of the Census and published by the Trade Service Bureau of the Tanners' Council of America.

7. *Survey of Current Business*. Data compiled by the Bureau of the Census. Based upon internal revenue taxes. Discontinued after April 1926 when the taxes were eliminated.

8. *Survey of Current Business*. Data compiled by the Motor and Accessory Manufacturers' Association. Represent the sales of accessories and parts shipped to customer by 75 members of the Association. The relative number is based on value with January 1925 as 100.

9. *Survey of Current Business*. Compiled by the Tire and Rim Association of America from reports of 46 firms representing practically the entire industry. The figures include motor-cycle, balloon, high pressure, truck and millimeter rims.

#### D. AUTOMOBILES: PRODUCTION, SALES, REGISTRATION AND EXPORTS

1. *Survey of Current Business*. Data compiled by the Bureau of the Census record 'factory sales'. Cover total membership of the National Automobile Chamber of Commerce as well as certain non-member companies reporting directly to the Bureau. Include foreign assemblies from parts made in the United States. Data, 1919-21, represent production compiled by the National Automobile Chamber of Commerce from the principal producers, covering nearly 90 per cent of the industry. Include taxicabs before 1925.

2. As under (1). Computed in the Business Cycles study.

3. As under (1).

4. *Survey of Current Business*. Data compiled by General Motors Corporation. Based upon sales of Chevrolet, Pontiac, Oldsmobile, Oakland, Buick and Cadillac cars, Chevrolet commercial cars and trucks, and cars, trucks and tractors not now manufactured, including, through April 1925, the G. M. C. trucks, which were then transferred to another manufacturing unit. Include sales to Canadian and overseas dealers.

5. As under (4).

6. *Survey of Current Business*. Data compiled by the Bureau of the Census. Based upon reports from 365 automobile-financing establishments. Method: ratio to annual averages, trends accounted for.

7. *Survey of Current Business*. Compiled by R. L. Polk & Co. Data for 1925 cover all but 3 states (with 2 per cent of country's automobile population), figures estimated; in 1926 Mississippi excluded; 1927-31 cover entire country.

8. As under (7).

9. *The Annalist*.

10. As under (9).
11. As under (9).
12. As under (9).
13. *Facts and Figures*, National Automobile Chamber of Commerce. Data compiled by R. L. Polk & Co. Composition as under (7).
14. As under (9).
15. *Survey of Current Business*. Data compiled by the Department of Commerce, Bureau of Foreign and Domestic Commerce. Cover exports of passenger cars as complete cars or chassis.
16. As under (15).

#### IV. CONSTRUCTION AND CONSTRUCTION MATERIALS

##### A. CONSTRUCTION ACTIVITY

1. 1905-21: computed by Babson Statistical Organization from records prepared by *Bradstreet's* for New York, Philadelphia, Pittsburgh, Cleveland, Cincinnati, Indianapolis, Chicago, Detroit, Memphis, Atlanta, New Orleans, St. Louis, St. Paul, Minneapolis, Kansas City, Milwaukee, Denver, Los Angeles, San Francisco and Seattle; 1921 to date: computed by F. W. Dodge Company from official figures for New York, Chicago, Philadelphia, Boston, Pittsburgh, Detroit, Los Angeles, Baltimore, San Francisco, Cleveland, Seattle, Minneapolis, Kansas City, St. Louis, Dallas, New Orleans, Indianapolis, Milwaukee, Buffalo, Atlanta. Indexes computed in the Business Cycles study.

2. 1911-18: estimates by F. W. Dodge Company, 1919-23: the District of Columbia and 27 states north and east of and including North Dakota, South Dakota, Iowa, Missouri, Tennessee and Virginia and portions of eastern Kansas and Nebraska; 1923-31: 36 states including the 27 northeastern states and 9 states in the southeastern district. The 27 states include about three-fourths of the total construction volume of the United States, according to the F. W. Dodge Company; the 36 states include about seven-eighths of the total. Seasonal index, 1911-18, computed in the Business Cycles study.

3. As under (2). (a) Includes individual dwellings, apartments, flats and tenements, barns and farm buildings, dormitories, private garages, hotels, private stables; index, 1915-20, computed in the Business Cycles study; (b) includes banks, office buildings, stores and warehouses; (c) includes waterfront developments, such as docks, piers and breakwaters, bridges, lighting systems, railroads, sewers, highways, water supply systems, and buildings associated with these developments.

4. *Survey of Current Business*. Data compiled by the Associated General Contractors of America. A simple average of structural steel bookings, common brick bookings, Portland cement shipments, loadings of sand, gravel and stone, shipments of face brick and of enamelled sanitary ware. The average for any month is given as an indication of construction volume in the following month.

5. *Survey of Current Business*. Data compiled by the U. S. Department of Agriculture, Bureau of Public Roads. Represent about 20 per cent of all roads built. Method: (a) selected means of relative deviations from 12-month moving average; (b) selected means of absolute deviations from 12-month moving average.

6. As under (5).

7. *Derived* from (5a) and (6).

8. *Survey of Current Business*. Data compiled by the Portland Cement Association, Highway Bureau. Include roads, streets and alleys.

B. CONSTRUCTION MATERIALS: ASPHALT, CEMENT, BRICK AND TILE.

1. *Survey of Current Business*. Data compiled by the U. S. Department of Commerce, Bureau of Mines. Relate only to by-products of petroleum.

2. As under (1).

3. *Derived* from (1) and (2).

4. *Survey of Current Business*. Compiled by U. S. Department of Commerce, Bureau of Mines. Indexes computed in the Business Cycles study: index 1924-30 is an average of the indexes 1924-28 and 1927-30.

5. As under (4).

6. Data compiled by the Department of Commerce, Bureau of Mines, and published in *Mineral Resources*. Indexes computed from ratios of original data to annual averages.

7. *Computed*. As under (4). Index 1911-24 is an average of the indexes 1911-18 and 1919-24. *Derived* from (4) and (5).

8. Source as under (4).

9. *Survey of Current Business*. Data compiled by the Common Brick Manufacturers' Association of America from reports of about 100 concerns representing about 30 per cent of the total output of common brick.

10. As under (9).

11. *Derived* from (9) and (10).

12. As under (9).

13. *Derived* from (9) and (12).

14. *Survey of Current Business*. Data compiled by the American Face Brick Association. Represent average per plant production of 54 reporting plants.

15. As under (14).

16. *Computed*. As under (14). *Derived* from (14) and (15).

17. As under (14).

18. *Derived* from (15) and (17).

19. *Survey of Current Business*. Compiled by the U. S. Bureau of the Census, Department of Commerce, from data reported by 39 concerns, producing about 80 per cent of total output in 1923.

20. As under (19).

21. *Computed*. As under (19). *Derived* from (19) and (20).

## C. CONSTRUCTION MATERIALS: LUMBER AND FLOORING

1. *Survey of Current Business*. Data compiled by the Southern Pine Association. 1930-31 data are not comparable with earlier data.
2. As under (1).
3. *Computed*. As under (1). *Derived* from (1) and (2).
4. As under (1).
5. *Survey of Current Business*. 1917-27: data compiled by the Lumber Manufacturers' Association from reports received from the Western Pine Manufacturers' Association, together with data from non-reporting firms, totalling in all about 64 companies. 1928-31: data compiled by the Western Pine Manufacturers' Association covering data of 65 identical mills and representing 90 per cent of the total Inland Empire region, including western Montana, Idaho, eastern Washington and eastern Oregon, exclusive of the Klamath Falls district. The two series are non-comparable, according to the *Survey of Current Business*.
6. As under (5).
7. *Computed*. Source as under (5). 1922—August 1929, data cover approximately 37 firms, no data available for September—December 1929; 1930-31, as under (5). *Derived* from (5) and (6).
8. *Survey of Current Business*. Data compiled by the Maple Flooring Manufacturers' Association, said to represent about 70 per cent of the industry, and cover birch and beech as well as maple flooring.
9. As under (8).
10. *Computed*. As under (8). *Derived* from (8) and (9).
11. As under (8).
12. Data compiled by the Federal Reserve Banks of Chicago, Minneapolis and Kansas City and published in the *Monthly Review* of these districts.
13. As under (12). Minneapolis stocks published in the *Survey of Current Business*. Chicago stocks *derived* from Chicago retail sales and wholesale sales.
14. As under (12). Minneapolis and Kansas City wholesale sales *derived* from retail sales and stocks at retailers.

## D. CONSTRUCTION MATERIALS: HEATING AND PLUMBING FIXTURES

1. *Survey of Current Business*. Compiled by the National Boiler and Radiator Manufacturers' Association from reports of 30 firms, 15 reporting on cast iron radiators. Together with boilers [see note on (5)] they represent over 90 per cent of the industry.
2. As under (1).
3. *Computed*. As under (1). *Derived* from (1) and (2).
4. As under (1).
5. As under (1). Reports from 25 firms on cast iron boilers (both round and square).

6. As under (1).
7. *Computed*. As under (1). *Derived* from (5) and (6).
8. As under (1).
9. As under (1).
10. *Computed*. As under (1). *Derived* from (8) and (9).
11. *Survey of Current Business*. 1917-22, data are totals of reports to Enameled Sanitary Ware Manufacturers' Association, estimated to represent about 98 per cent of the industry at that time; 1922-28, data compiled by the U. S. Department of Commerce, Bureau of the Census, representing complete production as reported by 22 manufacturers, including the membership of the Association; 1928 to date, compiled from reports made directly to the Census Bureau by the manufacturers, Computed in the Business Cycles study.
12. As under (11).
13. *Derived* from (11) and (12).
14. Source as under (11).
15. As under (11).
16. As under (11).
17. *Derived* from (15) and (16).
18. Source as under (11).
19. As under (11).
20. As under (11).
21. *Derived* from (19) and (20).
22. Source as under (11).
23. *Survey of Current Business*. Compiled by the U. S. Department of Commerce, Bureau of the Census, from reports of 32 manufacturers covering most of the firms making vitreous chinaware and accounting for about 85 per cent of the industry. Method: ratios to annual averages.
24. As under (23). Show amount of finished glost fixtures on hand at the end of the month.
25. *Derived* from (23) and (24).
26. As under (23). Comprise total new orders less cancellations.

#### E. CONSTRUCTION MATERIALS: MISCELLANEOUS

1. Data compiled by the Bureau of Railway Economics and given in *Seasonal Operation in the Construction Industries*, Report and Recommendation of a Committee of the President's Conference on Unemployment, (New York 1924), p. 180. Index computed from monthly percentages of yearly total.
2. Source as under (1), p. 173. Method: as under (1).
3. *Survey of Current Business*. Data compiled by the U. S. Department of Commerce, Bureau of the Census, including reports from the Central Fabricators' Association. Reports received from 232 firms which produce from 83 to 90 per cent of the total output of the country.
4. As under (1). Computed in the Business Cycles study.

5. *Survey of Current Business*. Data compiled by the Felt Manufacturers' Association. The data are said to represent about 50 per cent of the industry.

6. As under (3).

7. *Derived* from (3) and (4).

8. 1920-23; index given in *Seasonal Operation in the Construction Industries*; 1928-31, *Survey of Current Business*, data compiled by the Department of Commerce, Bureau of the Census, from the reports of 41 manufacturers whose output constitutes a large percentage of the total for the industry. Method: ratios to annual average.

9. U. S. Department of Commerce. Bureau of the Census. Method: ratios to annual average.

10. Data compiled by Seidman and Seidman and published in the *Survey of Current Business*. Based upon reports of representative manufacturers of furniture in the Grand Rapids district. Since the number of firms reporting monthly vary, the figures have been shown in number of days' production or sales, based upon current ratios or as percentages. The original data are based upon value. The New York office of Seidman and Seidman estimate their data to be based upon 80 per cent of all furniture manufactured in the Grand Rapids district.

## V. MISCELLANEOUS

### A. PRICES

1. Data compiled by the Chicago Board of Trade. 1885-1922, published in *Chicago Wheat Prices for Eighty-One Years—Daily, Monthly, and Yearly Fluctuations and their Causes*, J. E. Boyle, 1922. 1922-27, Annual Reports of the Chicago Board of Trade. Cover 1885-97, No. 2 Spring Wheat; 1897-1900, 'Regular Wheat' (Deliverable on Contracts); 1919-20, No. 2 Northern; 1921-27, No. 2 Red Northern. These represent the grades in which most of the transactions were made. Index computed in the Business Cycles study.

2. Data compiled by the Bureau of Labor Statistics and published in its Bulletins, *Wholesale Prices*. Series covers standard patents flour at Minneapolis. Index computed in Business Cycles study.

3. Data compiled by the Bureau of Labor Statistics and published in its Bulletins, *Retail Prices*. Series covers average price in Minneapolis. Index computed in Business Cycles study.

4. 1901-14, data published in the Annual Reports of the Chicago Board of Trade; 1915-27, *Corn and Corn Growing* by H. A. Wallace and E. N. Bressman (Des Moines 1923). Cover 1901-14, contract corn (spot), average of high and low prices; 1915-27, No. 2 mixed corn; 1915-17, average of high and low prices for month; 1917-27, average of daily high and low prices. Index computed in the Business Cycles study.

5. Data published in the *Yearbook of Agriculture*. Averages of high and low prices on the first of the month for good beef cattle. Index computed in the Business Cycles study.

6. Data compiled by Charles A. S. McCracken for the *Chicago Drover's Journal Yearbook* and published in *Agricultural Prices* by Henry A. Wallace (Des Moines 1920). Prices for average hogs. Index computed in the Business Cycles study.

7. As under (2). Series covers average prices in New York.

8. As under (3). Series covers average prices in New York.

9. As under (3). Covers sliced bacon in Chicago.

10. Source as under (2). Series covers creamery butter in New York, 1911-15, and firsts, 1923-31; Chicago series covers average prices, 1916-29. Indexes for New York, 1911-15, and Chicago series computed in Business Cycles study.

11. As under (3). Series covers average prices in Chicago.

12. Source as under (2). Covers whole milk cheese, Chicago.

13. As under (2). Series covers Jamaica no. 9 bananas in New York City.

14. As under (3). Series covers average prices in New York City.

15. As under (2). Series covers choice California oranges in Chicago.

16. As under (3). Covers average prices in Chicago.

17. As under (3). Covers average prices in New York City.

18. As under (2). Series covers average prices in Chicago.

19. As under (3). Series covers average prices in Chicago.

20. Source as under (2). Covers firsts in New York.

21. As under (2). Covers Rio no. 7 coffee in New York.

22. Data compiled by the New York Cotton Exchange and given in their *Market Reports*. Immediate source, U. S. Department of Agriculture, Bureau of Agricultural Economics, Division of Statistical and Historical Research. Represent an average of daily closing spot prices of middling cotton in New York. Index computed in the Business Cycles study.

23. As under (2). Series, 1920-28, covers chestnut coal at tidewater, New York harbor; 1927-31, chestnut coal prices for United States as a whole. Because of strikes, certain years were omitted in computing the first index which covers only 1921, 1923, 1924, 1925, 1927 and 1928.

24. As under (3). Series, 1920-31, covers chestnut coal in New York City; 1927-31, chestnut coal prices in about 25 cities in the United States. Because of strikes, certain years were omitted in computing the first index which covers 1923, 1924, 1927, 1928, 1929, 1930 and 1931.

25. Series published in *Coal Age* and represents averages of trade journal quotations on 14 coals, constituting nearly 90 per cent of the bituminous coal output of the United States, weighted with respect to the proportions of slack, prepared and run of mine coal normally shipped,

and with respect to the tonnage of each normally produced. Index computed in Business Cycles study.

26. As under (3). Covers average prices in the United States.

#### B. VOLUME OF PRODUCTION AND TRADE

1. *Derived* from material published in the *Federal Reserve Bulletin*, March 1932, p. 194. Indexes computed by dividing the published index adjusted for seasonal variations by the unadjusted index.

2. Data compiled weekly by the American Railway Association. Published 1918-22 by the American Railway Association; 1922-29, in the *Survey of Current Business*. Index computed in the Business Cycles study.

3. Data compiled by the Pullman Company and available 1915-20, from E. F. Carry, of the Company; 1921 on from the *Survey of Current Business*. Index computed in the Business Cycles study.

4. Data compiled by the U. S. Post Office and available: 1897-1908 in the Ledger of Receipts of the U. S. Post Office Department in Washington; 1908-29 in the *Survey of Current Business*. Cover the postal receipts for transporting all classes of mail in 50 selected cities (the largest in the country). Index computed in the Business Cycles study.

5. Data given in *Printers' Ink*. Cover the number of agate lines of advertising published in the leading magazines, both monthly and weekly. Index computed in the Business Cycles study.

6. Index of retail trade constructed by M. A. Copeland from sales of 4 mail order houses, 333 department stores, 27 grocery chains, 5 five and ten cent store chains, 5 candy chains, J. C. Penney Co., 9 drug chains, 3 cigar chains, 6 shoe chains, 4 music chains, 2 restaurant chains, and gasoline sales in 21 states (21 per cent of retail trade). Published in *Harvard Business Review*, November 1928. Index computed in the Business Cycles study.

7. Weighted average of the seasonal indexes in 9 branches of trade computed by the Federal Reserve Board: groceries, dry goods, meats, hardware, men's clothing, women's clothing, drugs, furniture, boots and shoes.

8. Data compiled by the U. S. Department of Commerce, Bureau of Foreign and Domestic Commerce and published in the *Monthly Summary of Foreign Commerce*. Indexes computed in the Business Cycles study.

9. As under (8).

#### C. CREDIT, INTEREST RATES AND SPECULATION

1. Data compiled by the Federal Reserve Board; published, 1919-21, *Federal Reserve Bulletin*; 1920-29, *Survey of Current Business*. Index computed in the Business Cycles study.

2. Source as under (1); 1919-21, covers 140 leading clearing house cities; 1920-29, about 150 cities (exact number varies from month to month). Index computed in the Business Cycles study.

3. Bills Discounted and Bills Bought, data published in *Federal Reserve Bulletin*. Indexes computed in the Business Cycles study. Combined index is a weighted average of the two indexes, with bills discounted by the Federal Reserve Bank given a double weight as compared with bills bought in the open market.

4. Data published in *Federal Reserve Bulletin*. Include loans on securities and other loans. Index computed in the Business Cycles study.

5. Total notes in circulation estimated by Y. S. Leong, see *Journal of Political Economy*, April 1930, pp. 164-93. It represents the difference between the total coin and other money in the United States (adjusted to include gold held abroad for the Federal Reserve Banks, and minor coin, and to exclude gold earmarked by the Federal Reserve Bank for foreign account) and money held in the Treasury as assets. Federal Reserve notes in circulation: data available in the *Federal Reserve Bulletin*. Both indexes computed in the Business Cycles study.

6. Data available in the *Annual Report of the Postmaster General*. Index computed in the Business Cycles study.

7. 1919: data given in the *Financial Review* and the *Commercial and Financial Chronicle*. In cases of conflict the *Review* was given a heavier weight. 1925-31: data given in the *Federal Reserve Bulletin*. Represent the average renewal rate. Moving seasonal indexes computed by F. R. Macaulay. They will be published fully in Dr. Macaulay's forthcoming study on Interest Rates and Bond Yields.

8. 1919, 1925, 1931 same as for 1919 under (7). Moving seasonal indexes computed by F. R. Macaulay.

9. 1919, 1922, 1925, same as for 1919 under (7). Represents the rate of interest on prime commercial paper, 60 to 90 day, two-name. Moving seasonal indexes computed by F. R. Macaulay.

10. Stocks: data given in the *Commercial and Financial Chronicle*, Bonds: data given in *The Annalist*.

#### D. FAILURES AND EARNINGS

1. Data given in *Dun's Review*. Index computed in the Business Cycles study.

2. As under (1). Includes general stores; groceries, meat, fish; hotels and restaurants; tobacco dealers; dry goods and carpets; shoes, rubber and trunks; furniture, crockery; hardware, stoves, tools; chemicals and drugs; paints and oils; jewelry and clocks; books and papers; hats, furs and gloves; all other (including automobile accessories, garages, bus lines). Index computed in the Business Cycles study.

3. Data given in the *Journal of Commerce*. Payments made by railroads, industrial and traction companies, and banks and trust companies in January and July. Index computed in the Business Cycles study.

4. Data given in the *Journal of Commerce* and *Standard Statistics Bulletin Base Book*. Index computed in the Business Cycles study.

5. *Survey of Current Business*. Data compiled by the Bureau of Statistics of the Interstate Commerce Commission. Operating revenue equals net revenue from railway operations minus railway tax accruals and uncollectible railway revenues. Based upon large steam roads, including switching and terminal companies, having annual operating revenues above \$1,000,000. Index computed in the Business Cycles study.

6. Data given in the *Survey of Current Business*. Combined from reports of the Western Union and the Postal Telegraph Companies to the Interstate Commerce Commission. Probably include income from business done abroad. Index computed in the Business Cycles study.

7. Data given in the *Survey of Current Business*. Represent the combined reports of the 12 largest telephone companies. Cover 83 per cent of the revenues of telephone companies with an annual revenue of over \$250,000. Index computed in the Business Cycles study.

8. *Survey of Current Business*. Data computed by the U. S. Department of Commerce, Bureau of the Census. Based upon reports from 95 public utility companies or systems operating gas, electric light, heat, power, traction and water services. Represent their gross earnings less operating expenses and taxes. Index computed in the Business Cycles study.

9. Data published in the *Commercial and Financial Chronicle*. Net earnings equal gross earnings minus bond interest and fixed charges of the subsidiary companies, all expenses incident to operations, comprising those for ordinary repairs and maintenance of plant, estimated taxes, including Federal income tax and excess profits tax when it was levied. Index computed in the Business Cycles study.

#### E. EMPLOYMENT AND PAYROLLS

1-24. Data published in the *Federal Reserve Bulletin*.

## APPENDIX II

### THE SOURCES OF SEASONAL INDEXES USED IN THE STUDY BUT NOT INCLUDED IN APPENDIX I

The order of listing follows that in Appendix I, Part I.

#### I. FOOD PRODUCTS

##### C. DAIRY PRODUCTS

1. Number of Cows Freshening 1927-28
  - 70 New York dairy farms producing Grade A milk
  - 450 New York and Pennsylvania dairy farms producing Grade B milk
  - 641 dairy farms producing all grades of milk
  - Indexes from Cornell University Agricultural Experiment Station Bulletin 518: *A Statistical Study of Milk Production for the New York Market*, by M. P. Catherwood, (1930) pp. 51, 54, 70.
2. Milk Sales, Grade A, Grade B and Total Milk 1927-28
  - Source of indexes as under (1)
3. Milk Sales by Farms
  - Chicago district 1920-22
  - Inner part of Chicago district 1918-22
  - Indexes from University of Illinois Agricultural Experiment Station Bulletin No. 269: *The Marketing of Milk in the Chicago Dairy District*, by H. A. Ross, (1925) pp. 484, 488.
4. Milk Sales by Farms, N. Y. Area, grouped according to acres of pasture per animal unit pastured 1927-28
  - Source of indexes as under (1), p. 49
5. Milk Sales by Farms, N. Y. Area, grouped according to tons of silage fed per cattle unit 1927-28
  - Source of indexes as under (1), p. 57
6. Milk Sales by Farms, N. Y. Area, grouped according to amount of milk produced per cow 1927-28
  - Source of indexes as under (1), p. 69
7. Milk Deliveries to 30 milk-shipping stations, per dairy, 1910-14, 1920-24
  - Index from Cornell University Agricultural Experiment Station Bulletin 445: *A Preliminary Survey of Milk Marketing in New York*, by L. S. Norton and Leland Spencer, (1925) p.

22. Data based upon returns from Columbia and Dutchess Counties (7 stations), Orange and Sullivan Counties (7 stations), Delaware and Otsego Counties (3 stations), Broome and Chenango Counties (4 stations), Tioga and Tompkins Counties (4 stations), Cleveland, St. Lawrence, Washington and Oneida Counties (5 stations).
8. Receipts of Milk at Cream-shipping Stations 1924  
Index from *Farm Economics*, Bulletin 44, (April 1927) p. 675. Cream-shipping stations shipped most of their supply as milk or cream to the New York market
9. Butter Factory Dairy Farms 1927-28  
Number of cows freshening  
Milk sold  
Source of indexes as under (1), p. 70  
Data cover 27 farms
10. Milk Receipts, Butter Factories, N. Y. Area, 1924  
Source of Index as under (8)  
Data cover 70 plants
11. American Cheese Dairy Farms 1927-28  
Number of cows freshening  
Milk sold  
Source of indexes as under (1), p. 70  
Data cover 70 farms
12. Milk Receipts, American Cheese Factories, N. Y. Area, 1924  
Source of index as under (8)  
Data cover 395 plants
13. Fancy Cheese Factory Dairy Farms 1927-28  
Source of index as under (1)  
Data cover 24 farms

### III. AUTOMOBILES

- C. SUNDRY AUTOMOBILE MATERIALS
1. Copper Smelted 1919-31  
Mimeographed release of the Federal Reserve Board
  2. Lead Production 1919-31  
Source of index as under (1)
  3. Plate Glass Production 1927  
From moving index computed by the Federal Reserve Board  
Source of index as under (1)
- D. AUTOMOBILES: PRODUCTION, SALES, REGISTRATION AND EXPORTS
1. Passenger Car Production 1919-31  
Source of index as under C (1)
  2. Truck Production 1919-31  
Source of index as under C (1)

## 3. Passenger Cars, Production by Make, 1925-29

Chevrolet	Buick
Reo	Packard

Indexes given in *Reducing Seasonal Unemployment*, by Edwin S. Smith (New York 1931) p. 267

## IV. CONSTRUCTION

## C. CONSTRUCTION MATERIALS: LUMBER AND FLOORING

## 1. Lumber Cut 1929

Source of index as under III, C (3)

## V. MISCELLANEOUS

## A. PRICES

## 1. Farm Prices, Sheep, 1910-29

Index given in University of California Agricultural Experiment Station Bulletin No. 473, September 1929: *Economic Aspects of the Sheep Industry*, p. 75, Table 35

## 2. Farm Prices, Lamb, 1910-29

Source of Index as under (1)

## 3. Fresh Milk, Prices Paid to Farmers, N. Y. Area, 1910-14, 1924-28

Index given in *Farm Economics*, No. 57, February 1929, p. 1045

## 4. Retail Prices, Selected Foods, 1922-29

Round steak	Cheese
Pork chops	Eggs
Milk	Oranges
Butter	Potatoes

Cabbage

Indexes given in *The Cost of Living in the United States, 1914-30* (National Industrial Conference Board, New York 1931) p. 145, Table 17

## B. VOLUME OF PRODUCTION AND TRADE

## 1. Car Loadings, by Groups of Commodities, 1928

Grains and grain products	Forest products
Livestock	Coal and coke
Ore	Miscellaneous l. c. l.

From moving seasonal indexes computed by the Federal Reserve Board and given in the *Federal Reserve Bulletin*, February 1931, p. 110

2. Sales at Wholesale of Selected Commodities 1919-27

Groceries	Men's clothing
Meats	Women's clothing
Drugs	Boots and shoes
Dry Goods	Furniture
Hardware	

Indexes computed by the Federal Reserve Board and given in the *Federal Reserve Bulletin*, December 1927, pp. 827-28

3. Retail Sales by Selected Groups of Chain Stores 1919-23

Groceries	Wearing apparel
Candy	Shoes
Cigars	Department stores
Drugs	Mail order houses
Five and ten cent stores	

Indexes computed by the Federal Reserve Board and given in the *Federal Reserve Bulletin*, January 1924, p. 17

4. Retail Sales, Dry Goods Stores 1919-25

Index given in S. S. Kuznets, *Cyclical Fluctuations* (New York 1926) p. 58

Data cover 4 chain systems having 576 stores

5. Department Store Sales, by Federal Reserve districts, 1919-27

Boston	Chicago
New York	St. Louis
Philadelphia	Minneapolis
Cleveland	Dallas
Richmond	San Francisco
Atlanta	United States

Indexes given in the *Federal Reserve Bulletin*, February 1928

6. Department Store Stocks, by Federal Reserve districts

Districts as under (5)

Source as under (3)

E. EMPLOYMENT AND PAYROLLS

1. Indexes of Factory Employment, Federal Reserve Board, 1919-29

Flour mills	Leather
Baking	Shoes
Slaughtering and meat packing	Furniture
Ice cream	Tires and tubes
Sugar	Gasoline
Cigars and cigarettes	Steel ingots
Cotton goods	Plate glass
Dyeing and finishing	Automobiles, passenger cars
Knit goods	Portland cement

Men's clothing	Brick, tile and terra cotta
Women's clothing	Lumber, sawmills, millwork
Carpets and rugs	Structural iron work
Silk	Steam fittings

Indexes computed by the Federal Reserve Board. Stable indexes given in the *Federal Reserve Bulletin*, November 1930, p. 665; moving indexes given in mimeographed releases of the Division of Research and Statistics

2. Employment, Census, 1904-25

Butter, cheese, etc.	Buttons
Fish and oyster canning	Woolen goods
Fruit and vegetable canning	Worsted goods
Cottonseed oil, cake and meal	Trunks and valises
Paving materials	

Indexes given in J. Parker Bursk, *Seasonal Variations in Employment in Manufacturing Industries* (Philadelphia 1931)

Indexes are averages of employment recorded in Censuses of Manufactures, 1904, 1909, 1914, 1919, 1921, 1923 and 1925.

## APPENDIX III

### THE LACUNÆ IN STATISTICAL DATA REVEALED BY THE STUDY

Throughout the discussion in the text, particularly in the tracing of seasonal variations from the production of raw materials to the sale of finished products, frequent references are made to the lack of continuous quantitative data which would not admit of the establishment of a typical seasonal swing or of a study of its persistence. An attempt to summarize these scattered references is made below. It is obvious that a filling out of the lacunæ indicated would not only facilitate a more exhaustive and hence more effective seasonal analysis but would also throw more light on cyclical and other changes in our economy.

1. For the diverse finished commodities turned out by our industrial system most of the monthly records available cover the basic semi-finished goods and the finished producers' goods. But for a number of consumers' goods, furniture, clothing, bread and baking, to name but a few, such data are absent. Nor are there monthly data on the farm production of some of the finished food products, for example, butter.

2. The lack of continuously homogeneous data on the volume of completed construction and some important construction materials, for example, lumber, has already been noted by many students.

3. Until recently even basic information was absent concerning the flow of finished commodities through the wholesale and retail trades, two of the most important branches of economic activity. This gap has been filled to a considerable extent by the *Census of Distribution for 1929*. But continuous monthly data in this field are still scanty. Only the sales of a few chain systems are recorded; and for wholesale trade the several series that were being collected by the Federal Reserve Board have been discontinued. Such records are urgently called for with such classification as would make possible a distinction between separate groups of commodities (rather than having them all added in total sales figures of such omnibus concerns as department and drug stores or mail order houses).

4. The most important gap, however, is in continuous data on commodity stocks held at the various stages of the industrial system. Several series are available on the visible supply of agricultural crops, and for recent years many records of stocks of semi-finished and finished goods, chiefly those in the hands of producers. But producers' stocks of manufactured goods are less important in volume than the unrecorded

stocks held by jobbers, wholesalers, retailers and some of the larger consuming units. Continuous series (monthly) on stocks of agricultural commodities held by the farmers themselves are also lacking.

5. In tracing the industrial sequence of materials and commodities in the productive system it is frequently impossible to apportion precisely among the various industries the consumption of widely used raw materials. Estimates are available for some of the more important materials, but even of these only a few are revised at sufficiently frequent intervals.

6. Because of the lack of organization in the labor market few continuous series are available on the movement of labor from one industry to the next. A quantitative study of the inter-industrial or inter-regional mobility of labor is thus impossible, unless from specially procured original data.

7. On the volume of capacity and equipment few continuous monthly data exist. For a number of industries the percentage of utilization of capacity is recorded, at least for a limited recent period. But the absolute volume of capacity, in firmly established units, is given but infrequently and changes in capacity cannot be studied as a continuous series.

8. There are all too few series dealing with regional differences and differences among smaller groups of concerns than are represented in the sample for the country as a whole.

9. For a more precise measurement of seasonal variations weekly data, and for some types of economic activity, for example, department store sales, daily data would be very valuable. Such data are available at present for only a limited number of series dealing with banking and finance, aspects of business activity which are subject to rather mild seasonal swings.

