

産業別・従業者規模別の達成精度

本調査の達成精度は、売上高の標準誤差率による。

売上高の標準誤差率（産業別・従業者規模別）

| 産業別・従業者規模別 | | | 売上高 | | | 産業別・従業者規模別 | | | 売上高 | | |
|-------------|------|--------|----------------|---------------|-------|---------------------------|------|--------|----------------|---------------|-------|
| | | | 総和(千円) | 標準誤差 | 標準誤差率 | | | | 総和(千円) | 標準誤差 | 標準誤差率 |
| 建設業 | 法人企業 | 5人以下 | 16,269,085,290 | 934,661,223 | 0.06 | 不動産業, 物品賃貸業 | 法人企業 | 5人以下 | 9,862,849,594 | 546,734,884 | 0.06 |
| | | 6～20人 | 27,143,962,832 | 1,622,409,998 | 0.06 | | | 6～20人 | 5,213,679,482 | 352,016,626 | 0.07 |
| | | 21～50人 | 14,281,191,808 | 817,622,352 | 0.06 | | | 21～50人 | 3,468,107,897 | 230,267,232 | 0.07 |
| | | 51人以上 | 15,048,918,561 | 1,121,326,932 | 0.07 | | | 51人以上 | 4,708,529,761 | 331,324,524 | 0.07 |
| | 個人企業 | | 3,410,438,855 | 276,991,704 | 0.08 | | 個人企業 | | 1,533,545,935 | 95,209,620 | 0.06 |
| 製造業 | 法人企業 | 5人以下 | 6,141,367,559 | 230,157,201 | 0.04 | 学術研究, 専門・技術 サービス業 | 法人企業 | 5人以下 | 3,087,199,880 | 199,131,642 | 0.06 |
| | | 6～20人 | 14,379,428,331 | 505,172,537 | 0.04 | | | 6～20人 | 2,902,979,656 | 157,261,052 | 0.05 |
| | | 21～50人 | 18,278,673,576 | 587,659,877 | 0.03 | | | 21～50人 | 1,915,424,964 | 81,269,508 | 0.04 |
| | | 51人以上 | 63,053,250,197 | 2,421,082,575 | 0.04 | | | 51人以上 | 2,923,184,160 | 190,849,682 | 0.07 |
| | 個人企業 | | 1,750,341,737 | 95,463,421 | 0.05 | | 個人企業 | | 2,557,843,902 | 91,874,638 | 0.04 |
| 情報通信業 | 法人企業 | 5人以下 | 1,245,663,679 | 56,859,322 | 0.05 | 宿泊業, 飲食サービス業 | 法人企業 | 5人以下 | 1,182,875,277 | 29,870,823 | 0.03 |
| | | 6～20人 | 2,110,971,111 | 89,078,693 | 0.04 | | | 6～20人 | 2,321,516,154 | 157,624,176 | 0.07 |
| | | 21～50人 | 2,119,082,810 | 121,432,218 | 0.06 | | | 21～50人 | 2,313,916,829 | 161,985,869 | 0.07 |
| | | 51人以上 | 5,292,101,808 | 232,390,745 | 0.04 | | | 51人以上 | 4,945,945,933 | 460,148,374 | 0.09 |
| | 個人企業 | | 28,949,596 | 2,372,030 | 0.08 | | 個人企業 | | 5,724,685,571 | 329,482,542 | 0.06 |
| 運輸業, 郵便業 | 法人企業 | 5人以下 | 1,225,765,258 | 61,930,037 | 0.05 | 生活関連 サービス業, 娯楽業 | 法人企業 | 5人以下 | 1,798,850,807 | 220,728,830 | 0.12 |
| | | 6～20人 | 3,286,641,283 | 95,811,629 | 0.03 | | | 6～20人 | 3,044,382,410 | 228,520,852 | 0.08 |
| | | 21～50人 | 4,696,483,618 | 180,687,978 | 0.04 | | | 21～50人 | 3,810,409,771 | 174,424,715 | 0.05 |
| | | 51人以上 | 13,011,955,743 | 630,250,028 | 0.05 | | | 51人以上 | 19,396,366,210 | 2,777,343,358 | 0.14 |
| | 個人企業 | | 168,903,800 | 13,028,834 | 0.08 | | 個人企業 | | 1,856,398,014 | 80,805,220 | 0.04 |
| 卸売業 | 法人企業 | 5人以下 | 18,535,082,711 | 1,107,596,545 | 0.06 | サービス業 (他に分類され ないもの) | 法人企業 | 5人以下 | 2,666,331,357 | 186,101,689 | 0.07 |
| | | 6～20人 | 25,926,879,448 | 1,377,389,848 | 0.05 | | | 6～20人 | 4,265,389,922 | 367,585,775 | 0.09 |
| | | 21～50人 | 23,848,700,987 | 1,766,891,956 | 0.07 | | | 21～50人 | 3,111,362,397 | 181,667,459 | 0.06 |
| | | 51人以上 | 50,507,318,766 | 2,749,783,815 | 0.05 | | | 51人以上 | 7,518,528,294 | 371,821,415 | 0.05 |
| | 個人企業 | | 1,289,069,272 | 77,763,476 | 0.06 | | 個人企業 | | 653,303,522 | 41,015,866 | 0.06 |
| 小売業 | 法人企業 | 5人以下 | 12,435,291,730 | 518,085,254 | 0.04 | | | 5人以下 | | | |
| | | 6～20人 | 14,545,918,190 | 664,460,772 | 0.05 | | | 6～20人 | | | |
| | | 21～50人 | 9,569,025,692 | 407,527,206 | 0.04 | | | 21～50人 | | | |
| | | 51人以上 | 21,084,679,386 | 1,061,042,524 | 0.05 | | | 51人以上 | | | |
| | 個人企業 | | 10,581,023,705 | 437,919,876 | 0.04 | | | | | | |

（注）売上高の標準誤差率は、次の式により算出した。

売上高の総和の推定値：
$$\hat{T}_x = \sum_{h=1}^L \frac{N_h}{n_h} \sum_{i=1}^{n_h} X_{hi}$$

売上高の標準誤差の推定値：
$$\sqrt{\hat{V}(\hat{T}_x)} = \sqrt{\sum_{h=1}^L N_h (N_h - n_h) \frac{Var(X_h)}{n_h}}$$

売上高の標準誤差率：
$$\frac{\sqrt{V(\hat{T}_x)}}{T_x}$$

h = 層（産業中分類×従業者規模）

N_h = 第 h 層の母集団の大きさ

n_h = 第 h 層の標本数

\hat{T}_x = 売上高の総和の推定値

$Var(X_h)$ = 第 h 層内分散

$\sqrt{V(\hat{T}_x)}$ = 売上高の総和の標準誤差の推定値

$\frac{\sqrt{V(\hat{T}_x)}}{\hat{T}_x}$ = 売上高の総和の標準誤差率

Achievement Accuracy by Industrial Category and by Enterprise Size

The achievement accuracy of the Survey was based on the standard error rate of sales.

Standard deviation of sales by industrial category and by enterprise size

| Industrial category / enterprise size | | | Sales | | |
|---|---------------------------|-------------------|-----------------------------|----------------|------------------------|
| | | | Summation (thousand yen) | Standard error | Standard error rate |
| Construction | Business corporations | 5persons or fewer | 16,269,085,290 | 934,661,223 | 0.06 |
| | | 6-20persons | 27,143,962,832 | 1,622,409,998 | 0.06 |
| | | 21-50persons | 14,281,191,808 | 817,622,352 | 0.06 |
| | | 51persons or more | 15,048,918,561 | 1,121,326,932 | 0.07 |
| | Individual proprietorship | | 3,410,438,855 | 276,991,704 | 0.08 |
| Manufacturing | Business corporations | 5persons or fewer | 6,141,367,559 | 230,157,201 | 0.04 |
| | | 6-20persons | 14,379,428,331 | 505,172,537 | 0.04 |
| | | 21-50persons | 18,278,673,576 | 587,659,877 | 0.03 |
| | | 51persons or more | 63,053,250,197 | 2,421,082,575 | 0.04 |
| | Individual proprietorship | | 1,750,341,737 | 95,463,421 | 0.05 |
| Information and telecommunications | Business corporations | 5persons or fewer | 1,245,663,679 | 56,859,322 | 0.05 |
| | | 6-20persons | 2,110,971,111 | 89,078,693 | 0.04 |
| | | 21-50persons | 2,119,082,810 | 121,432,218 | 0.06 |
| | | 51persons or more | 5,292,101,808 | 232,390,745 | 0.04 |
| | Individual proprietorship | | 28,949,596 | 2,372,030 | 0.08 |
| Transport and postal activities | Business corporations | 5persons or fewer | 1,225,765,258 | 61,930,037 | 0.05 |
| | | 6-20persons | 3,286,641,283 | 95,811,629 | 0.03 |
| | | 21-50persons | 4,696,483,618 | 180,687,978 | 0.04 |
| | | 51persons or more | 13,011,955,743 | 630,250,028 | 0.05 |
| | Individual proprietorship | | 168,903,800 | 13,028,834 | 0.08 |
| Wholesale | Business corporations | 5persons or fewer | 18,535,082,711 | 1,107,596,545 | 0.06 |
| | | 6-20persons | 25,926,879,448 | 1,377,389,848 | 0.05 |
| | | 21-50persons | 23,848,700,987 | 1,766,891,956 | 0.07 |
| | | 51persons or more | 50,507,318,766 | 2,749,783,815 | 0.05 |
| | Individual proprietorship | | 1,289,069,272 | 77,763,476 | 0.06 |
| Retail trade | Business corporations | 5persons or fewer | 12,435,291,730 | 518,085,254 | 0.04 |
| | | 6-20persons | 14,545,918,190 | 664,460,772 | 0.05 |
| | | 21-50persons | 9,569,025,692 | 407,527,206 | 0.04 |
| | | 51persons or more | 21,084,679,386 | 1,061,042,524 | 0.05 |
| | Individual proprietorship | | 10,581,023,705 | 437,919,876 | 0.04 |
| Real estate and goods rental and leasing | Business corporations | 5persons or fewer | 9,862,849,594 | 546,734,884 | 0.06 |
| | | 6-20persons | 5,213,679,482 | 352,016,626 | 0.07 |
| | | 21-50persons | 3,468,107,897 | 230,267,232 | 0.07 |
| | | 51persons or more | 4,708,529,761 | 331,324,524 | 0.07 |
| | Individual proprietorship | | 1,533,545,935 | 95,209,620 | 0.06 |
| Scientific research, professional and technical services | Business corporations | 5persons or fewer | 3,087,199,880 | 199,131,642 | 0.06 |
| | | 6-20persons | 2,902,979,656 | 157,261,052 | 0.05 |
| | | 21-50persons | 1,915,424,964 | 81,269,508 | 0.04 |
| | | 51persons or more | 2,923,184,160 | 190,849,682 | 0.07 |
| | Individual proprietorship | | 2,557,843,902 | 91,874,638 | 0.04 |
| Accommodations, eating and drinking services | Business corporations | 5persons or fewer | 1,182,875,277 | 29,870,823 | 0.03 |
| | | 6-20persons | 2,321,516,154 | 157,624,176 | 0.07 |
| | | 21-50persons | 2,313,916,829 | 161,985,869 | 0.07 |
| | | 51persons or more | 4,945,945,933 | 460,148,374 | 0.09 |
| | Individual proprietorship | | 5,724,685,571 | 329,482,542 | 0.06 |
| Living-related and personal services and amusement services | Business corporations | 5persons or fewer | 1,798,850,807 | 220,728,830 | 0.12 |
| | | 6-20persons | 3,044,382,410 | 228,520,852 | 0.08 |
| | | 21-50persons | 3,810,409,771 | 174,424,715 | 0.05 |
| | | 51persons or more | 19,396,366,210 | 2,777,343,358 | 0.14 |
| | Individual proprietorship | | 1,856,398,014 | 80,805,220 | 0.04 |
| Service, N.E.C. | Business corporations | 5persons or fewer | 2,666,331,357 | 186,101,689 | 0.07 |
| | | 6-20persons | 4,265,389,922 | 367,585,775 | 0.09 |
| | | 21-50persons | 3,111,362,397 | 181,667,459 | 0.06 |
| | | 51persons or more | 7,518,528,294 | 371,821,415 | 0.05 |
| | Individual proprietorship | | 653,303,522 | 41,015,866 | 0.06 |

Note: The standard error rate of sales was calculated using the following formula:

$$\text{Estimate of summation of sales : } \hat{T}_x = \sum_{h=1}^L \frac{N_h}{n_h} \sum_{i=1}^{n_h} X_{hi}$$

$$\text{Estimate of standard error of sales : } \sqrt{\hat{V}(\hat{T}_x)} = \sqrt{\sum_{h=1}^L N_h (N_h - n_h) \frac{\text{Var}(X_h)}{n_h}}$$

$$\text{Standard error ratio of sales : } \frac{\sqrt{V(\hat{T}_x)}}{\hat{T}_x}$$

h = stratum (industrial category and size categories)

N_h = number of populations for the stratum h

n_h = number of samples for the stratum h

\hat{T}_x = estimate of summation of sales

$\text{Var}(X_h)$ = variance in the stratum h

$\sqrt{V(\hat{T}_x)}$ = estimate of standard error of summation of sales

$\frac{\sqrt{V(\hat{T}_x)}}{\hat{T}_x}$ = standard error ratio of summation of sales