TABLE 1

Industrial Development of the Automobile and Motorcycle Industries in Indonesia (1986-1995)

| Sector | Number of establishments | | | Share of total manufacturing employment (%) | | | Share of total manufacturing gross output (%) | | |
|---|---|---|---|---|---|---|---|---|---|
| | 1986 | 1990 | 1995 | 1986 | 1990 | 1995 | 1986 | 1990 | 1995 |
| Auto-mobile | 64 | 196 | 259 | 0.84 | 1.43 | 1.47 | 2.85 | 4.45 | 4.38 |
| Motor-cycle | 20 | 33 | 51 | 0.42 | 0.42 | 0.45 | 1.71 | 1.73 | 3.99 |
| Total | 84 | 229 | 310 | 1.26 | 1.86 | 1.92 | 4.56 | 6.18 | 8.37 |

SOURCE: Central Bureau of Statistics, *Industrial Statistics*, various issues.

TABLE 2 (a)
Shares of Assemblers and Suppliers in the Automobile Industry (%)

| | Automobile Assemblers | | Automobile body suppliers | | Automobile parts suppliers | |
|---|---|---|---|---|---|---|
| | 1990 | 1995 | 1990 | 1995 | 1990 | 1995 |
| Number of establishment | 5.1 | 5.4 | 60.2 | 47.9 | 34.7 | 46.7 |
| Gross Output | 57.7 | 53.6 | 10.8 | 5.0 | 31.5 | 41.4 |
| Employment | 20.1 | 23.2 | 49.4 | 29.1 | 30.5 | 47.7 |

SOURCE: See table 1.
NOTE: Automobile Assemblers - ISIC 38431, Automobile body suppliers - ISIC 38432, Automobile parts suppliers - ISIC 38433.

TABLE 2 (b)
Shares of Assemblers and Suppliers in the Motorcycle Industry (%).

| | Motorcycle assemblers | | Motorcycle parts suppliers | |
|---|---|---|---|---|
| | 1990 | 1995 | 1990 | 1995 |
| Number of establishments | 15.2 | 7.8 | 84.8 | 92.2 |
| Gross output | 61.5 | 45.7 | 38.5 | 54.3 |
| Employment | 36.8 | 36.5 | 63.2 | 63.5 |

SOURCE: See table 1.
NOTE: Motorcycle assemblers - ISIC 38441, Motorcycle parts suppliers - ISIC 38442.

TABLE 3(a)

Economic Performance in the Automobile Industries between 1990 and 1995 (simple average)

| | Automobile assemblers | | | Automobile body suppliers | | | Automobile parts suppliers | | |
|---|---|---|---|---|---|---|---|---|---|
| | 1990 | 1995 | T-test | 1990 | 1995 | T-test | 1990 | 1995 | T-test |
| Number of establishments | 8 | 11 | | 101 | 110 | | 56 | 97 | |
| Employment | 917 | 1,187 | | 166 | 150 | | 156 | 240 | * |
| Gross output per employee (000.Rp) | 133,702 | 77,979 | | 13,417 | 11,470 | | 44,849 | 42,118 | |
| Value added per employee (000.Rp) | 45,871 | 29,791 | | 5,173 | 4,015 | * | 14,942 | 11,123 | |
| Total factor productivity | 2.4 | 1.9 | | 2.5 | 2.4 | * | 2.3 | 2.3 | |
| Share of nonproduction workers (%) | 35.9 | 30.1 | | 16.0 | 18.6 | | 21.6 | 18.9 | |
| Production worker wages (000.Rp) | 3,028 | 5,621 | * | 1,569 | 1,567 | | 2,144 | 2,156 | |
| Nonproduction worker wages (000.Rp) | 4,859 | 9,789 | * | 3,110 | 2,232 | * | 4,470 | 6,380 | * |
| Export share in output (%) | 0 | 0 | | 0 | 1.6 | | 0 | 5.2 | * |
| Import ratio (%) | 30.1 | 10.6 | | 5.1 | 2.7 | | 20.8 | 25.4 | |

SOURCE: Calculations based on data from the Central Bureau of Statistics, Indonesia.

NOTE: (1) Gross output was deflated by the wholesale price index (1993=100).

(2) Value added was obtained by taking the difference between real gross output and intermediate inputs deflated by the relevant prices.

(3) Wages were deflated by the wholesale price index (1993=100).

(4) Import ratios are defined here as imports of intermediates as percentage of the total material costs.

(5) Some of the observations were not included because of missing values.

(6) * - statistical significance at a ten per cent level.

TABLE 3(b)
Economic Performance in the Motorcycle Industries between 1990 and 1995 (simple average)

| | Motorcycle assemblers | | | Motorcycle parts suppliers | | |
|---|---|---|---|---|---|---|
| | 1990 | 1995 | T-test | 1990 | 1995 | T-test |
| Number of establishments | 5 | 4 | | 24 | 38 | |
| Employment | 827 | 1,708 | * | 158 | 150 | |
| Gross output per employee (000.Rp) | 169,156 | 304,980 | | 19,028 | 19,522 | |
| Value added per employee (000.Rp) | 32,647 | 171,008 | | 5,594 | 8,337 | |
| Total factor productivity | n.a. | n.a. | | 2.2 | 2.2 | |
| Share of nonproduction workers (%) | 32.5 | 18.1 | | 15.7 | 17.2 | |
| Production worker wages (000.Rp) | 4,138 | 6,255 | | 1,067 | 1,411 | |
| Nonproduction worker wages (000.Rp) | 7,747 | 12,776 | | 3,525 | 4,453 | |
| Export share in output (%) | 0.2 | 1.0 | | 0 | 7.1 | * |
| Import ratio (%) | 34.3 | 10.8 | | 13.2 | 16.1 | |

SOURCE: See table 3(a).
NOTE: See table 3(a). n.a. - not available.

TABLE 4
Productivity Growth Analysis of the Automotive Iindustries (Percentage change between 1990-95)

| | | Number of establishment | Gross output per employee | Value added per employee | TFP |
|---|---|---|---|---|---|
| Automobile assemblers | Stayers | 5 | 192.0 | 155.5 | 22.1 |
| | Fixed effects | | 4.8 | (2.8) | (18.5) |
| | Share effects | | 187.2 | 158.3 | 40.6 |
| | Entrants | 6 | 49.2 | 45.5 | 9.3 |
| | Exits | 3 | (251.1) | (215.5) | (49.3) |
| | Total | | (9.9) | (14.5) | (17.9) |
| Automobile body suppliers | Stayers | 64 | 172.1 | 137.1 | 34.9 |
| | Fixed effects | | (3.8) | (11.7) | (11.6) |
| | Share effects | | 175.9 | 148.8 | 46.5 |
| | Entrants | 46 | 435.4 | 381.2 | 134.0 |
| | Exits | 37 | (629.8) | (575.2) | (179.2) |
| | Total | | (22.3) | (56.9) | (10.3) |
| Automobile parts suppliers | Stayers | 31 | 164.7 | 82.3 | 37.6 |
| | Fixed effects | | (2.8) | (35.6) | 1.5 |
| | Share effects | | 167.5 | 117.9 | 36.1 |
| | Entrants | 66 | 543.1 | 451.4 | 127.7 |
| | Exits | 25 | (680.3) | (581.1) | (128.0) |
| | Total | | 27.5 | (47.4) | 37.3 |
| Motorcycle parts suppliers | Stayers | 7 | 14.9 | 16.0 | 4.9 |
| | Fixed effects | | 1.0 | 3.3 | 1.1 |
| | Share effects | | 13.9 | 12.7 | 3.8 |
| | Entrants | 31 | 1046.0 | 990.9 | 297.1 |
| | Exits | 17 | (1078.6) | (950.2) | (268.8) |
| | Total | | (17.7) | 56.7 | 33.2 |

SOURCE: Calculations on data from Central Bureau of Statistics, Indonesia.
NOTE: Negative values within paranthesis.

TABLE 5

Number of Produced Cars and Motorcycles in Indonesia

| Year | Cars | Motorcycles |
|---|---|---|
| 1990 | 270,526 | 409,062 |
| 1991 | 254,737 | 445,268 |
| 1992 | 175,257 | 488,524 |
| 1993 | 203,588 | 621,085 |
| 1994 | 325,021 | 781,089 |
| 1995 | 387,541 | 1,042,938 |

SOURCE: Thee (1997), Sakura Research Institute (1996).

TABLE 6

Number of establishments in the Automobile and Motorcycle Assembling Industries by Employment Size

| | Automobile assemblers | | Motorcycle assemblers | |
|---|---|---|---|---|
| | 1990 | 1995 | 1990 | 1995 |
| Employment | | | | |
| 50-99 | 1 | 2 | 0 | 0 |
| 100-199 | 1 | 1 | 0 | 0 |
| 200-499 | 4 | 4 | 1 | 0 |
| 500 and above | 4 | 7 | 4 | 5 |

SOURCE: Data obtained from the Central Bureau of Statistics, Indonesia.

TABLE 7
Share of Foreign Establishments in the Automotive Sector (%)

| | Automobile assemblers | | Automobile body suppliers | | Automobile parts suppliers | | Motorcycle parts suppliers | |
|---|---|---|---|---|---|---|---|---|
| | 1990 | 1995 | 1990 | 1995 | 1990 | 1995 | 1990 | 1995 |
| Gross output | 76.3 | 94.1 | 44.5 | 69.2 | 48.9 | 15.7 | 67.2 | 75.4 |
| Value added | 89.9 | 93.7 | 53.9 | 77.6 | 82.3 | 30.6 | 54.6 | 82.9 |
| Employment | 69.2 | 58.0 | 5.5 | 7.2 | 19.5 | 18.2 | 15.4 | 23.6 |
| Investment | 92.3 | 56.0 | 10.3 | 36.9 | 32.9 | 74.6 | 43.3 | 54.1 |
| Export | n.a. | n.a. | n.a. | 86.0 | n.a. | 40.5 | n.a. | 59.6 |
| Imports of intermediate goods | 83.4 | 96.9 | 0.3 | 78.5 | 26.7 | 15.5 | 3.8 | 69.7 |

SOURCE: Calculations on data from Central Bureau of Statistics, Indonesia.

TABLE 8

Comparison of Local and Foreign Establishments in the Automotive Industries

| | Automobile assemblers | | | Automobile parts suppliers | | | | | | Motorcycle parts suppliers | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1995 | | | 1990 | | | 1995 | | | 1995 | | |
| | Domes. | Foreign | T-test | Domes. | Foreign | T-test | Domes. | Foreign | T-test | Domes. | Foreign | T-test |
| Number of establishments | 7 | 4 | | 51 | 5 | | 84 | 13 | | 33 | 5 | |
| Employment | 785 | 1,892 | | 138 | 341 | | 226 | 326 | | 132 | 269 | |
| Gross output per employee (000.Rp) | 24,032 | 172388 | | 39,647 | 97,912 | | 37,651 | 70,977 | | 9,352 | 86,643 | * |
| Value added per employee (000.Rp) | 13,717 | 57,919 | | 13,937 | 25,188 | | 7,810 | 32,529 | * | 3,502 | 40,252 | * |
| Total Factor Productivity | 1.9 | 2.0 | | 2.3 | 2.6 | | 2.3 | 2.7 | * | 2.1 | 3.1 | * |
| Share of nonproduction workers (%) | 29.2 | 31.7 | | 21.5 | 22.6 | | 18.8 | 19.1 | | 17.0 | 19.0 | |
| Production worker wages (000.Rp) | 5,320 | 6,148 | | 2,035 | 3,261 | | 1,885 | 3,905 | * | 1,181 | 2,927 | * |
| Nonproduction worker Wages (000.Rp) | 6,870 | 14,898 | | 3,947 | 9,693 | | 5,388 | 12,566 | * | 2,782 | 14,815 | |
| Export share in output(%) | 0 | 0 | | 0 | 0 | | 3.8 | 14.3 | | 4.2 | 25.7 | * |
| Import ratio(%) | 6.2 | 18.3 | | 18.1 | 48.3 | * | 19.7 | 62.6 | * | 9.4 | 60.4 | * |

SOURCE: Calculations on data from Central Bureau of Statistics, Indonesia.

NOTE: * - statistical significance at a ten per cent level.