



Fig. 2 Assumed micro-macro causal linkage



Fig. 3 ICT introduction and its operational impacts



[Operational Impact Index] = 0.1461+0.6841\*[ICT Introduction Index] se (b<sub>1</sub>)=0.1772; se (b<sub>2</sub>)=0.1210r-squared = 0.2556





$$\label{eq:constant} \begin{split} \mbox{[Environmental Impact Index]} &= 0.0997 + 0.2262 * \mbox{[ICT Introduction Index]} \\ & se \ (b_1) = 0.1538; \ se \ (b_2) = 0.1043 \\ & r\mbox{-squared} = 0.0425 \end{split}$$

## Table 1 Purpose of ICT investment

|   | Manufacturing<br>(N=83) |         | Infrastructure<br>(N=39) |         | Application<br>(N=73) |         | Total<br>(N=195) |         |
|---|-------------------------|---------|--------------------------|---------|-----------------------|---------|------------------|---------|
| Process Innovation <sup>1</sup>         | 50.0                    | (60.2%) | 27.0                     | (69.2%) | 43.4                  | (59.5%) | 120.4            | (61.7%) |
| Information sharing                     | 71                      | (85.5%) | 38                       | (97.4%) | 60                    | (82.2%) | 169              | (86.7%) |
| Faster management response              | 66                      | (79.5%) | 37                       | (94.9%) | 49                    | (67.1%) | 152              | (77.9%) |
| Profit/Loss control                     | 36                      | (43.4%) | 20                       | (51.3%) | 33                    | (45.2%) | 89               | (45.6%) |
| Cost reduction                          | 42                      | (50.6%) | 19                       | (48.7%) | 34                    | (46.6%) | 95               | (48.7%) |
| Customer satisfaction                   | 35                      | (42.2%) | 21                       | (53.8%) | 41                    | (56.2%) | 97               | (49.7%) |
| Product Innovation <sup>1</sup>         | 18.0                    | (21.7%) | 7.0                      | (17.9%) | 14.5                  | (19.9%) | 39.5             | (20.3%) |
| Identification of market opportunities  | 16                      | (19.3%) | 8                        | (20.5%) | 13                    | (17.8%) | 37               | (19.0%) |
| Introduction of new capacity/technology | 20                      | (24.1%) | 6                        | (15.4%) | 16                    | (21.9%) | 42               | (21.5%) |
| Others                                  | 0                       | (0.0%)  | 0                        | (0.0%)  | 2                     | (2.7%)  | 2                | (1.0%)  |

\*) 1: Bold figures in row 2 and row 8 are simple averages of row 3-7 and row 9-10, respectively.

2: Figures in parenthesis indicates % shares within each industrial sector.