

Some statistical analyses on the questionnaire survey in 2006

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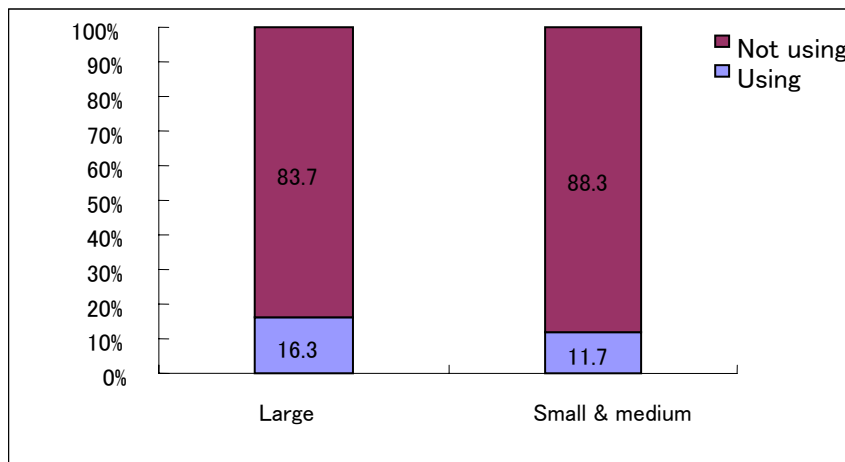
- Japan-Mexico EPA : Difference of utilization of EPA between large companies and small-medium companies (in terms of a capital, in terms of employee)
 - Japan-Malaysia EPA: Difference of utilization of EPA between large companies and small-medium companies (in terms of a capital, in terms of employee)
 - Japan-Singapore EPA: Difference of utilization of EPA between large companies and small-medium companies (in terms of a capital, in terms of employee)
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- Japan-Mexico EPA : Difference of utilization of EPA between manufacturing and trade/commerce sector
 - Japan-Malaysia EPA : Difference of utilization of EPA between manufacturing and trade/commerce sector
 - Japan-Singapore EPA : Difference of utilization of EPA between manufacturing and trade/commerce sector

1. Japan-Mexico EPA: any difference of utilization between large companies and small medium sized companies (in terms of a capital)

Overall utilization of Japan-Mexico EPA is 12.6% of the effective answers. (Note that some companies did not answer their capital)

14 large companies (more than ¥1 billion of capital) out of 86 companies in the category, which means 16.3%. In the category of small-medium companies, 37 companies make use of 316, which means 11.7%.

Is there any difference between the two categories? If so, is it statically significant? The test of the difference of the ratio was conducted at 5 % level of significance. The hypothesis that there is no difference between the two was not rejected, which suggested that there is no statistically significant difference.



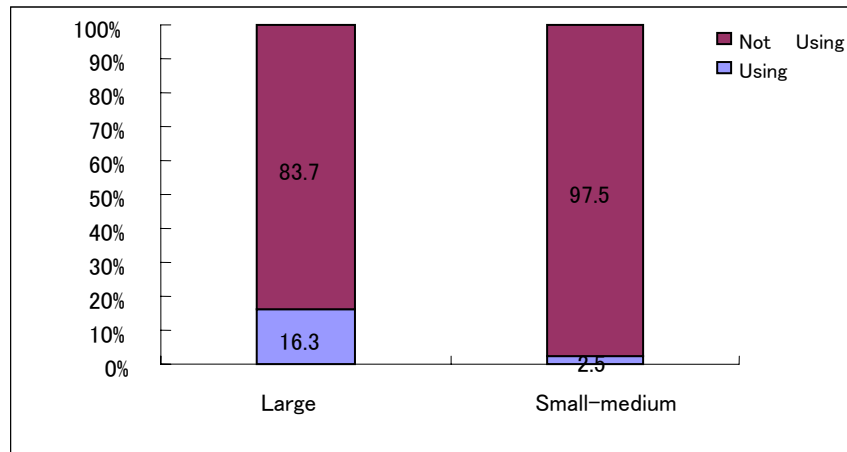
	Large firms	Small-Medium firms	Large firms	Small-Medium firms
Using	14	37	14	37
Not using	72	279	72	279
	Ratio of using		0.1628	0.1171
	Ratio of using (total)		0.1269	
	z_{cal}		1.1290	
	Normal distribution		1.9600	
	Probability of occurrence (%)		25.89%	
α			0.05 (5%)	
result	No difference between the two categories			

2. Japan-Malaysia EPA: Difference of utilization between large companies and small-medium companies (in terms of a capital)

Overall utilization of Japan-Mexico EPA is 5.5% of the effective answers (Note that some companies did not answer their scale of capital).

14 large companies (more than ¥1 billion of capital) out of 86 companies make use of EPA, which means 16.3%, same ratio with Japan-Mexico EPA coincidentally. In the category of small medium companies, mere 8 companies out of 316 make use of EPA, which means 2.5%.

Apparently the utilization of large firms seems much higher than that of small-medium firms. Is there any difference between the two categories? If so, is it statically significant? The test of the difference of the ratio was conducted at 5% level of significance. The hypothesis that there is no difference between the two was rejected, which suggested that there is statistically significant difference between the two category.

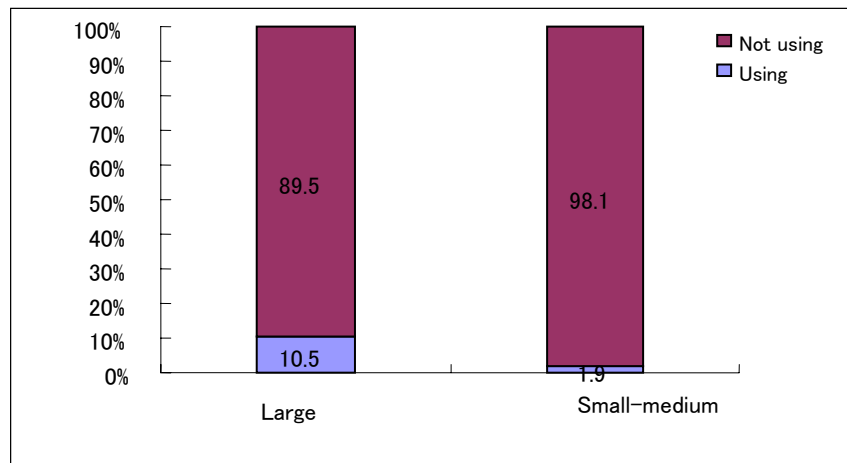


	Large firms	Small-Medium firms	Large firms	Small-Medium Firms
Using	14	8	14	8
Not using	72	308	72	308
	Ratio of using		0.1628	0.0253
	Ratio of using (total)		0.0547	
	Z _{cal}		4.9696	
	Normal distribution		1.9600	
	Probability of occurrence (%)		0.00%	
α			0.05	
result	Difference between the category			

3. Japan-Singapore EPA: Difference of utilization between large companies and small-medium companies (in terms of a capital)

Overall utilization rate of Japan-Singapore EPA is 3.7%. 9 large companies (more than ¥1 billion of capital) out of 86 companies in the category make use of EPA, which means 10.5%. In the category of small -medium companies, mere 6 companies make use of EPA, which means 1.9%.

Apparently the utilization of large firms is much higher than that of small-medium firms. Is there any difference between the two categories? If so, is it statically significant? The test of the difference of the ratio was conducted at 5 % level of significance. The hypothesis that there is no difference between the two was rejected, which suggested that there is statistically significant difference between the two category.



	Large firms	Small-Medium firms	Large firms	Small-Medium Firms
Using	9	6	9	6
Not using	77	310	77	310
	Ratio of using		0.1047	0.0190
	Ratio of using (total)		0.0373	
	Z_{cal}		3.7162	
	Normal distribution		1.9600	
	Probability of occurrence (%)		0.02%	
α			0.05	
result	Difference between the category			

4-1 Japan-Mexico EPA: Difference of utilization between large companies and small-medium companies (in terms of number of employees)

Does the utilization ratio depend on the scale of the firms in terms of number of employees? Are there any differences in the ratio with the scale of the firms.

We can probably say that there is no clear tendency. Even small companies show the relatively high ratio of utilization.

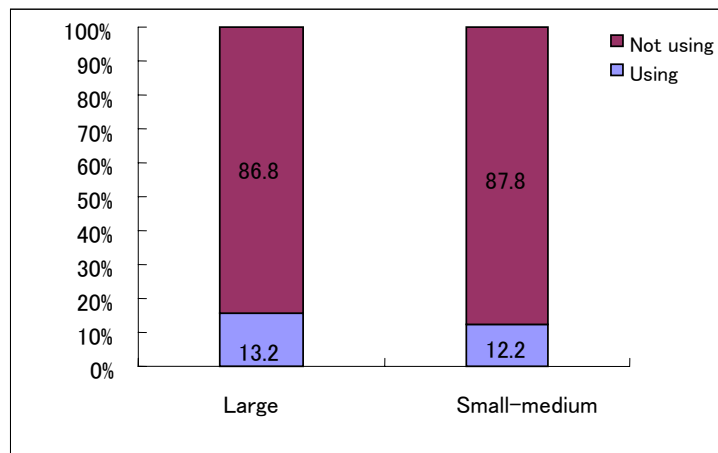
Japan-Mexico EPA			
Number of employees	firms	Using EPA	Ratio
$N < 20$	125	17	13.6%
$20 \leq N < 50$	58	8	13.8%
$50 \leq N < 100$	63	5	7.9%
$100 \leq N < 500$	116	13	11.2%
$500 \leq N < 1000$	37	7	18.9%
$N \geq 1000$	51	6	11.8%
N.A.	19	3	15.7%

4-2 Japan-Mexico EPA: Difference of utilization between large companies and small-medium companies (in terms of number of employees)

26 large companies (more than 100 employees) out of 201 companies in the category make use of EPA, which means 13.2%. In the category of small-medium companies (less than 100 employees), 30 companies make use of EPA, which means 12.2%.

Is there any difference between the two categories? If so, is it statically significant? The test of the difference of the ratio was conducted at 5 % level of significance. The hypothesis that there is no difference between the two was not rejected, which suggested that there is no statistically significant difference.

(computation procedure is omitted)



5.1 Japan-Malaysia EPA: Difference of utilization between large companies and small-medium companies (in terms of number of employees)

Does the utilization ratio depend on the scale of the firms in terms of number of employees? Are there any differences in the ratio with the scale of the firms.

We can probably say that there is a slight inclination, not so strong; the larger, the higher.

Japan-Malaysia EPA			
Number of employees	firms	Using EPA	Ratio
$N < 20$	125	3	2.4%
$20 \leq N < 50$	58	2	3.4%
$50 \leq N < 100$	63	3	4.8%
$100 \leq N < 500$	116	9	7.8%
$500 \leq N < 1000$	37	3	8.1%
$N \geq 1000$	51	5	9.8%
N.A.	19	1	5.3%

5-2 Japan-Mexico EPA: Difference of utilization between large companies and small-medium companies (in terms of number of employees)

18 large companies (more than 100 employees) out of 205 companies in the category make use of EPA, which means 8.8%.

In the category of small-medium companies (less than 100 employees), 8 companies make use of EPA, which means 3.3%.

Is there any difference between the two categories? If so, is it statically significant? The test of the difference of the ratio was conducted at 5 % level of significance. The hypothesis that there is no difference between the two was rejected, which suggested that there is statistically significant difference.

(computation procedure is omitted)

