







The original design set the other three products' adjustment quotient in the light of product A, whose adjustment quotient is 1. Product B's quotient is 1.2, Product C's quotient is 1.4 and Product D's quotient is 0.8. We use Product B for example to explain how to carry out optimization of composite cost drivers. Adjustment quotient is raised to 1.9 ( $1.2 \div 0.618$ ) and then redistribute overhead costs on the basis of 1.9, test the correlation again. The results are shown in Table 3. The coefficient of "fermentation tank cast of time  $\times$  adjustment quotient" with "activity based cost in fermentation" is 33.6404

and is significantly positive at the 5 per cent level. The R-squared value decreases from 0.3094 to 0.2194. So, the further step is turn to the opposite direction and reduce the adjustment quotient to 0.7 ( $1.2 \times 0.618$ ). Table 3 suggests that the R-squared value gets growth up to 0.4516 based on quotient 0.7 and the R-squared value continues rising to 0.4531 based on quotient 0.4 ( $0.7 \times 0.618$ ) but decline to 0.3808 based on quotient 0.3. To sum up, adjustment quotient of Product B should be set in 0.4 rather than 1.2.

TABLE III. RESULTS OF OPTIMIZATION

Quotient	Variables	Coefficients	R-squared	F-statistic
1.2	$INTERCEPT_1^1$	2364776*** (5.6499)	0.3094	9.4066***
	$Q_1^1$	66.2714*** (3.0670)		
1.9	$INTERCEPT_1^2$	2689536*** (6.8188)	0.2194	5.9026**
	$Q_1^2$	33.6404** (2.4295)		
0.7	$INTERCEPT_1^3$	1908364*** (4.5581)	0.4516	17.2952***
	$Q_1^3$	135.0656*** (4.1588)		
0.4	$INTERCEPT_1^4$	2043425*** (5.3024)	0.4531	17.3972***
	$Q_1^4$	177.7366*** (4.1710)		
0.3	$INTERCEPT_1^5$	2355001*** (6.5274)	0.3808	12.9140***
	$Q_1^5$	166.6950*** (3.5936)		

It is unnecessary to go into details of C and D's because of similar optimization method.

problem that must be addressed in practice is how to formulate multi-level criteria of the R-squared value scientifically.

#### IV. CONCLUSION AND OUTLOOK

This study tests the statistical correlation of 5 cost drivers from HZ's microbial pharmaceutical workshop by simple linear regression model. The driver of fermentation fails to pass the test and is optimized finally according to the test results. The results of this paper not only verify the scientificity of ABC system design, but also lay a solid foundation for the follow-up activity-based cost management system.

There still exists space extended in the following aspects: only simple linear regression model is put into use to test drivers' correlation. Is the multiple linear regression model applicable? How do the researchers apply the model? The key

#### REFERENCES

- [1] Cooper, R. and Kaplan, R.S., "Measure cost right : make the right decision," Harvard Business Review, vol.66, pp. 96-103, 1955.
- [2] M. Babad, V. Balachandran, "Cost driver optimization in activity-based costing," Accounting Review, pp. 529-551, July 1993.
- [3] Pingxin Wang, Fangjun Wang, and Peng Wang, "Study on Homogeneity of cost drivers," The Journal of quantitative & Technical Economics , vol- 5, 1999, pp.44-46.
- [4] Carsten Homburg, "A note on optimal cost driver selection in ABC," Management Accounting Research, pp. 199-203, December 2001.
- [5] Doupack N, "A Perspective On Cost Drivers," Accounting Review, pp. 121-126, July 1993.