

given in Section 2.

The input and output data are given in Table 1 and the results of the DEA methodologies are provided in Table 2-5.

Table 1. Input and Output Data

Stores	Inputs			Outputs		
	Employee number	Area of the store (m ²)	Total premium	NPS	Conversion rate	Total turnover
1	60	3542	£100697.33	52.13	0.12	£1317523.58
2	32	1866	£66934.26	51.38	0.06	£9028861.46
3	41	3114	£95236.95	51.01	0.07	£10847285.92
4	43	2824	£63058.25	51.92	0.15	£12010550.56
5	29	2121	£38450.87	49.27	0.10	£7027468.57
6	27	2415	£29992.94	58.26	0.09	£5421230.97
7	34	2613	£88856.25	60.52	0.14	£7104473.45
8	31	2010	£78222.24	49.60	0.24	£7945112.71
9	31	2364	£70617.73	60.08	0.13	£7773632.54
10	18	1253	£7618.37	48.14	0.10	£4058008.19
11	37	3783	£19876.83	51.63	0.16	£7306513.52
12	24	2762	£33944.39	50.49	0.10	£5366156.74

Table 2. Results of CCR model

Stores	CCR	CCR - Rank
1	0.857420	10
2	1	1
3	0.937679	6
4	1	1
5	0.925862	7
6	0.858249	9
7	0.838657	12
8	1	1
9	0.975688	5
10	1	1
11	0.853643	11
12	0.915772	8

Table 3. Results of minimax model

Stores	Minimax	Minimax - Rank
1	0.818009	8
2	0.989728	2
3	0.852544	6
4	1	1
5	0.866138	4
6	0.760919	9
7	0.710443	11
8	0.889136	3
9	0.862459	5
10	0.832174	7
11	0.714518	10
12	0.687292	12

Table 4. Results of minsum model

Stores	Minsum	Minsum - Rank
1	0.792747	11
2	1	1
3	0.912876	7
4	1	1
5	0.925862	6
6	0.834998	9
7	0.81593	10
8	1	1
9	0.960615	5
10	1	1
11	0.792528	12
12	0.907926	8

Table 5. Results of Sun et al. [19] model

Stores	Sun et al. [19]	Sun et al. [19] Rank
1	2.148211	7
2	3.101503	1
3	2.076998	9
4	2.468384	4
5	2.342751	6
6	1.983896	10
7	2.101595	8
8	2.63212	3
9	2.42473	5
10	3.039033	2
11	1.377373	12
12	1.595253	11

According to the results of CCR model, stores 2, 4, 8, and 10 are efficient, but CCR, minimax, and minsum models do not provide full ranking of the stores. However, the model proposed by Sun et al. [19] gives full ranking of the stores and it identified store 2 as the most efficient store, which is followed by stores 10 and 8.

IV. CONCLUSIONS

In a globalizing world where competition and change are fast, customer needs are changing every day. The ability of companies to sustain their existence in this complex structure depends on their understanding of environmental changes and their adaptation to these changes. On the other hand, the level of knowledge and skills of employees is increasing and employees are expected not only to do their jobs but also to think and make decisions. Performance management system is considered as the most important management systems in order to achieve the goals of the companies.

In this study, performance evaluation of a technology company that performs in the retail sector is conducted. First classical CCR method is employed to determine the efficient

stores. Employee number, area of the store and total premium are considered as inputs whereas NPS, conversion rate and total turnover are supposed as outputs of the model. CCR model dichotomized stores as efficient and inefficient but it did not provide full ranking of the stores. Common-weight DEA-based model introduced by Sun et al. [19] is utilized for ranking the stores and store 2 is determined as the most efficient store, which is followed by stores 10 and 8.

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