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Addendum to "an assessment of world-wide research productivity in production and operations management"

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ABSTRACT

This note updates some results in Hsieh and Chang (2009) in view of the fact that there had been title changes for four of the 20 core POM journals surveyed.

1. Introduction

One of the difficulties in conducting research productivity assessment is caused by journal title changes. The data of Hsieh and Chang (2009) study were captured from the 20 core POM journals under their exact titles given in Table 1 of their paper. As such, journals under former/different titles were excluded from analysis. It is evident that the data of each journal under different titles had been included, the scores of some researchers would have been slightly different and this would have affected the rankings of researchers and institutions. This is why I provide in this note an update of the results taking into consideration journal title changes.

2. Change of journal titles

Since the publication of Hsieh and Chang (2009), we have been alerted to the fact that some of the 20 core POM journals had changed their titles over the survey period. We followed up by matching the journal titles in our study against the active titles in *Ulrich's Periodicals Directory* and journal websites to identify changes to journal titles. *Ulrich's Periodicals Directory* is a bibliographic database that provides detailed, comprehensive, and authoritative information on serials published world-wide. Four of the 20 core POM journals in our study had changed their titles during the period 1959–2008. The former title of *IIE Transactions* was *AIIE Transactions*, which is included in the *Web of Science/Knowledge* (*WoS/K*) databases from 1978–1981. The original title of *International Journal of Production Economics* (*IJPE*) was *Engineering and Process Economics*, which was later changed to *Engineering Costs and Production Economics*. *Operational Research Quarterly* changed its name to *Journal of The Operational Research Society* in 1978, while *Naval Research Logistics Quarterly* changed its name to *Naval Research Logistics* in 1987. In addition, it should be noted that not all issues of the 20 core POM journals are included in *WoS/K*. Taking *International Journal of Production Research* as an example, only issues published after 1977 are included in the *WoS/K* databases. Obviously, if data are unavailable in *WoS/K*, one cannot capture them for analysis. This unavailability of data was an inherent limitation of our study, which was based exclusively on the data captured from *WoS/K* to assess research productivity.

3. Results

Under their former/different titles (Table 1), the five journals AIIE transactions, Engineering Costs and Production Economics, Engineering and Process Economics, Operational Research Quarterly, and Naval Research Logistics Quarterly, published a total of 3,111 papers during 1959–2008. Taking these papers into consideration, we updated Tables 2–5 in Hsieh and Chang's study and report the updated results in the following.

Table 2a shows the ranked list of the top 20 most productive authors in POM over the last five decades. The most productive author during this 50-year period was T. C. Edwin Cheng from The Hong Kong Polytechnic University, Hong Kong, having published 187 papers. S. K. Goyal from Concordia University, Canada, was ranked second with 176 papers. Gilbert Laporte from HEC

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Table 1
Journal title changes for the 20 core POM journals during 1959–2008.

Active title	Former title	Included in *WoS*/*K*	No. of papers
1. *IIE Transactions*, since 1982, Vol. 14, No. 1	*AIIE transactions*, 1978–1981	✓	194
2. *International Journal of Production Economics*, since September 1991, Vol. 22, No.1	*Engineering Costs and Production Economics*, 1980–1991	✓	610
	Engineering and Process Economics, 1976–1979	✓	104
3. *Journal of The Operational Research Society*, since January 1978, Vol. 29, No. 1	*Operational Research Quarterly*, 1956–1977	✓	1858 1959-1977
4. *Naval Research Logistics*: *An International Journal*, since February 1987, Vol. 34, No. 1	*Naval Research Logistics Quarterly*, 1954–1986	✓ 1964–1972 1972–2008	345

Table 2
(a) Top 20 most productive authors in POM (1959–2008) and (b) Top 20 most productive authors in the five leading POM journals (1959–2008).

(a)

Rank	Author	Institution	Country	Papers	% of 66,797	Sum of the times cited	Average citation per item	*h*-index
1	Cheng, T. C. Edwin	The Hong Kong Polytechnic University	HK	187	0.28%	2129	11.39	22
2	Goyal, S. K.	Concordia University	CA	176	0.26%	1837	10.44	24
3	Laporte, Gilbert	HEC Montreal	CA	161	0.24%	3420	21.24	31
4	Eilon, Sam	Imperial College of Science and Technology	UK	154	0.23%	772	5.01	12
5	Berman, Oded	University of Toronto	CA	108	0.16%	876	8.11	15
6	Drezner, Zvi	California State University, Fullerton	USA	108	0.16%	1516	14.04	18
7	Sherali, Hanif D.	Virginia Polytechnic Institute and State University	USA	102	0.15%	897	8.79	15
8	Silver, Edward A.	University of Calgary	CA	97	0.15%	1137	11.72	18
9	Cooper, William W.	University of Texas, Austin	USA	93	0.14%	6260	67.31	23
10	Gen, Mitsuo	Waseda University	IP	93	0.14%	975	10.48	16
11	Lee, Chung-Yee	Hong Kong University of Science & Technology	HK	93	0.14%	2125	22.85	26
12	Mehrez, A.	Ben-Gurion University of the Negev	IL	93	0.14%	394	4.24	10
	Miller, D. W.*	Columbia University	USA	92	0.14%	0	0	0
13	Glover, Fred	University of Colorado	USA	90	0.13%	3284	36.49	30
14	Gupta, Jatinder N. D.	University of Alabama	USA	87	0.13%	1481	17.02	22
15	Lau, Hon-Shiang	City University of Hong Kong	HK	85	0.13%	830	9.76	16
16	Bard, Jonathan F.	University of Texas, Austin	USA	84	0.13%	1420	16.90	23
17	Charnes, Abraham	University of Texas, Austin	USA	83	0.12%	5963	71.84	21
18	Sarker, Bhaba R.	Louisiana State University	USA	83	0.12%	1001	12.06	19
19	Whitt, Ward	Columbia University	USA	82	0.12%	1874	22.85	24
20	Murphy, Frederic H.	Temple University	USA	79	0.12%	301	3.81	10

(b)

Rank	Author	Institution	Country	Papers	% of 30,594	Sum of the times cited	Average citation per item	*h*-index
1	Laporte, Gilbert	HEC Montreal	CA	68	0.22	1747	25.69	22
2	Thiriez, Hervé	Groupe HEC	FR	66	0.22	6	0.09	2
3	Charnes, Abraham	University of Texas, Austin	USA	65	0.21	5213	80.20	18
4	Whitt, Ward	Columbia University	USA	62	0.20	1512	24.39	21
5	Federgruen, Awi	Columbia University	USA	59	0.19	1847	31.31	26
6	Cooper, William W.	University of Texas, Austin	USA	58	0.19	5268	90.83	20
7	Goyal, S. K.	Concordia University	CA	55	0.18	826	15.02	16
8	Glover, Fred	University of Colorado	USA	52	0.17	1460	28.08	21
9	Fishburn, Peter C.	AT&T Labs Research	USA	49	0.16	887	18.10	14
10	Cheng, T. C. Edwin	The Hong Kong Polytechnic University	HK	46	0.15	801	17.41	12
11	Shanthikumar, J. George	University of California, Berkeley	USA	44	0.14	804	18.27	18
12	Tang, Christopher S.	University of California, Los Angeles	USA	42	0.14	1037	24.69	15
13	Zenios, Stefanos A.	Stanford University	USA	41	0.13	652	15.90	13
14	Tiwari, M. K.	Indian Institute of Technology	IN	41	0.13	225	5.49	8
15	Van Wassenhove, Luk N.	INSEAD	FR	40	0.13	1535	38.38	20
16	Sethi, Suresh P.	University of Texas, Dallas	USA	40	0.13	807	20.17	15
17	Lee, Hau L.	Stanford University	USA	39	0.13	2679	68.69	22
18	Silver, Edward A.	University of Calgary	CA	39	0.13	626	16.05	14
19	Wein, Lawrence M.	Stanford University	USA	38	0.12	801	21.08	17
20	Sarker, Bhaba R.	Louisiana State University	USA	38	0.12	386	10.16	13
20	Sherali, Hanif D.	Virginia Polytechnic Institute and State University	USA	38	0.12	456	12.00	13
				1020	3.31			

Note: D. W. Miller compiled 92 book reviews in *Management Science* in 1968, thereafter not ranked in the table.

Table 3
Top 10 most productive authors in the last five decades (1959∼2008).

Rank	D1 (1959-1968)			D2 (1969-1978)			D3 (1979-1988)			D4 (1989-1998)			D5 (1999-2008)		
	Authors	Docs	(%)	Authors	Docs	(%)	Authors	Docs	(%)	Authors	Docs	(%)	Authors	Docs	(%)
1	Miller, DW	92	2.40	Eilon, S	51	0.86	Eilon, S	56	0.40	Gen, M	63	0.32	Cheng, TCE	111	0.48
2	Charnes, A	33	0.86	Glover, F	27	0.46	Goyal, SK	52	0.37	Cheng, TCE	62	0.32	Laporte, G	86	0.37
3	Battersby, A	20	0.52	Goyal, SK	25	0.42	Shanthikumar, JG	40	0.28	Laporte, G	59	0.30	Berman, O	55	0.24
4	Jewell, WS	20	0.52	Charnes, A	22	0.37	Mehrez, A	38	0.27	Goyal, SK	52	0.26	Goyal, SK	47	0.20
5	Cooper, WW	19	0.50	Woolsey, G	22	0.37	Drezner, Z	37	0.26	Mehrez, A	46	0.23	Lee, CY	45	0.19
6	Ancker, CJ	18	0.47	Taylor, JG	21	0.35	Sherali, HD	35	0.25	Lee, CY	45	0.23	Sarker, BR	43	0.18
7	Wagner, HM	18	0.47	Klingman, D	20	0.34	Chakravarty, AK	30	0.21	Thiriez, H	45	0.23	Gunasekaran, A	41	0.18
8	Eilon, S	16	0.42	Gray, P	17	0.29	Lee, HL	29	0.21	Wilson, JM	37	0.19	Gupta, JND	41	0.18
9	Geisler, MA	16	0.42	Kay, E	16	0.27	Rosenblatt, MJ	27	0.19	Murphy, FH	36	0.18	Tiwari, MK	41	0.18
10	Dantzig, GB	14	0.37	Thompson, GL	16	0.27	Silver, EA	27	0.19	Sarker, BR	35	0.18	Zhu, J	41	0.18
	Fishburn, PC	14	0.37												
	Haley, KB	14	0.37												
	Herman, R	14	0.37												
	Jackson, RRP	14	0.37												
	Total	322	8.41		237	4.01		371	2.64		480	2.44		551	2.37%
No.	of authors	2850			4868			10,507			16,947			23,409	
No.	of papers	3829			5917			14,114			19,638			23,299	

Table 4
Top 20 *h*-index POM researchers (1959–2008).

Rank	Author	Institution	Country	*h*-index	Papers	World (%)	Sum of the times cited	Average citation per Item
1	Laporte, Gilbert	HEC Montreal	CA	31	161	0.24	3420	21.24
2	Glover, Fred	University of Colorado	USA	30	90	0.13	3284	36.49
3	Lee, Hau L.	Stanford University	USA	29	72	0.11	3757	52.18
4	Federgruen, Awi	Columbia University	USA	27	71	0.11	2138	30.11
5	Lee, Chung-Yee	Hong Kong University of Science & Technology	HK	26	93	0.14	2125	22.85
5	Van Wassenhove, Luk N.	INSEAD	FR	26	56	0.08	2196	39.21
7	Goyal, S. K.	Concordia University	CA	24	176	0.26	1837	10.44
7	Whitt, Ward	Columbia University	USA	24	82	0.12	1874	22.85
9	Cooper, William W.	University of Texas, Austin	USA	23	93	0.14	6260	67.31
9	Bard, Jonathan F.	University of Texas, Austin	USA	23	84	0.13	1420	16.9
9	Gendreau, Michel	Université de Montréal	CA	23	62	0.09	1769	28.53
12	Cheng, T. C. Edwin	The Hong Kong Polytechnic University	HK	22	187	0.28	2129	11.39
12	Gupta, Jatinder N. D.	University of Alabama	USA	22	87	0.13	1481	17.02
12	Beasley, J. E.	Brunel University	UK	22	50	0.07	2018	40.36
15	Charnes, Abraham	University of Texas, Austin	USA	21	83	0.12	5963	71.84
15	Rajendran, Chandrasekharan	Indian Institute of Technology	IN	21	55	0.08	1091	19.84
15	Potts, C. N.	University of Southampton	UK	21	53	0.08	1811	34.17
15	Rosenblatt, Meir J.	Washington University	USA	21	53	0.08	1525	28.77
19	Powell, Warren B.	Princeton University	USA	20	58	0.09	980	16.9
20	Sarker, Bhaba R.	Louisiana State University	USA	19	83	0.12	1001	12.06
20	Shanthikumar, J. George	University of California, Berkeley	USA	19	74	0.11	1214	16.41
20	Nemhauser, George L.	Georgia Institute Technology	USA	19	56	0.08	1726	25.76

Montreal, Canada, was ranked third with 161 papers. Sam Eilon from the Imperial College of Science and Technology, UK, was fourth with 154 papers.

Table 2b shows the ranked list of the top 20 most productive authors in the five leading POM journals over 50 years as supplementary information. The five leading POM journals, selected based on their *h*-indices, were *Management Science* (*h*-index=141), *Operations Research* (117), *European Journal of Operational Research* (86), *International Journal of Production Research* (65), and *Mathematics of Operations Research* (61). These journals had not changed their names, so the information in Table 4b of Hsieh and Chang's study needs no updating.

The *h*-index values of the top 20 most productive POM authors ranged from 10 to 31. Two authors, namely Gilbert Laporte and Fred Glover, had an *h*-index score exceeding 30. Eight authors had an *h*-index score exceeding 20. Table 2a lists the *h*-index scores of the top 20 most productive POM authors.

We further segregated the data into five time periods, each covering one decade, to facilitate comparisons and analyses. Table 3 shows the top ten most productive authors in these five decades (1959–2008). D. W. Miller from Columbia University, USA, compiled 92 book reviews in *Management Science* in 1968 and Abraham Charnes from the University of Texas, Austin, USA, who published 33 papers, was the second most productive author in the first decade (1959–1968). Sam Eilon from the Imperial College of Science and Technology, UK, published 51 and 56 papers in the second and third decades, respectively. In the fourth decade, Mitsuo Gen from Waseda University, Japan, published 63 papers. T. C. Edwin Cheng from The Hong Kong Polytechnic University, Hong Kong, published 111 papers in the last decade, topping the research production rate in the last decade.

Table 5
Top 20 institution distribution of research productivity (1973–2008).

Rank	Institution name	Country	Papers	World (%)	Sum of the times cited	Average citations per item	*h*-index	Times cited of most cited paper
1	University of Texas	USA	1050	1.57	19,870	18.92	52	2455
2	Massachusetts Institute of Technology	USA	859	1.29	21,898	25.49	71	471
3	Georgia Institute of Technology	USA	746	1.12	10,886	14.59	49	294
4	Purdue University	USA	725	1.09	11,305	15.59	50	353
5	Columbia University	USA	708	1.06	11,960	16.89	54	224
6	University of Michigan	USA	664	0.99	11,484	17.30	50	1400
7	Stanford University	USA	639	0.96	15,943	24.95	61	733
8	University of Pennsylvania	USA	634	0.95	16,642	26.25	63	695
9	Pennsylvania State University	USA	629	0.94	6504	10.34	37	420
10	University of Wisconsin	USA	625	0.94	8132	13.01	40	352
11	Carnegie Mellon University	USA	540	0.81	14,025	25.92	56	1284
12	University of Florida	USA	533	0.80	6254	11.73	38	224
13	Tel-Aviv University	IL	516	0.77	5942	11.52	33	248
14	Northwestern University	USA	506	0.76	9797	19.36	49	701
15	University of Maryland	USA	474	0.71	6794	14.33	38	693
16	University of California, Berkeley	USA	472	0.71	7928	16.80	40	437
17	Ohio State University	USA	471	0.71	7964	16.91	46	254
18	Virginia Polytechnic Institute and State University	USA	469	0.70	3897	8.31	29	89
19	University of Illinois	USA	458	0.69	6272	13.69	37	397
20	Indian Institute Technology	IN	437	0.65	4570	10.46	33	102

Table 4 shows the top 20 most active authors ranked by their *h*-index scores. Gilbert Laporte had the highest *h*-index score (31), followed by Fred Glove (30), and Hau L. Lee (29). The top 20 *h*-index POM researchers had *h*-index scores exceeding 19.

Eighteen of the top 20 institutions whose researchers published the most POM papers were in the USA, with the remaining two institutions being Tel-Aviv University, Israel, and the Indian Institute of Technology, India (Table 5). Among the top 20 institutions, Massachusetts Institute of Technology, USA, had the highest *h*-index of 71, followed by the University of Pennsylvania, USA, with an *h*-index of 63 and 634 published papers.

Reference

Hsieh, P.-N., Chang, P.-L., 2009. An assessment of world-wide research productivity in production and operations management. International Journal of Production Economics 120 (2), 540–551.