APPENDIX
Appendix I: Cement Capacity 2014-15

S. No	Group	Capacity (MTPA)	Capacity Share	Cummuliative Capacity Share
1	UltraTech Cement Ltd	66.61	15.15%	15.15%
2	ACC Ltd	31.24	7.10%	22.25%
3	Ambuja Cement Ltd	28.42	6.46%	28.71%
4	Shree Cement	23.60	5.37%	34.08%
5	Jaiprakash Associates Ltd	18.29	4.16%	38.24%
6	Remco Cement Ltd	16.44	3.74%	41.98%
7	India Cements Ltd	15.55	3.54%	45.52%
8	Chettinad Cement	14.20	3.23%	48.74%
9	Dalmia Cement (Bharat) Ltd	14.10	3.21%	51.95%
10	Century Textiles and Industries Ltd	12.80	2.91%	54.86%
11	Kesoram Industries	10.75	2.44%	57.31%
12	Lafarge India(P) Ltd	10.35	2.35%	59.66%
13	Birla Corp. Ltd	9.60	2.18%	61.84%
14	J.K. Cement Ltd	9.41	2.14%	63.98%
15	JK Lakshmi Cement Ltd	8.44	1.92%	65.90%
16	Zuari Cement Ltd	7.80	1.77%	67.68%
17	Penna Cement Industries Ltd	7.00	1.59%	69.27%
18	Prism Cement Ltd	7.00	1.59%	70.86%
19	OCL India Ltd	6.70	1.52%	72.38%
20	JSW	6.40	1.46%	73.84%
21	Binani Cement	6.25	1.42%	75.26%
22	Heidelberg Cement (I) Ltd	6.21	1.41%	76.67%
23	Reliance Cement	5.80	1.32%	77.99%
24	My Home Industries Ltd	5.20	1.18%	79.17%
25	Bharathi Cement	5.00	1.14%	80.31%
26	Orient Paper and Industries Ltd	5.00	1.14%	81.45%
27	C.C.I. Ltd	3.89	0.88%	82.33%
28	Sanghi Industries Ltd	3.74	0.85%	83.18%
29	Rani Cement Ltd	3.66	0.83%	84.02%
30	Mangalam Cement Ltd	3.25	0.74%	84.75%
31	Wonder Cement	3.25	0.74%	85.49%
32	Sri Jaya Jyoti Cement	3.20	0.73%	86.22%
33	Murli Industries	3.00	0.68%	86.90%
34	Mehta Group	2.90	0.66%	87.56%
35	Asian Cement	2.83	0.64%	88.21%
36	Cement Manufacturing Co. Ltd	2.80	0.64%	88.84%
37	Kalburgi Cement	2.75	0.63%	89.47%
38	Sagar Cement	2.75	0.63%	90.09%
39	Andhra Cements	2.56	0.58%	90.68%
40	The K.C.P. Ltd	2.34	0.53%	91.21%
41	Deccan Cement	2.30	0.52%	91.73%
42	KJS Cement	2.27	0.52%	92.25%
43	Bhilai Jaypee (G)	2.20	0.50%	92.75%
44	Bokaro Jaypee (G)	2.10	0.48%	93.23%
45	Calcon Cement	1.72	0.39%	93.62%
46	Adhunik Cement	1.50	0.34%	93.96%
47	Swasata Cements Ltd	1.50	0.34%	94.30%
48	Bhavya Cement	1.40	0.32%	94.62%
49	Panyam Cement	1.35	0.31%	94.92%
50	Anjani Portland Cement	1.30	0.30%	95.22%
51	Hi-Bond Cement	1.20	0.27%	95.49%
52	Shree Digvijay-Sikka	1.08	0.25%	95.74%
53	Amrit Cement	1.00	0.23%	95.97%
54	BMM Cement	1.00	0.23%	96.19%
55	Green Valley Industries	1.00	0.23%	96.42%
56	Hills Cement Company	1.00	0.23%	96.65%
57	Kalyanpur Cement	1.00	0.23%	96.88%
58	Sparta Cement & Infra.	1.00	0.23%	97.10%
59	Sri Chabra Cement	1.00	0.23%	97.33%
60	NCL Industries	0.99	0.23%	97.56%
61	Parasakti Cement	0.94	0.21%	97.77%
62	Bheema Cement	0.90	0.20%	97.97%
63	Megha Tech	0.70	0.16%	98.13%
64	Meghalaya Cement Ltd	0.65	0.15%	98.28%
65	Keerthi Industries	0.62	0.14%	98.42%
66	Malabar Cements	0.62	0.14%	98.56%
67	Tamil Nadu Cement	0.60	0.14%	98.70%
68	Bagalkot Cement & Ind Ltd	0.60	0.14%	98.84%
69	Udaipur Cement	0.60	0.14%	98.97%
70	JUD Cements	0.50	0.11%	99.09%
71	Tata Chemicals Limited	0.50	0.11%	99.20%
72	Toshali Cements	0.44	0.10%	99.30%
73	J & K Cement Ltd.	0.40	0.09%	99.39%
74	RNB Cement	0.40	0.09%	99.48%
75	Shriram Cement	0.40	0.09%	99.57%
76	Purbanchal Cement	0.36	0.08%	99.65%
77	Barak Valley Cement	0.33	0.08%	99.73%
78	Burnpur Cement	0.33	0.08%	99.80%
79	Khyber Industries (P) Ltd	0.33	0.08%	99.88%
80	Mancherial Cement	0.33	0.08%	99.95%
81	Mawmluh Cherra Cement Ltd.	0.20	0.05%	100.00%
	Total	439.74	100.00%	

Source: Indian Minerals Year Book 2015 (Published in 2017)

Appendix II: Annual Price Index

Annual Price Index: Lime and Calcium Carbonate, Clinker and Ordinary Portland Cement

Price Index with base 2011-12 = 100

Month	Lime and calcium carbonate (Limestone)	Clinker	Ordinary Portland cement (Cement)	Month	Lime and calcium carbonate (Limestone)	Clinker	Ordinary Portland cement (Cement)
Apr-12	102.0	112.0	110.6	Apr-13	103.7	107.6	102.5
May-12	102.1	110.3	109.1	May-13	103.3	106.8	103.6
Jun-12	103.2	115.2	109.2	Jun-13	103.2	109.9	106.0
Jul-12	103.6	116.8	111.3	Jul-13	105.3	109.1	105.8
Aug-12	103.9	112.4	111.2	Aug-13	103.2	108.0	103.4
Sep-12	102.6	116.8	106.8	Sep-13	104.2	109.5	103.5
Oct-12	103.3	110.9	107.0	Oct-13	104.4	106.1	104.8
Nov-12	102.8	107.2	107.4	Nov-13	104.7	105.7	103.3
Dec-12	102.7	105.8	102.4	Dec-13	105.3	104.4	102.4
Jan-13	102.5	109.1	103.3	Jan-14	103.7	108.2	102.6
Feb-13	103.2	110.2	104.3	Feb-14	105.5	108.6	106.4
Mar-13	104.2	108.2	103.8	Mar-14	105.1	108.2	107.4

Month	Lime and calcium carbonate (Limestone)	Clinker	Ordinary Portland cement (Cement)	Month	Lime and calcium carbonate (Limestone)	Clinker	Ordinary Portland cement (Cement)
Apr-16	104.8	111.2	106.3	Apr-17	108.4	111.4	110.5
May-16	105.5	111.4	107.8	May-17	108.8	115.6	113.7
Jun-16	105.6	112.5	109.0	Jun-17	109.9	118.3	112.9
Jul-16	106.0	112.4	109.4	Jul-17	110.4	116.3	111.3
Aug-16	107.1	114.1	108.9	Aug-17	109.8	112.9	111.1
Sep-16	106.3	116.3	110.0	Sep-17	110.7	116.5	110.9
Oct-16	104.7	117.7	109.5	Oct-17	111.3	119.4	109.2
Nov-16	106.3	111.1	108.2	Nov-17	111.4	117.1	110.2
Dec-16	107.9	111.0	106.4	Dec-17	112.6	116.2	110.4
Jan-17	108.0	111.1	105.9	Jan-18	113.3	117.2	111.2
Feb-17	108.4	111.8	105.7				
Mar-17	107.3	109.4	106.7				

Month	Lime and calcium carbonate (Limestone)	Clinker	Ordinary Portland cement (Cement)	Month	Lime and calcium carbonate (Limestone)	Clinker	Ordinary Portland cement (Cement)
Apr-14	106.5	102.9	109.8	Apr-15	105.1	110.2	108.3
May-14	105.5	104.8	107.9	May-15	107.3	109.1	105.8
Jun-14	105.9	107.4	110.4	Jun-15	108.7	109.2	105.2
Jul-14	106.5	111.7	114.0	Jul-15	108.5	112.1	106.6
Aug-14	107.7	111.5	112.0	Aug-15	109.2	114.5	107.4
Sep-14	107.8	111.4	109.5	Sep-15	105.8	113.2	110.3
Oct-14	108.2	112.7	109.5	Oct-15	106.5	115.4	110.1
Nov-14	106.2	110.7	106.7	Nov-15	106.7	114.7	109.0
Dec-14	105.9	112.6	107.9	Dec-15	107.7	114.8	107.0
Jan-15	106.2	109.8	112.0	Jan-16	107.2	113.2	104.5
Feb-15	106.9	110.4	110.2	Feb-16	106.2	113.7	103.6
Mar-15	104.6	111.1	110.7	Mar-16	105.9	113.3	106.0

Source: Department of Industrial Policy and Promotion, Ministry of Commerce and Industry, Government of India

Appendix II: Annual Price Index

Annual Price Index: Lime and Calcium Carbonate, Clinker and Ordinary Portland Cement

Price Index with base 2011-12 = 100

Month	Lime and calcium carbonate (Limestone)	Clinker	Ordinary Portland cement (Cement)	Month	Lime and calcium carbonate (Limestone)	Clinker	Ordinary Portland cement (Cement)
Apr-16	104.8	111.2	106.3	Apr-17	108.4	111.4	110.5
May-16	105.5	111.4	107.8	May-17	108.8	115.6	113.7
Jun-16	105.6	112.5	109.0	Jun-17	109.9	118.3	112.9
Jul-16	106.0	112.4	109.4	Jul-17	110.4	116.3	111.3
Aug-16	107.1	114.1	108.9	Aug-17	109.8	112.9	111.1
Sep-16	106.3	116.3	110.0	Sep-17	110.7	116.5	110.9
Oct-16	104.7	117.7	109.5	Oct-17	111.3	119.4	109.2
Nov-16	106.3	111.1	108.2	Nov-17	111.4	117.1	110.2
Dec-16	107.9	111.0	106.4	Dec-17	112.6	116.2	110.4
Jan-17	108.0	111.1	105.9	Jan-18	113.3	117.2	111.2
Feb-17	108.4	111.8	105.7				
Mar-17	107.3	109.4	106.7				

Appendix III: KM publications 1980-2014

Country	Publications
China	668
US	363
UK	253
Malaysia	138
Australia	106
Taiwan	102
Spain	87
Italy	75
Germany	66
Canada	61
Iran	56
Netherland	50
India	49
France	49
Finland	45

Adapted from (Akhavan et al., 2016), page 1253

Appendix IV: Survey Questionnaire

Section 1 – Knowledge Management Practices & Processes impacting Competitive Advantage

Please indicate (by circling the appropriate box) the extent to which you agree or disagree with the statement

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree Nor Disagree	Slightly Agree	Agree	Strongly Agree

1. Category: Human resource (HR) practices of Knowledge Management

No.	Statement							
	My organization….	Circle the appropriate box						
C11A	Provides formal training programs to train teams on "How to manage dealers effectively?"	1	2	3	4	5	6	7
C12A	Rewards team with non-monetary incentive to maintain inventory at dealer godowns as per the demand of the dealers.	1	2	3	4	5	6	7
C13A	Imparts formal training to logistics team on "How to arrange fleet of varying capacities as per the demand of the dealer.	1	2	3	4	5	6	7
C14A	Rotates sales team every three years to a different market to provide experience of managing various types of dealer.	1	2	3	4	5	6	7
C15A	Has a small advertising team that engages effectively with multiple advertising agencies for advertisement of our cement.	1	2	3	4	5	6	7
C16A	Encourages sales team to attend seminars, symposia and so on to learn newer ways of sales promotion.	1	2	3	4	5	6	7
C17A	Recognizes the sales team that understands the fluctuation of cement price in the market.	1	2	3	4	5	6	7
C18A	Imparts formal training to sales team on "how to do" a cost benefit analysis before introducing a discount.	1	2	3	4	5	6	7
C19A	Recognizes sales team that negotiates competitive credit terms with the dealers.	1	2	3	4	5	6	7
C110A	Imparts formal training to sales team on "How to improve dealer satisfaction"?	1	2	3	4	5	6	7

Appendix IV: Survey Questionnaire

Please indicate (by circling the appropriate box) the extent to which you agree or disagree with the statement

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree Nor Disagree	Slightly Agree	Agree	Strongly Agree

2. Category: Information Technology (IT) practices of Knowledge Management

No.	Statement							
	My organization….	Circle the appropriate box						
C21A	Provides IT solutions to update and retrieve information about dealers of my market.	1	2	3	4	5	6	7
C22A	Provides IT solutions to give visibility of inventory at dealer godowns to sales and logistics teams.	1	2	3	4	5	6	7
C23A	Provides IT support to install global positioning system (GPS) in their trucks to track their movement.	1	2	3	4	5	6	7
C24A	Provides sales team with IT solutions and gadgets to acquire from dealers their cement requirement and price at which they sell cement to the retailers.	1	2	3	4	5	6	7
C25A	Provides sales team with IT solution and gadgets to capture advertisement of the competitors.	1	2	3	4	5	6	7
C26A	Provides IT solution to analyze dealer wise sales pattern to devise sales promotion strategies.	1	2	3	4	5	6	7
C27A	Provides IT solutions to analyze past and predict future price trends.	1	2	3	4	5	6	7
C28A	Provides IT solutions to ascertain impact of discount on the organizations profitability.	1	2	3	4	5	6	7
C29A	Provides IT solutions to change credit terms as agreed with the dealers.	1	2	3	4	5	6	7
C210A	Provides IT solutions to respond with speed to variety of dealer queries, such as: sales, payment, discounts, dispatch of cement etc	1	2	3	4	5	6	7

Appendix IV: Survey Questionnaire

Section 1 - Knowledge Management Practices & Processes impacting Competitive Advantage

Please indicate (by circling the appropriate box) the extent to which you agree or disagree with the statement

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree Nor Disagree	Slightly Agree	Agree	Strongly Agree

3. Category: Process to acquire knowledge

No.	Statement							
	My organization....	Circle the appropriate box						
C31A	Has a process for acquiring information about all cement dealers operating in my market.	1	2	3	4	5	6	7
C32A	Has a process for sales team to generate the cement requirement of our dealers in my market.	1	2	3	4	5	6	7
C33A	Has a process for logistics team to find available capacity of various modes (Rail, Road and Sea) for cement dispatch.	1	2	3	4	5	6	7
C34A	Has a process for sales team to identify upcoming construction projects in my market.	1	2	3	4	5	6	7
C35A	Has a process for sales team to capture the advertisement of cement products of our competitors.	1	2	3	4	5	6	7
C36A	Has a process for sales team to understand sales promotion strategies of competitors.	1	2	3	4	5	6	7
C37A	Has a process for sales team to obtain daily market wise, dealer wise, product wise prices of cement per bag.	1	2	3	4	5	6	7
C38A	Has a process for sales team to know the acceptable discount per bag of cement by the dealer in the market.	1	2	3	4	5	6	7
C39A	Has a process for sales team to know the acceptable credit terms for dealer to sell our cement in the market.	1	2	3	4	5	6	7
C310A	Has a process to know the service level expectations of dealer from our organization in terms of response time; to announce price change, to announce discounts and to fulfill orders.	1	2	3	4	5	6	7

Appendix IV: Survey Questionnaire

Section 1 – Knowledge Management Practices & Processes impacting Competitive Advantage

Please indicate (by circling the appropriate box) the extent to which you agree or disagree with the statement

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree Nor Disagree	Slightly Agree	Agree	Strongly Agree

4. Category: Process to share knowledge

No.	Statement							
	My organization….	Circle the appropriate box						
C41A	Has a process for sharing information about all cement dealers in my market with my peers, subordinates and superiors.	1	2	3	4	5	6	7
C42A	Has a process for sales team to exchange information about cement required by our dealers in my market with our logistics team.	1	2	3	4	5	6	7
C43A	Has a process for logistics team to share the available capacity of various modes (Rail, Road and Sea) for cement dispatch within logistics team (Regional, Zonal, Plant and Central levels).	1	2	3	4	5	6	7
C44A	Has a process for sales team to share the identified cement projects in my market with peers, subordinates and superiors.	1	2	3	4	5	6	7
C45A	Has a process for sale team to share the captured advertisement of our competitors with our advertisement team.	1	2	3	4	5	6	7
C46A	Has a process for sales team to share the sales promotion strategies of competitors with their peers, subordinates and superiors.	1	2	3	4	5	6	7
C47A	Has a process for sales team to share daily market wise, dealer wise, product wise prices of cement per bag.	1	2	3	4	5	6	7
C48A	Has a process for sales team to share the cost benefit analysis of the acceptable discount per bag of cement with peers, subordinates and superiors.	1	2	3	4	5	6	7
C49A	Has a process for sales team to share the cost benefit analysis of the acceptable credit terms for dealer to sell cement in the market with peers, subordinates and superiors.	1	2	3	4	5	6	7
C410A	Has a process to communicate across relevant functions (marketing & sales, finance & accounts, logistics) the service level expectations of dealer from our organization in terms of response time; to announce price change, to announce discounts and to fulfill orders.	1	2	3	4	5	6	7

Appendix IV: Survey Questionnaire

Section 1 – Knowledge Management Practices & Processes impacting Competitive Advantage

Please indicate (by circling the appropriate box) the extent to which you agree or disagree with the statement

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree Nor Disagree	Slightly Agree	Agree	Strongly Agree

5. Category: Process to use knowledge

No.	Statement	Part A						
	My organization….	Circle the appropriate box						
C51A	Has a process for using information about all cement dealers in my market to develop our dealer expansion strategy in my market.	1	2	3	4	5	6	7
C52A	Has a process for logistics team to integrate cement required by our dealers in all the markets and develop a distribution plan.	1	2	3	4	5	6	7
C53A	Has a process for logistics team to develop the cement dispatch plan as per the available cement dispatch capacity through various modes (Rail, Road and Sea) and cement demand of the dealers in the market.	1	2	3	4	5	6	7
C54A	Has a process for sales team to use the information about upcoming construction projects to develop the marketing plan to promote our cement in my market.	1	2	3	4	5	6	7
C55A	Has a process for our advertisement team to understand advertisement of competitors and develop new advertisement for our cement products.	1	2	3	4	5	6	7
C56A	Has a process for sales team to develop new and effective sales promotion strategy.	1	2	3	4	5	6	7
C57A	Has a process for sales team to develop a market wise and product wise pricing strategy.	1	2	3	4	5	6	7
C58A	Has a process for sales team to develop a discount structure beneficial to both the dealer and my organization.	1	2	3	4	5	6	7
C59A	Has a process for sales team to design credit terms beneficial to both the dealer and my organization.	1	2	3	4	5	6	7
C510A	Has a process for relevant functions (marketing & sales, finance & accounts, logistics) to internally prepare for serving the expected service levels of dealers from our organization in terms of response time; to announce price change, to announce discounts and to fulfill orders.	1	2	3	4	5	6	7

Appendix IV: Survey Questionnaire

Section 1 - Knowledge Management Practices & Processes impacting Competitive Advantage

Please indicate (by circling the appropriate box) the extent to which you agree or disagree with the statement

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree Nor Disagree	Slightly Agree	Agree	Strongly Agree

6. Category: Process to apply knowledge

No.	Statement							
	My organization....	Circle the appropriate box						
C61A	Has a process to apply our dealer expansion strategy to expand our dealer network in my market.	1	2	3	4	5	6	7
C62A	Has a process for logistics team to distribute cement as per developed distribution plan to our dealers in all the markets.	1	2	3	4	5	6	7
C63A	Has a process for logistics team to dispatch the cement through various modes (Rail, Road and Sea) as per cement dispatch plan.	1	2	3	4	5	6	7
C64A	Has a process for sales team to implement the developed marketing plan to promote cement in my market.	1	2	3	4	5	6	7
C65A	Has a process for our advertisement team to respond with the new advertisement of our cement products.	1	2	3	4	5	6	7
C66A	Has a process for sales team to timely implement developed sales promotion strategy.	1	2	3	4	5	6	7
C67A	Has a process for sales team to respond to market with the developed product wise pricing strategy.	1	2	3	4	5	6	7
C68A	Has a process for sales team to announce the developed discount structure in the market.	1	2	3	4	5	6	7
C69A	Has a process for sales team to announce the designed discount structure in the market.	1	2	3	4	5	6	7
C610A	Has a process to actually fulfill the expected service levels of dealers from our organization in terms of response time: to announce price change, to announce discounts and to fulfill orders.	1	2	3	4	5	6	7

7. Category: Competitiveness

No.	Statement							
	Competitiveness compared to our key competitors....	Circle the appropriate box						
C11A	Our organization has a greater market share	1	2	3	4	5	6	7
C12A	Our organization is growing faster	1	2	3	4	5	6	7
C13A	Our organization is more profitable	1	2	3	4	5	6	7
C14A	Our organization is more innovative	1	2	3	4	5	6	7
C15A	Our organization is more responsive to market demand	1	2	3	4	5	6	7

Appendix IV: Survey Questionnaire

Section 2 - Personal information of the survey participant

1. What is your age? (Tick the appropriate category)

Under 30 years	31-35 years	36-40 years	40 years and above

2. What is your educational qualification? (Tick the appropriate category)

Only Bachelor's degree	Bachelor's degree with Master's degree in management	Bachelor's degree with diploma in management

3. What is the name of your cement organization?

Mention name	

4. What is size of your market (in sales per month of all cement companies put together)? (Tick the appropriate category)

Less than 10000 MT	Between 10001 MT and 20000 MT	Between 20001 MT and 30000 MT	Between 30001 MT and 40000 MT	Above 40000 MT

5. Since how many years you have been working for this cement organisation? (Tick the appropriate category)

Less than 3 years	More than 3 years and less than 6 years	More than 6 years and less than 9 years	More than 9 years and less than 12 years	More than 12 years

6. Which market you manage, mention depot or district and state?

Mention depot or district name		Mention state name	

7. Have you worked in any other function other than marketing and sales?

Mention name	Function 1 -	Function 2 -	Function 3 -

8. Have you worked for any other cement organization other than the present one?

Mention name...	Organization 1 -	Organization 2 -	Organization 3 -

Thank you very much for your time to complete this survey!

Appendix V: Inter-Item Correlation Matrix

Inter-Item Correlation Matrix - KMPRAHR

	C11A	C12A	C13A	C14A	C15A	C16A	C17A	C18A	C19A	C110A
C11A	1.00	0.55	0.54	0.15	0.28	0.58	0.38	0.55	0.47	0.70
C12A	0.55	1.00	0.54	0.18	0.10	0.50	0.40	0.64	0.57	0.53
C13A	0.54	0.54	1.00	0.32	0.38	0.62	0.50	0.59	0.40	0.51
C14A	0.15	0.18	0.32	1.00	0.18	0.16	0.56	0.17	0.29	0.15
C15A	0.28	0.10	0.38	0.18	1.00	0.13	0.31	0.02	0.27	0.20
C16A	0.58	0.50	0.62	0.16	0.13	1.00	0.39	0.66	0.44	0.60
C17A	0.38	0.40	0.50	0.56	0.31	0.39	1.00	0.42	0.56	0.50
C18A	0.55	0.64	0.59	0.17	0.02	0.66	0.42	1.00	0.49	0.53
C19A	0.47	0.57	0.40	0.29	0.27	0.44	0.56	0.49	1.00	0.62
C110A	0.70	0.53	0.51	0.15	0.20	0.60	0.50	0.53	0.62	1.00
a	6/9	7/9	9/9	3/9	2/9	7/9	9/9	7/9	7/9	7/9
b	0.47	0.45	0.49	0.24	0.21	0.45	0.45	0.45	0.46	0.48

Inter-Item Correlation Matrix - KMPRAIT

	C21A	C22A	C23A	C24A	C25A	C26A	C27A	C28A	C29A	C210A
C21A	1.00	0.57	0.47	0.35	0.51	0.44	0.39	0.34	0.40	0.41
C22A	0.57	1.00	0.53	0.41	0.48	0.61	0.59	0.53	0.42	0.52
C23A	0.47	0.53	1.00	0.46	0.69	0.58	0.34	0.34	0.39	0.38
C24A	0.35	0.41	0.46	1.00	0.70	0.52	0.24	0.17	0.19	0.36
C25A	0.51	0.48	0.69	0.70	1.00	0.67	0.39	0.38	0.38	0.47
C22A	0.44	0.61	0.58	0.52	0.67	1.00	0.60	0.51	0.57	0.60
C27A	0.39	0.59	0.34	0.24	0.39	0.60	1.00	0.65	0.54	0.60
C28A	0.34	0.53	0.34	0.17	0.38	0.51	0.65	1.00	0.54	0.56
C29A	0.40	0.42	0.39	0.19	0.38	0.57	0.54	0.54	1.00	0.47
C210A	0.41	0.52	0.38	0.36	0.47	0.60	0.60	0.56	0.47	1.00
a	9/9	9/9	9/9	6/9	9/9	9/9	8/9	8/9	8/9	9/9
b	0.43	0.52	0.47	0.38	0.52	0.57	0.48	0.45	0.43	0.49

Appendix V

Inter-Item Correlation Matrix - KMPROACQ

	C31A	C32A	C33A	C34A	C35A	C36A	C37A	C38A	C39A	C310A
C31A	1.00	0.62	0.57	0.60	0.64	0.71	0.59	0.51	0.60	0.52
C32A	0.62	1.00	0.46	0.48	0.61	0.51	0.31	0.45	0.58	0.60
C33A	0.57	0.46	1.00	0.44	0.55	0.58	0.47	0.54	0.64	0.53
C34A	0.60	0.48	0.44	1.00	0.63	0.71	0.48	0.53	0.59	0.70
C35A	0.64	0.61	0.55	0.63	1.00	0.71	0.61	0.71	0.73	0.60
C36A	0.71	0.51	0.58	0.71	0.71	1.00	0.55	0.55	0.68	0.63
C37A	0.59	0.31	0.47	0.48	0.61	0.55	1.00	0.56	0.63	0.37
C38A	0.51	0.45	0.54	0.53	0.71	0.55	0.56	1.00	0.77	0.65
C39A	0.60	0.58	0.64	0.59	0.73	0.68	0.63	0.77	1.00	0.64
C310A	0.52	0.60	0.53	0.70	0.60	0.63	0.37	0.65	0.64	1.00
a	8/9	9/9	9/9	8/9	6/9	6/9	9/9	7/9	7/9	9/9
b	0.60	0.51	0.53	0.57	0.64	0.63	0.51	0.58	0.65	0.58

Inter-Item Correlation Matrix - KMPROSHR

	C41A	C42A	C43A	C44A	C45A	C46A	C47A	C48A	C49A	C410A
C41A	1.00	0.58	0.32	0.44	0.44	0.47	0.52	0.37	0.43	0.25
C42A	0.58	1.00	0.62	0.52	0.49	0.66	0.62	0.42	0.55	0.43
C43A	0.32	0.62	1.00	0.53	0.37	0.58	0.44	0.44	0.55	0.49
C44A	0.44	0.52	0.53	1.00	0.65	0.59	0.35	0.33	0.48	0.22
C45A	0.44	0.49	0.37	0.65	1.00	0.59	0.38	0.52	0.63	0.29
C46A	0.47	0.66	0.58	0.59	0.59	1.00	0.62	0.51	0.69	0.44
C47A	0.52	0.62	0.44	0.35	0.38	0.62	1.00	0.47	0.55	0.49
C48A	0.37	0.42	0.44	0.33	0.52	0.51	0.47	1.00	0.73	0.48
C49A	0.43	0.55	0.55	0.48	0.63	0.69	0.55	0.73	1.00	0.60
C410A	0.25	0.43	0.49	0.22	0.29	0.44	0.49	0.48	0.60	1.00

Appendix V

Inter-Item Correlation Matrix - KMPROUSE

	C51A	C52A	C53A	C54A	C55A	C56A	C57A	C58A	C59A	C510A
C51A	1.00	0.46	0.55	0.56	0.54	0.66	0.58	0.59	0.55	0.58
C52A	0.46	1.00	0.59	0.57	0.57	0.54	0.48	0.42	0.45	0.56
C53A	0.55	0.59	1.00	0.40	0.46	0.60	0.62	0.47	0.48	0.49
C54A	0.56	0.57	0.40	1.00	0.41	0.66	0.42	0.23	0.28	0.50
C55A	0.54	0.57	0.46	0.41	1.00	0.68	0.58	0.50	0.45	0.61
C56A	0.66	0.54	0.60	0.66	0.68	1.00	0.76	0.55	0.47	0.72
C57A	0.58	0.48	0.62	0.42	0.58	0.76	1.00	0.66	0.55	0.68
C58A	0.59	0.42	0.47	0.23	0.50	0.55	0.66	1.00	0.76	0.67
C59A	0.55	0.45	0.48	0.28	0.45	0.47	0.55	0.76	1.00	0.59
C510A	0.58	0.56	0.49	0.50	0.61	0.72	0.68	0.67	0.59	1.00
a	9/9	9/9	9/9	7/9	9/9	9/9	8/9	7/9	7/9	8/9
b	0.56	0.52	0.52	0.45	0.53	0.63	0.59	0.54	0.51	0.60

Inter-Item Correlation Matrix - KMPROAPP

	C61A	C62A	C63A	C64A	C65A	C66A	C67A	C68A	C69A	C610A
C61A	1.00	0.54	0.50	0.57	0.52	0.70	0.65	0.48	0.49	0.61
C62A	0.54	1.00	0.81	0.60	0.49	0.69	0.61	0.50	0.49	0.56
C63A	0.50	0.81	1.00	0.67	0.64	0.68	0.61	0.48	0.49	0.56
C64A	0.57	0.60	0.67	1.00	0.71	0.79	0.77	0.57	0.49	0.62
C65A	0.52	0.49	0.64	0.71	1.00	0.68	0.59	0.48	0.35	0.53
C66A	0.70	0.69	0.68	0.79	0.68	1.00	0.79	0.67	0.54	0.63
C67A	0.65	0.61	0.61	0.77	0.59	0.79	1.00	0.58	0.53	0.76
C68A	0.48	0.50	0.48	0.57	0.48	0.67	0.58	1.00	0.77	0.64
C69A	0.49	0.49	0.49	0.49	0.35	0.54	0.53	0.77	1.00	0.52
C610A	0.61	0.56	0.56	0.62	0.53	0.63	0.76	0.64	0.52	1.00
a	9/9	8/9	8/9	6/9	8/9	7/9	6/9	8/9	8/9	8/9
b	0.56	0.59	0.61	0.64	0.55	0.69	0.66	0.57	0.52	0.60

Inter-Item Correlation Matrix - CA

	C71A	C72A	C73A	C74A	C75A
C71A	1.00	0.73	0.40	0.58	0.59
C72A	0.73	1.00	0.35	0.67	0.49
C73A	0.40	0.35	1.00	0.46	0.18
C74A	0.58	0.67	0.46	1.00	0.57
C75A	0.59	0.49	0.18	0.57	1.00
a	9/9	9/9	9/9	6/9	9/9
b	0.57	0.56	0.35	0.57	0.46

Appendix VI: Item Total Statistics

Appendix VI
Item-Total Statistics - KMPRAHR

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
C11A	41.3500	122.164	0.689	0.589	0.862
C12A	42.5000	122.627	0.659	0.553	0.864
C13A	41.7833	125.868	0.717	0.601	0.861
C14A	40.9500	139.506	0.323	0.357	0.887
C15A	40.7167	143.359	0.281	0.313	0.888
C16A	41.8667	120.660	0.671	0.576	0.863
C17A	41.2667	127.080	0.637	0.560	0.866
C18A	41.6500	123.553	0.676	0.614	0.863
C19A	41.6667	126.395	0.668	0.556	0.864
C110A	41.3000	121.231	0.717	0.648	0.859

Item-Total Statistics - KMPRAIT

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
C21A	43.0500	128.014	0.589	0.427	0.893
C22A	43.8167	119.000	0.716	0.592	0.884
C23A	43.1500	120.875	0.635	0.552	0.890
C24A	43.0667	132.199	0.510	0.546	0.897
C25A	43.2167	120.884	0.712	0.724	0.885
C22A	43.4000	121.532	0.794	0.668	0.880
C27A	44.4333	123.131	0.665	0.585	0.888
C28A	44.1667	125.158	0.617	0.528	0.891
C29A	44.4500	124.319	0.589	0.455	0.893
C210A	43.3000	121.400	0.667	0.497	0.888

Appendix VI

Item-Total Statistics - KMPROACQ

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
C31A	49.2833	102.545	0.754	0.669	0.925
C32A	49.1667	107.87	0.644	0.588	0.930
C33A	49.3833	111.257	0.663	0.488	0.929
C34A	49.5333	104.694	0.728	0.630	0.926
C35A	49.4833	102.356	0.821	0.710	0.921
C36A	49.7333	99.216	0.797	0.706	0.922
C37A	49.0167	109.712	0.633	0.548	0.930
C38A	49.3833	104.681	0.736	0.695	0.925
C39A	49.2667	101.860	0.829	0.756	0.921
C310A	49.4000	102.820	0.737	0.674	0.926

Item-Total Statistics - KMPROSHR

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
C41A	46.8833	98.478	0.562	0.436	0.902
C42A	46.8667	96.795	0.741	0.637	0.892
C43A	47.0833	97.434	0.644	0.555	0.897
C44A	47.2167	96.783	0.619	0.573	0.898
C45A	47.2667	92.267	0.657	0.600	0.897
C46A	47.3667	89.253	0.782	0.658	0.888
C47A	46.5000	97.305	0.661	0.546	0.896
C48A	47.6000	95.600	0.642	0.558	0.897
C49A	47.3500	91.825	0.800	0.736	0.887
C410A	47.1667	99.294	0.541	0.459	0.903

Appendix VI

Item-Total Statistics - KMPROUSE

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
C51A	45.6833	105.135	0.734	0.599	0.914
C52A	46.5667	108.826	0.661	0.586	0.918
C53A	46.1167	107.901	0.665	0.546	0.918
C54A	46.1167	109.868	0.570	0.620	0.922
C55A	46.6167	103.698	0.691	0.563	0.916
C56A	46.0833	97.840	0.828	0.795	0.908
C57A	46.0833	101.230	0.777	0.695	0.911
C58A	46.0833	104.586	0.702	0.720	0.916
C59A	46.2833	107.020	0.655	0.620	0.918
C510A	46.2167	101.054	0.788	0.661	0.911

Item-Total Statistics - KMPROAPP

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
C61A	49.7000	90.925	0.692	0.582	0.931
C62A	50.1000	89.210	0.733	0.716	0.929
C63A	49.8333	88.718	0.762	0.759	0.927
C64A	49.7500	88.394	0.809	0.739	0.925
C65A	50.0000	89.559	0.686	0.615	0.932
C66A	49.6000	88.617	0.867	0.819	0.922
C67A	49.6333	91.795	0.824	0.775	0.925
C68A	49.5667	93.097	0.711	0.744	0.930
C69A	49.7500	91.716	0.630	0.658	0.934
C610A	49.6167	90.952	0.747	0.682	0.928

Appendix VI

Item-Total Statistics - CA

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
C71A	23.1333	14.829	0.748	0.623	0.774
C72A	22.8167	16.118	0.736	0.623	0.779
C73A	23.2167	19.698	0.423	0.270	0.859
C74A	22.9167	15.908	0.734	0.578	0.779
C75A	23.1167	18.173	0.581	0.449	0.822

Appendix VII: Total Variance Explained

Appendix VII

Total Variance Explained - KMPRAHR

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.923	49.232	49.232	4.923	49.232	49.232	4.213	42.126	42.126
2	1.320	13.201	62.433	1.320	13.201	62.433	2.031	20.307	62.433
3	0.944	9.441	71.874						
4	0.715	7.146	79.02						
5	0.546	5.461	84.481						
6	0.443	4.434	88.915						
7	0.344	3.441	92.356						
8	0.305	3.049	95.405						
9	0.255	2.547	97.952						
10	0.205	2.048	100.000						

Extraction Method: Principal Component Analysis.

Total Variance Explained - KMPRAIT

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.293	52.933	52.933	5.293	52.933	52.933	3.486	34.856	34.856
2	1.335	13.355	66.288	1.335	13.355	66.288	3.143	31.432	66.288
3	0.703	7.035	73.323						
4	0.608	6.084	79.408						
5	0.498	4.977	84.385						
6	0.415	4.151	88.536						
7	0.387	3.868	92.404						
8	0.321	3.206	95.61						
9	0.263	2.634	98.244						
10	0.176	1.756	100.000						

Extraction Method: Principal Component Analysis

Appendix VII
Total Variance Explained - KMPROACQ

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	6.255	62.547	62.547	6.255	62.547	62.547
2	0.798	7.985	70.532			
3	0.642	6.424	76.956			
4	0.609	6.093	83.049			
5	0.513	5.129	88.178			
6	0.32	3.197	91.374			
7	0.263	2.629	94.003			
8	0.244	2.443	96.446			
9	0.223	2.227	98.673			
10	0.133	1.327	100.000			

Extraction Method: Principal Component Analysis.

a. Only one component was extracted. The solution cannot be rotated.

Total Variance Explained - KMPROSHR

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative e %
1	5.471	54.708	54.708	5.471	54.708	54.708	3.273	32.729	32.729
2	1.038	10.377	65.085	1.038	10.377	65.085	3.236	32.356	65.085
3	0.845	8.448	73.533						
4	0.747	7.468	81.001						
5	0.454	4.541	85.542						
6	0.431	4.311	89.853						
7	0.317	3.17	93.023						
8	0.287	2.875	95.898						
9	0.22	2.205	98.103						
10	0.19	1.897	100						

Extraction Method: Principal Component Analysis.

Appendix VII
Total Variance Explained - KMPROUSE

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.932	59.324	59.324	5.932	59.324	59.324	3.573	35.729	35.729
2	1.058	10.576	69.90	1.058	10.576	69.900	3.417	34.170	69.900
3	0.630	6.305	76.204						
4	0.569	5.693	81.897						
5	0.554	5.539	87.436						
6	0.430	4.302	91.738						
7	0.269	2.687	94.424						
8	0.242	2.418	96.842						
9	0.179	1.793	98.636						
10	0.136	1.364	100.000						

Extraction Method: Principal Component Analysis.

Total Variance Explained - KMPROAPP

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	6.419	64.193	64.193	6.419	64.193	64.193
2	0.913	9.133	73.327			
3	0.667	6.672	79.999			
4	0.545	5.447	85.445			
5	0.439	4.387	89.832			
6	0.339	3.389	93.221			
7	0.263	2.635	95.855			
8	0.171	1.709	97.564			
9	0.144	1.435	98.999			
10	0.100	1.001	100.000			

Extraction Method: Principal Component Analysis.

Appendix VII
Total Variance Explained - CA

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.060	61.204	61.204	3.060	61.204	61.204
2	0.835	16.702	77.906			
3	0.491	9.830	87.735			
4	0.407	8.133	95.868			
5	0.207	4.132	100.000			

Extraction Method: Principal Component

a. Only one component was extracted. The solution cannot be rotated.

PUBLICATIONS

International Journals

1. Dave, Manish. Singh, Kanhaiya. Kumar, Arya. Kumar, Sachin (2017). "Knowledge Management Measures: An Empirical Investigation of Indian Cement Industry", (Journal: *Benchmarking: An International journal)* [Accepted on 20 June 2018]

2. Dave, Manish. Singh, Kanhaiya. Kumar, Arya. "A Framework to Link Knowledge Management, Competitive Advantage and Physical Performance in Marketing Function of an Organization", (Journal: *International Journal of Knowledge and Learning*) [Under Review]

International Conference

1. Paper entitled "A knowledge framework of decision support system for higher education institutes in India" by Dave, Manish. Kumar, Arya. Presented at the 11th Indian Subcontinent Decision Sciences Institute International Conference, December 27-30, 2017 held at IIM, Tiruchirappalli

Book Chapter

1. Manish Dave and Satyendra Sharma, (2017), Chapter 32 "Knowledge management in corporate environment", published in edited book on Decision sciences for business sustainability by Excel publisher ISBN 978-93-86724-24-3

BIOGRAPHY

Candidate

Manish Dave is Assistant Vice President at Aditya Birla Group. At present he is on deputation from Aditya Birla Group to BITS Pilani to Head the Program Management Office. He received B.E. and M.B.A, degrees from Devi Ahilya Vishwavidyalaya, Indore, and later completed a one-year Senior Management Program from IIM Calcutta. He has over 20 years of experience in various sectors, such as the Cement, Education, Automobile and Petroleum. He has proven himself successful in such diverse functions as Strategy, Planning, Execution and Transformation. He has spent 19 years with the Aditya Birla Group, 12 of those in the cement business, wherein he has contributed to the development of long-term, as well as short-term strategies and plans. For the last 7 years he has been on deputation to BITS Pilani, where he has managed excellence and transformation programs in the field of Higher Education. He has had brief stints spread over a duration of two years with three other organizations: Hindustan Motors (Material Management), BPCL (Petroleum Sales) and Zee Interactive Learning Systems (e-entrance exam).

At BITS Pilani, he has worked closely with the Leadership and over 200 faculty members from across 4 campuses – Pilani, Goa, Hyderabad and Dubai, and off campus locations namely –Pune, Delhi, Bangalore, Chennai and Kolkata. He deeply involved in Mission 2012 and Mission 2015 programs as part of Vision 2020 which has helped BITS Pilani bring in addition focus on research, modern pedagogy and processes related to faculty recruitment, admissions, infrastructure. He also worked with the leadership of Work Integrated Learning Program (WILP), a 30-year-old industry engagement program, in transforming the organization into a professionally managed unit that is more responsive to learners in the industry and their employers. Since March 2016, Manish heads the newly established Institutional Knowledge Analysis (IKA) cell at BITS Pilani to promote evidence-based decision making at all levels in the University.

Supervisor

Prof. Arya Kumar is Professor in the area of Economics and Finance and Dean Alumni Relations at Birla Institute of Technology & Science, Pilani. He has served as Director at Lal Bahadur Shastri Institute of Management New Delhi between November 2014 and December 2016. Prior to this he was Dean Student Welfare Division and Chief Entrepreneurship Development & IPR Unit BITS, Pilani. He was also coordinating the activities of Technology Business Incubator and Center for Entrepreneurial Leadership at BITS, Pilani. He did his M A (Hons.) Economics in **first class first** in the year 1977 and PhD in the area of **Financial Management of Higher Education in India- with an Intensive Study of BITS Pilani** in the year 1982, both from BITS-Pilani. He has a diversified experience for more than 39 years of serving in educational institutions, research organizations, banks and financial institutions.

His basic interests lie in Entrepreneurship, Strategic Management, Knowledge Management, Values in Management, Capital Markets and Financial Management. He has published four books in the area of Entrepreneurship, General Management, Ethics in Management, and Grassroots Entrepreneurship. He has published more than 50 research papers in national and international journals and has presented papers in international and national conferences in India and abroad. He has delivered more than 60 invited talks and chaired sessions in National and International conferences. Four students have successfully completed their PhD under his supervision and another three are pursuing in their advance stages. He has examined more than twelve PhD theses of different universities.

He has undertaken research projects in the area of entrepreneurship development funded by **National Entrepreneurship Network;** Strategies to Meet Manpower Requirements for Power Sector up to 2020 funded by **NSTMIS, Department of Science &Technology**, Government of India; educational excellence funded by **Aditya Birla Group** and successfully got grants for setting up Technology Business Incubator at BITS Pilani and for extending seed fund support to start-ups under **Technology Incubation & Development of Entrepreneurs (TIDE)** in the areas of Electronics and ICT.

He has served as Nominee Director on the Boards of a number of companies; expert member **Biotechnology Industry Research Assistance Council** (BIRAC), Department of Biotechnology Government of India; expert member of **UPSC**, member of **Governing Body of STIDE** of Central University of Rajasthan, member of committees for selection of faculty in different institutions, member of Boards of Studies of different universities.

He is a member of the **National Entrepreneurship Network (NEN) India Faculty Advisory Board**. He has been honoured with **distinguished faculty award** in recognition and appreciation of his dedication, interest, enthusiasm and attitude in accomplishing his assigned mission of teaching by BITSAA International in 2011, **Global excellence award for outstanding contribution to management education – 2012** by Management Teachers Consortium (MTC) and conferred with **Entrepreneurship Educator and Mentor Special Jury Award** for promotion of Entrepreneurship Education by NEN in collaboration with Ministry of Skill and Entrepreneurship Development, British Council and Intel.

Co-Supervisor

Dr Kanhaiya Singh is Senior Fellow (Chief Economist) at the National Council of Applied Economic Research, New Delhi. Dr Singh, is PhD in Economics from the Australian National University Canberra, Australia and also holds a Batchelor's Degree in Technology with Gold Medal from Indian School of Mines Dhanbad and a Masters Degree in Business Administration from R.A. Poddar Institute of Management Jaipur.

Dr. Singh started his career as Engineer and served Public Sector and Private Sector industries, and Central Government in senior positions. He was Deputy Director in the Department of Industrial Policy and Promotion before switching over to the area of Research in Economics. He has been having working relationship with various organizations including World Health Organisation (WFO); the Earth Institute of Columbia University; the Asian Development Bank; International Monetary Fund; Department for International Development (DFID), British High Commission; Canada International Development Agency (CIDA); Department of Foreign Affairs and Trade (DFAT), Government of Australia; FASID, Tokyo; and various organs of Government of India and Corporates.

Dr. Singh has interest in diverse fields of Economic Research and has produced Reports and Papers covering areas of Macroeconomic Modelling and Policy Analysis, Applied Econometrics and Forecasting, Input-Output Analysis, Sector Specific Analysis, Environmental Economics, Agriculture Trade & Food Security, Growth and Development Economics, Defence Economics, International Economics and Regional Integration.

He has several articles to his credit, published in international and national journals including Journal of Policy Modelling, Resource Policy, Brookings Working Paper Series, Journal of Asia Pacific Economy, Asia Pacific Economic Literature, International Journal of Social Economics, Asian Economic *Papers,* Journal of World Economic Review, Review of Applied Economics, Indian Economic Journal, the India Policy Forum, Economic and Political Weekly, and Margin the Journal of Applied Economic Research. He has also contributed several articles in edited books published by international publishers such as Edward Elgar, IMF, Oxford University Press, and Palgrave-Macmillan. Viewership and Downloads of his scholarly works runs in several

thousands. He also contributes to the policy debates by writing on issues of far reaching importance to the economic development in newspapers, periodicals and reviews.

Dr Singh has produced several reports of national importance including State Development Reports for Planning Commission of India, Comprehensives Economic Analysis of Defence Research and Development Organisation, Unaccounted Income and Wealth, Both inside and Outside India', Sponsored by the Ministry of Finance, Economic Impact of Indira Gandhi International Airport, and most Recently, Assessment of Employment impact of proposed large scale investment in Railways.

Dr Singh has visited several countries Australia, United States, Japan, France, China, South Korea, Singapore, Thailand, Philippines with the purpose academic discourses and advisory meetings. Dr. Singh has been visiting fellow at the Foundation for Advanced Studies on International Development (FASID)/ GRIPS, Tokyo (March 2003, September 2007, and February 2009).