

## Perhitungan DEA 2013

Results from DEAP Version 2.1

Instruction file = baru13.ins

Data file = baru13.dta

Output orientated DEA

Scale assumption: VRS

Slacks calculated using multi-stage method

### EFFICIENCY SUMMARY:

firm crste vrste scale

1	0.078	0.080	0.987	irs
2	0.005	0.005	0.984	-
3	0.357	1.000	0.357	irs
4	0.051	1.000	0.051	irs
5	0.110	0.278	0.396	irs
6	0.098	1.000	0.098	drs
7	1.000	1.000	1.000	-
8	1.000	1.000	1.000	-
9	0.038	0.236	0.159	drs
10	0.080	0.634	0.125	drs

mean 0.282 0.623 0.516

Note: crste = technical efficiency from CRS DEA

vrste = technical efficiency from VRS DEA

scale = scale efficiency = crste/vrste

Note also that all subsequent tables refer to VRS results

#### SUMMARY OF OUTPUT SLACKS:

firm output:	1	2
1	2328053.208	0.000
2	4185266.845	0.000
3	0.000	0.000
4	0.000	0.000
5	0.000	618829.011
6	0.000	0.000
7	0.000	0.000
8	0.000	0.000
9	0.000	2457651.963
10	0.000	28278505.706
mean	651332.005	3135498.668

#### SUMMARY OF INPUT SLACKS:

firm input:	1	2	3
1	0.000	0.000	850068.188
2	3976217.192	14786673.145	0.000
3	0.000	0.000	0.000
4	0.000	0.000	0.000

5	0.000	0.000	10515.373
6	0.000	0.000	0.000
7	0.000	0.000	0.000
8	0.000	0.000	0.000
9	11422078.050	0.000	2213949.174
10	0.000	2727595.763	30711.432

mean      1539829.524 1751426.891 310524.417

SUMMARY OF PEERS:

firm peers:

1	3	7	8
2	8	3	
3	3		
4	4		
5	3	7	8
6	6		
7	7		
8	8		
9	6	8	
10	6	8	

SUMMARY OF PEER WEIGHTS:

(in same order as above)

firm peer weights:

1 0.157 0.121 0.722

2 0.890 0.110

3 1.000

4 1.000

5 0.943 0.026 0.031

6 1.000

7 1.000

8 1.000

9 0.078 0.922

10 0.507 0.493

PEER COUNT SUMMARY:

(i.e., no. times each firm is a peer for another)

firm peer count:

1 0

2 0

3 3

4 0

5 0

6 2

7 2

8 5

9 0

10 0

SUMMARY OF OUTPUT TARGETS:

firm output:	1	2
1	5696002.69420303189.126	
2	6162407.32222563741.884	
3	29606.230	745749.690
4	38281.000	180838.000
5	391348.272	1903056.820
6	19805182.00041615455.000	
7	5774923.00016217513.000	
8	6917778.54025251043.020	
9	7928599.79826534582.839	
10	13448966.82033544339.343	

SUMMARY OF INPUT TARGETS:

firm input:	1	2	3
1	324964.000	192979.000	256577.812
2	383712.808	112422.855	152562.000
3	41344.370	10350.570	26994.730
4	19966.000	672727.000	533945.000
5	54487.000	35411.000	58883.627
6	36701030.000	9985041.000	4914425.000
7	91821.000	835660.000	1082900.000
8	425882.000	124995.000	168028.000
9	3271116.950	898366.000	540310.826
10	18809711.000	5121953.237	2573447.568

FIRM BY FIRM RESULTS:

Results for firm: 1

Technical efficiency = 0.080

Scale efficiency = 0.987 (irs)

PROJECTION SUMMARY:

variable		original	radial	slack	projected
		value	movement	movement	value
output	1	267765.000	3100184.485	2328053.208	5696002.694
output	2	1614182.000	18689007.126	0.000	20303189.126
input	1	324964.000	0.000	0.000	324964.000
input	2	192979.000	0.000	0.000	192979.000
input	3	1106646.000	0.000	-850068.188	256577.812

LISTING OF PEERS:

peer	lambda	weight
3	0.157	
7	0.121	
8	0.722	

Results for firm: 2

Technical efficiency = 0.005

Scale efficiency = 0.984 (crs)

PROJECTION SUMMARY:

variable		original	radial	slack	projected
		value	movement	movement	value
output	1	10446.000	1966694.477	4185266.845	6162407.322
output	2	119213.000	22444528.884	0.000	22563741.884

input	1	4359930.000	0.000	-3976217.192	383712.808
input	2	14899096.000	0.000	-14786673.145	112422.855
input	3	152562.000	0.000	0.000	152562.000

LISTING OF PEERS:

peer	lambda	weight
8	0.890	
3	0.110	

Results for firm: 3

Technical efficiency = 1.000

Scale efficiency = 0.357 (irs)

PROJECTION SUMMARY:

variable	original	radial	slack	projected
	value	movement	movement	value
output 1	29606.230	0.000	0.000	29606.230
output 2	745749.690	0.000	0.000	745749.690
input 1	41344.370	0.000	0.000	41344.370
input 2	10350.570	0.000	0.000	10350.570
input 3	26994.730	0.000	0.000	26994.730

LISTING OF PEERS:

peer	lambda	weight
3	1.000	

Results for firm: 4

Technical efficiency = 1.000

Scale efficiency = 0.051 (irs)

PROJECTION SUMMARY:

variable		original	radial	slack	projected
		value	movement	movement	value
output	1	38281.000	0.000	0.000	38281.000
output	2	180838.000	0.000	0.000	180838.000
input	1	19966.000	0.000	0.000	19966.000
input	2	672727.000	0.000	0.000	672727.000
input	3	533945.000	0.000	0.000	533945.000

LISTING OF PEERS:

peer	lambda	weight
4	1.000	

Results for firm: 5

Technical efficiency = 0.278

Scale efficiency = 0.396 (irs)

PROJECTION SUMMARY:

variable		original	radial	slack	projected
		value	movement	movement	value
output	1	108948.000	282400.272	0.000	391348.272
output	2	357518.000	926709.810	618829.011	1903056.820
input	1	54487.000	0.000	0.000	54487.000
input	2	35411.000	0.000	0.000	35411.000
input	3	69399.000	0.000	-10515.373	58883.627

LISTING OF PEERS:

peer	lambda	weight
3	0.943	
7	0.026	
8	0.031	



Results for firm: 6

Technical efficiency = 1.000

Scale efficiency = 0.098 (drs)

PROJECTION SUMMARY:

variable		original	radial	slack	projected
		value	movement	movement	value
output	1	19805182.000	0.000	0.000	19805182.000
output	2	41615455.000	0.000	0.000	41615455.000
input	1	36701030.000	0.000	0.000	36701030.000
input	2	9985041.000	0.000	0.000	9985041.000
input	3	4914425.000	0.000	0.000	4914425.000

LISTING OF PEERS:

peer	lambda	weight
6	1.000	

Results for firm: 7

Technical efficiency = 1.000

Scale efficiency = 1.000 (crs)

PROJECTION SUMMARY:

variable		original	radial	slack	projected
		value	movement	movement	value
output	1	5774923.000	0.000	0.000	5774923.000
output	2	16217513.000	0.000	0.000	16217513.000
input	1	91821.000	0.000	0.000	91821.000
input	2	835660.000	0.000	0.000	835660.000
input	3	1082900.000	0.000	0.000	1082900.000

LISTING OF PEERS:

peer	lambda	weight
7	1.000	

Results for firm: 8

Technical efficiency = 1.000

Scale efficiency = 1.000 (crs)

PROJECTION SUMMARY:

variable		original	radial	slack	projected
		value	movement	movement	value
output	1	6917778.540	0.000	0.000	6917778.540
output	2	25251043.020	0.000	0.000	25251043.020
input	1	425882.000	0.000	0.000	425882.000
input	2	124995.000	0.000	0.000	124995.000
input	3	168028.000	0.000	0.000	168028.000

LISTING OF PEERS:

peer lambda weight

8 1.000

Results for firm: 9

Technical efficiency = 0.236

Scale efficiency = 0.159 (drs)

PROJECTION SUMMARY:

variable		original	radial	slack	projected
		value	movement	movement	value
output	1	1870713.000	6057886.798	0.000	7928599.798
output	2	5680830.000	18396100.876	2457651.963	26534582.839
input	1	14693195.000	0.000	-11422078.050	3271116.950
input	2	898366.000	0.000	0.000	898366.000
input	3	2754260.000	0.000	-2213949.174	540310.826

LISTING OF PEERS:

peer lambda weight

6 0.078

8 0.922

Results for firm: 10

Technical efficiency = 0.634

Scale efficiency = 0.125 (drs)

PROJECTION SUMMARY:

variable		original	radial	slack	projected
		value	movement	movement	value
output	1	8528033.000	4920933.820	0.000	13448966.820
output	2	3339082.000	1926751.637	28278505.706	33544339.343
input	1	18809711.000	0.000	0.000	18809711.000
input	2	7849549.000	0.000	-2727595.763	5121953.237
input	3	2604159.000	0.000	-30711.432	2573447.568

LISTING OF PEERS:

peer lambda weight

6 0.507

8 0.493

## Perhitungan DEA 2014

Results from DEAP Version 2.1

Instruction file = baru14.ins

Data file = baru14.dta

Output orientated DEA

Scale assumption: VRS

Slacks calculated using multi-stage method

### EFFICIENCY SUMMARY:

firm crste vrste scale

1 1.000 1.000 1.000 -

2 1.000 1.000 1.000 -

3 0.456 0.633 0.721 drs

4 0.609 0.772 0.789 irs

5 1.000 1.000 1.000 -

6 1.000 1.000 1.000 -

7 0.755 1.000 0.755 irs

8 1.000 1.000 1.000 -

9 1.000 1.000 1.000 -

10 1.000 1.000 1.000 -

mean 0.882 0.940 0.927

Note: crste = technical efficiency from CRS DEA

vrste = technical efficiency from VRS DEA

scale = scale efficiency = crste/vrste

Note also that all subsequent tables refer to VRS results

SUMMARY OF OUTPUT SLACKS:

firm output:	1	2
1	0.000	0.000
2	0.000	0.000
3	15.442	0.000
4	0.000	367.581
5	0.000	0.000
6	0.000	0.000
7	0.000	0.000
8	0.000	0.000
9	0.000	0.000
10	0.000	0.000
mean	1.544	36.758

SUMMARY OF INPUT SLACKS:

firm input:	1	2	3
1	0.000	0.000	0.000
2	0.000	0.000	0.000
3	588.577	386.972	0.000
4	0.000	484.869	0.000
5	0.000	0.000	0.000
6	0.000	0.000	0.000
7	0.000	0.000	0.000
8	0.000	0.000	0.000

9	0.000	0.000	0.000
10	0.000	0.000	0.000
mean	58.858	87.184	0.000

SUMMARY OF PEERS:

firm peers:

1	1
2	2
3	5 2
4	5 2 1
5	5
6	6
7	7
8	8
9	9
10	10

SUMMARY OF PEER WEIGHTS:

(in same order as above)

firm peer weights:

1	1.000
2	1.000
3	0.338 0.662
4	0.338 0.627 0.036
5	1.000

6 1.000  
7 1.000  
8 1.000  
9 1.000  
10 1.000

PEER COUNT SUMMARY:

(i.e., no. times each firm is a peer for another)

firm peer count:

1 1  
2 2  
3 0  
4 0  
5 2  
6 0  
7 0  
8 0  
9 0  
10 0

SUMMARY OF OUTPUT TARGETS:

firm output:	1	2
1	385.000	532.000
2	12.000	562.000

3	50.197	674.563
4	63.497	673.401
5	125.000	895.000
6	21.000	349.000
7	2.000	321.000
8	407.000	561.000
9	1.000	870.000
10	12.000	354.000

SUMMARY OF INPUT TARGETS:

firm input:	1	2	3
1	2.000	157.000	850.000
2	124.000	520.000	10.000
3	202.423	426.028	34.000
4	198.000	413.131	64.000
5	356.000	242.000	81.000
6	33.000	55.000	937.000
7	360.000	11.000	777.000
8	696.000	682.000	440.000
9	831.000	6.000	442.000
10	658.000	7.000	676.000



FIRM BY FIRM RESULTS:

Results for firm: 1

Technical efficiency = 1.000

Scale efficiency = 1.000 (crs)

PROJECTION SUMMARY:

variable		original	radial	slack	projected
		value	movement	movement	value
output	1	385.000	0.000	0.000	385.000
output	2	532.000	0.000	0.000	532.000
input	1	2.000	0.000	0.000	2.000
input	2	157.000	0.000	0.000	157.000
input	3	850.000	0.000	0.000	850.000

LISTING OF PEERS:

peer	lambda	weight
1	1.000	

Results for firm: 2

Technical efficiency = 1.000

Scale efficiency = 1.000 (crs)

PROJECTION SUMMARY:

variable		original	radial	slack	projected
		value	movement	movement	value
output	1	12.000	0.000	0.000	12.000
output	2	562.000	0.000	0.000	562.000
input	1	124.000	0.000	0.000	124.000
input	2	520.000	0.000	0.000	520.000

input 3 10.000 0.000 0.000 10.000

LISTING OF PEERS:

peer lambda weight

2 1.000

Results for firm: 3

Technical efficiency = 0.633

Scale efficiency = 0.721 (drs)

PROJECTION SUMMARY:

variable		original	radial	slack	projected
		value	movement	movement	value
output	1	22.000	12.755	15.442	50.197
output	2	427.000	247.563	0.000	674.563
input	1	791.000	0.000	-588.577	202.423
input	2	813.000	0.000	-386.972	426.028
input	3	34.000	0.000	0.000	34.000

LISTING OF PEERS:

peer lambda weight

5 0.338

2 0.662

Results for firm: 4

Technical efficiency = 0.772

Scale efficiency = 0.789 (irs)

PROJECTION SUMMARY:

variable		original	radial	slack	projected
		value	movement	movement	value

output	1	49.000	14.497	0.000	63.497
output	2	236.000	69.820	367.581	673.401
input	1	198.000	0.000	0.000	198.000
input	2	898.000	0.000	-484.869	413.131
input	3	64.000	0.000	0.000	64.000

LISTING OF PEERS:

peer lambda weight

5 0.338

2 0.627

1 0.036

Results for firm: 5

Technical efficiency = 1.000

Scale efficiency = 1.000 (crs)

PROJECTION SUMMARY:

variable		original	radial	slack	projected
		value	movement	movement	value
output	1	125.000	0.000	0.000	125.000
output	2	895.000	0.000	0.000	895.000
input	1	356.000	0.000	0.000	356.000
input	2	242.000	0.000	0.000	242.000
input	3	81.000	0.000	0.000	81.000

LISTING OF PEERS:

peer lambda weight

5 1.000

Results for firm: 6

Technical efficiency = 1.000

Scale efficiency = 1.000 (crs)

PROJECTION SUMMARY:

variable		original	radial	slack	projected
		value	movement	movement	value
output	1	21.000	0.000	0.000	21.000
output	2	349.000	0.000	0.000	349.000
input	1	33.000	0.000	0.000	33.000
input	2	55.000	0.000	0.000	55.000
input	3	937.000	0.000	0.000	937.000

LISTING OF PEERS:

peer lambda weight

6 1.000

Results for firm: 7

Technical efficiency = 1.000

Scale efficiency = 0.755 (irs)

PROJECTION SUMMARY:

variable		original	radial	slack	projected
		value	movement	movement	value
output	1	2.000	0.000	0.000	2.000
output	2	321.000	0.000	0.000	321.000
input	1	360.000	0.000	0.000	360.000
input	2	11.000	0.000	0.000	11.000
input	3	777.000	0.000	0.000	777.000

LISTING OF PEERS:

peer lambda weight

7 1.000

Results for firm: 8

Technical efficiency = 1.000

Scale efficiency = 1.000 (crs)

PROJECTION SUMMARY:

variable		original	radial	slack	projected
		value	movement	movement	value
output	1	407.000	0.000	0.000	407.000
output	2	561.000	0.000	0.000	561.000
input	1	696.000	0.000	0.000	696.000
input	2	682.000	0.000	0.000	682.000
input	3	440.000	0.000	0.000	440.000

LISTING OF PEERS:

peer	lambda	weight
8	1.000	

Results for firm: 9

Technical efficiency = 1.000

Scale efficiency = 1.000 (crs)

PROJECTION SUMMARY:

variable		original	radial	slack	projected
		value	movement	movement	value
output	1	1.000	0.000	0.000	1.000
output	2	870.000	0.000	0.000	870.000
input	1	831.000	0.000	0.000	831.000
input	2	6.000	0.000	0.000	6.000
input	3	442.000	0.000	0.000	442.000

LISTING OF PEERS:

peer	lambda	weight
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9 1.000

Results for firm: 10

Technical efficiency = 1.000

Scale efficiency = 1.000 (crs)

PROJECTION SUMMARY:

variable		original	radial	slack	projected
		value	movement	movement	value
output	1	12.000	0.000	0.000	12.000
output	2	354.000	0.000	0.000	354.000
input	1	658.000	0.000	0.000	658.000
input	2	7.000	0.000	0.000	7.000
input	3	676.000	0.000	0.000	676.000

LISTING OF PEERS:

peer lambda weight

10 1.000

## PERHITUNGAN DEA 2015

Results from DEAP Version 2.1

Instruction file = baru15.ins

Data file = baru15.dta

Output orientated DEA

Scale assumption: VRS

Slacks calculated using multi-stage method

EFFICIENCY SUMMARY:

firm crste vrste scale

1 1.000 1.000 1.000 -

2 0.983 1.000 0.983 irs

3 0.664 1.000 0.664 irs

4 1.000 1.000 1.000 -

5 1.000 1.000 1.000 -

6 0.555 0.574 0.968 drs

7 0.308 1.000 0.308 irs

8 0.601 0.732 0.820 drs

9 0.915 0.915 1.000 -

10 1.000 1.000 1.000 -

mean 0.803 0.922 0.874

Note: crste = technical efficiency from CRS DEA

vrste = technical efficiency from VRS DEA

scale = scale efficiency = crste/vrste

Note also that all subsequent tables refer to VRS results

#### SUMMARY OF OUTPUT SLACKS:

firm output:	1	2
1	0.000	0.000
2	0.000	0.000
3	0.000	0.000
4	0.000	0.000
5	0.000	0.000
6	328.687	0.000
7	0.000	0.000
8	0.000	774.693
9	0.000	677.110
10	0.000	0.000
mean	32.869	145.180

#### SUMMARY OF INPUT SLACKS:



firm input:	1	2	3
1	0.000	0.000	0.000
2	0.000	0.000	0.000
3	0.000	0.000	0.000
4	0.000	0.000	0.000
5	0.000	0.000	0.000
6	8.630	28.565	0.000
7	0.000	0.000	0.000
8	495.370	174.435	0.000
9	0.000	649.000	57.000
10	0.000	0.000	0.000
mean	50.400	85.200	5.700

#### SUMMARY OF PEERS:

firm peers:

1	1
2	2
3	3
4	4
5	5
6	5 1
7	7
8	5 1
9	10
10	10

SUMMARY OF PEER WEIGHTS:

(in same order as above)

firm peer weights:

1	1.000
2	1.000
3	1.000
4	1.000
5	1.000
6	0.161 0.839
7	1.000
8	0.239 0.761
9	1.000
10	1.000

PEER COUNT SUMMARY:

(i.e., no. times each firm is a peer for another)

firm peer count:

1	2
2	0
3	0
4	0
5	2
6	0
7	0
8	0
9	0

10 1

SUMMARY OF OUTPUT TARGETS:

firm output:	1	2
1	433.000	978.000
2	11.000	421.000
3	15.000	262.000
4	109.000	593.000
5	153.000	956.000
6	387.957	974.461
7	6.000	265.000
8	366.043	972.739
9	516.000	969.000
10	516.000	969.000

SUMMARY OF INPUT TARGETS:

firm input:	1	2	3
1	3.000	21.000	540.000
2	191.000	860.000	38.000
3	714.000	253.000	33.000
4	2.000	622.000	58.000
5	658.000	61.000	80.000
6	108.370	27.435	466.000
7	136.000	22.000	436.000

8	159.630	30.565	430.000
9	2.000	137.000	811.000
10	2.000	137.000	811.000

FIRM BY FIRM RESULTS:

Results for firm: 1

Technical efficiency = 1.000

Scale efficiency = 1.000 (crs)

PROJECTION SUMMARY:

variable		original	radial	slack	projected
		value	movement	movement	value
output	1	433.000	0.000	0.000	433.000
output	2	978.000	0.000	0.000	978.000
input	1	3.000	0.000	0.000	3.000
input	2	21.000	0.000	0.000	21.000
input	3	540.000	0.000	0.000	540.000

LISTING OF PEERS:

peer	lambda	weight
1	1.000	

Results for firm: 2

Technical efficiency = 1.000

Scale efficiency = 0.983 (irs)

PROJECTION SUMMARY:

variable		original	radial	slack	projected
		value	movement	movement	value
output	1	11.000	0.000	0.000	11.000
output	2	421.000	0.000	0.000	421.000
input	1	191.000	0.000	0.000	191.000
input	2	860.000	0.000	0.000	860.000
input	3	38.000	0.000	0.000	38.000

LISTING OF PEERS:

peer	lambda	weight
2	1.000	

Results for firm: 3

Technical efficiency = 1.000

Scale efficiency = 0.664 (irs)

PROJECTION SUMMARY:

variable		original	radial	slack	projected
		value	movement	movement	value
output	1	15.000	0.000	0.000	15.000
output	2	262.000	0.000	0.000	262.000
input	1	714.000	0.000	0.000	714.000
input	2	253.000	0.000	0.000	253.000
input	3	33.000	0.000	0.000	33.000

LISTING OF PEERS:

peer	lambda	weight
3	1.000	

Results for firm: 4

Technical efficiency = 1.000

Scale efficiency = 1.000 (crs)

PROJECTION SUMMARY:

variable		original	radial	slack	projected
		value	movement	movement	value
output	1	109.000	0.000	0.000	109.000
output	2	593.000	0.000	0.000	593.000
input	1	2.000	0.000	0.000	2.000
input	2	622.000	0.000	0.000	622.000
input	3	58.000	0.000	0.000	58.000

LISTING OF PEERS:

peer lambda weight

4 1.000

Results for firm: 5

Technical efficiency = 1.000

Scale efficiency = 1.000 (crs)

PROJECTION SUMMARY:

variable		original	radial	slack	projected
		value	movement	movement	value
output	1	153.000	0.000	0.000	153.000
output	2	956.000	0.000	0.000	956.000
input	1	658.000	0.000	0.000	658.000
input	2	61.000	0.000	0.000	61.000
input	3	80.000	0.000	0.000	80.000

LISTING OF PEERS:

peer lambda weight

5 1.000

Results for firm: 6

Technical efficiency = 0.574

Scale efficiency = 0.968 (drs)

PROJECTION SUMMARY:

variable		original	radial	slack	projected
		value	movement	movement	value
output	1	34.000	25.270	328.687	387.957
output	2	559.000	415.461	0.000	974.461
input	1	117.000	0.000	-8.630	108.370
input	2	56.000	0.000	-28.565	27.435
input	3	466.000	0.000	0.000	466.000

LISTING OF PEERS:

peer lambda weight

5 0.161

1 0.839

Results for firm: 7

Technical efficiency = 1.000

Scale efficiency = 0.308 (irs)

PROJECTION SUMMARY:

variable		original	radial	slack	projected
		value	movement	movement	value
output	1	6.000	0.000	0.000	6.000
output	2	265.000	0.000	0.000	265.000
input	1	136.000	0.000	0.000	136.000
input	2	22.000	0.000	0.000	22.000

input 3 436.000 0.000 0.000 436.000

LISTING OF PEERS:

peer lambda weight

7 1.000

Results for firm: 8

Technical efficiency = 0.732

Scale efficiency = 0.820 (drs)

PROJECTION SUMMARY:

variable		original	radial	slack	projected
		value	movement	movement	value
output	1	268.000	98.043	0.000	366.043
output	2	145.000	53.046	774.693	972.739
input	1	655.000	0.000	-495.370	159.630
input	2	205.000	0.000	-174.435	30.565
input	3	430.000	0.000	0.000	430.000

LISTING OF PEERS:

peer lambda weight

5 0.239

1 0.761

Results for firm: 9

Technical efficiency = 0.915

Scale efficiency = 1.000 (crs)

PROJECTION SUMMARY:

variable		original	radial	slack	projected
		value	movement	movement	value



output	1	472.000	44.000	0.000	516.000
output	2	267.000	24.890	677.110	969.000
input	1	2.000	0.000	0.000	2.000
input	2	786.000	0.000	-649.000	137.000
input	3	868.000	0.000	-57.000	811.000

LISTING OF PEERS:

peer	lambda	weight
10	1.000	

Results for firm: 10

Technical efficiency = 1.000

Scale efficiency = 1.000 (crs)

PROJECTION SUMMARY:

variable		original	radial	slack	projected
		value	movement	movement	value
output	1	516.000	0.000	0.000	516.000
output	2	969.000	0.000	0.000	969.000
input	1	2.000	0.000	0.000	2.000
input	2	137.000	0.000	0.000	137.000
input	3	811.000	0.000	0.000	811.000

LISTING OF PEERS:

peer	lambda	weight
10	1.000	

## PERHITUNGAN DEA 2016

Results from DEAP Version 2.1

Instruction file = baru16.ins

Data file = baru16.dta

Output orientated DEA

Scale assumption: VRS

Slacks calculated using multi-stage method

EFFICIENCY SUMMARY:

firm crste vrste scale

1 1.000 1.000 1.000 -

2 0.395 0.397 0.995 irs

3 1.000 1.000 1.000 -

4 0.176 0.210 0.840 drs

5 0.291 0.323 0.901 drs

6 0.167 0.167 0.999 -

7 1.000 1.000 1.000 -

8 1.000 1.000 1.000 -

9 1.000 1.000 1.000 -

10 1.000 1.000 1.000 -

mean 0.703 0.710 0.973

Note: crste = technical efficiency from CRS DEA

vrste = technical efficiency from VRS DEA

scale = scale efficiency = crste/vrste

Note also that all subsequent tables refer to VRS results

#### SUMMARY OF OUTPUT SLACKS:

firm output:	1	2
1	0.000	0.000
2	278.778	0.000
3	0.000	0.000
4	0.000	103.364
5	0.000	275.769
6	250.104	0.000
7	0.000	0.000
8	0.000	0.000
9	0.000	0.000
10	0.000	0.000

mean 52.888 37.913

#### SUMMARY OF INPUT SLACKS:

firm input:	1	2	3
1	0.000	0.000	0.000
2	0.000	307.632	0.000
3	0.000	0.000	0.000
4	0.000	418.500	629.000
5	858.000	63.828	0.000
6	7.250	0.000	0.000
7	0.000	0.000	0.000
8	0.000	0.000	0.000
9	0.000	0.000	0.000
10	0.000	0.000	0.000
mean	86.525	78.996	62.900

#### SUMMARY OF PEERS:

firm peers:

1 1  
2 1 3 10  
3 3  
4 9 10  
5 9 1  
6 8 9 3  
7 7  
8 8  
9 9  
10 10

SUMMARY OF PEER WEIGHTS:

(in same order as above)

firm peer weights:

1	1.000
2	0.639 0.314 0.047
3	1.000
4	0.500 0.500
5	0.406 0.594
6	0.597 0.372 0.031
7	1.000
8	1.000
9	1.000
10	1.000

PEER COUNT SUMMARY:

(i.e., no. times each firm is a peer for another)

firm peer count:

1	2
2	0
3	2
4	0
5	0
6	0
7	0
8	1
9	3

10 2

SUMMARY OF OUTPUT TARGETS:

firm output:	1	2
1	453.000	115.000
2	316.554	251.844
3	12.000	450.000
4	628.000	660.000
5	578.816	285.054
6	435.500	340.889
7	10.000	257.000
8	254.000	215.000
9	763.000	534.000
10	493.000	786.000

SUMMARY OF INPUT TARGETS:

firm input:	1	2	3
1	3.000	397.000	23.000
2	225.000	373.368	34.000
3	711.000	250.000	38.000
4	2.000	495.500	209.000
5	3.000	284.172	120.000
6	452.750	64.000	166.000
7	277.000	24.000	393.000

8	719.000	20.000	113.000
9	3.000	119.000	262.000
10	1.000	872.000	156.000

FIRM BY FIRM RESULTS:

Results for firm: 1

Technical efficiency = 1.000

Scale efficiency = 1.000 (crs)

PROJECTION SUMMARY:

variable		original	radial	slack	projected
		value	movement	movement	value
output	1	453.000	0.000	0.000	453.000
output	2	115.000	0.000	0.000	115.000
input	1	3.000	0.000	0.000	3.000
input	2	397.000	0.000	0.000	397.000
input	3	23.000	0.000	0.000	23.000

LISTING OF PEERS:

peer	lambda	weight
1	1.000	

Results for firm: 2

Technical efficiency = 0.397

Scale efficiency = 0.995 (irs)

PROJECTION SUMMARY:

variable		original	radial	slack	projected
		value	movement	movement	value
output	1	15.000	22.777	278.778	316.554
output	2	100.000	151.844	0.000	251.844
input	1	225.000	0.000	0.000	225.000
input	2	681.000	0.000	-307.632	373.368
input	3	34.000	0.000	0.000	34.000

LISTING OF PEERS:

peer	lambda	weight
1	0.639	
3	0.314	
10	0.047	

Results for firm: 3

Technical efficiency = 1.000

Scale efficiency = 1.000 (crs)

PROJECTION SUMMARY:

variable		original	radial	slack	projected
		value	movement	movement	value
output	1	12.000	0.000	0.000	12.000
output	2	450.000	0.000	0.000	450.000
input	1	711.000	0.000	0.000	711.000
input	2	250.000	0.000	0.000	250.000
input	3	38.000	0.000	0.000	38.000

LISTING OF PEERS:

peer	lambda	weight
3	1.000	



Results for firm: 4

Technical efficiency = 0.210

Scale efficiency = 0.840 (drs)

PROJECTION SUMMARY:

variable		original	radial	slack	projected
		value	movement	movement	value
output	1	132.000	496.000	0.000	628.000
output	2	117.000	439.636	103.364	660.000
input	1	2.000	0.000	0.000	2.000
input	2	914.000	0.000	-418.500	495.500
input	3	838.000	0.000	-629.000	209.000

LISTING OF PEERS:

peer	lambda	weight
9	0.500	
10	0.500	

Results for firm: 5

Technical efficiency = 0.323

Scale efficiency = 0.901 (drs)

PROJECTION SUMMARY:

variable		original	radial	slack	projected
		value	movement	movement	value
output	1	187.000	391.816	0.000	578.816
output	2	3.000	6.286	275.769	285.054
input	1	861.000	0.000	-858.000	3.000
input	2	348.000	0.000	-63.828	284.172
input	3	120.000	0.000	0.000	120.000

LISTING OF PEERS:

peer lambda weight

9 0.406

1 0.594

Results for firm: 6

Technical efficiency = 0.167

Scale efficiency = 0.999 (crs)

PROJECTION SUMMARY:

variable		original	radial	slack	projected
		value	movement	movement	value
output	1	31.000	154.396	250.104	435.500
output	2	57.000	283.889	0.000	340.889
input	1	460.000	0.000	-7.250	452.750
input	2	64.000	0.000	0.000	64.000
input	3	166.000	0.000	0.000	166.000

LISTING OF PEERS:

peer lambda weight

8 0.597

9 0.372

3 0.031

Results for firm: 7

Technical efficiency = 1.000

Scale efficiency = 1.000 (crs)

PROJECTION SUMMARY:

variable		original	radial	slack	projected
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		value	movement	movement	value
output	1	10.000	0.000	0.000	10.000
output	2	257.000	0.000	0.000	257.000
input	1	277.000	0.000	0.000	277.000
input	2	24.000	0.000	0.000	24.000
input	3	393.000	0.000	0.000	393.000

LISTING OF PEERS:

peer	lambda	weight
7	1.000	

Results for firm: 8

Technical efficiency = 1.000

Scale efficiency = 1.000 (crs)

PROJECTION SUMMARY:

variable		original	radial	slack	projected
		value	movement	movement	value
output	1	254.000	0.000	0.000	254.000
output	2	215.000	0.000	0.000	215.000
input	1	719.000	0.000	0.000	719.000
input	2	20.000	0.000	0.000	20.000
input	3	113.000	0.000	0.000	113.000

LISTING OF PEERS:

peer	lambda	weight
8	1.000	

Results for firm: 9

Technical efficiency = 1.000

Scale efficiency = 1.000 (crs)

PROJECTION SUMMARY:

variable		original	radial	slack	projected
		value	movement	movement	value
output	1	763.000	0.000	0.000	763.000
output	2	534.000	0.000	0.000	534.000
input	1	3.000	0.000	0.000	3.000
input	2	119.000	0.000	0.000	119.000
input	3	262.000	0.000	0.000	262.000

LISTING OF PEERS:

peer	lambda	weight
9	1.000	

Results for firm: 10

Technical efficiency = 1.000

Scale efficiency = 1.000 (crs)

PROJECTION SUMMARY:

variable		original	radial	slack	projected
		value	movement	movement	value
output	1	493.000	0.000	0.000	493.000
output	2	786.000	0.000	0.000	786.000
input	1	1.000	0.000	0.000	1.000
input	2	872.000	0.000	0.000	872.000
input	3	156.000	0.000	0.000	156.000

LISTING OF PEERS:

peer	lambda	weight
10	1.000	

## PERHITUNGAN DEA 2017

Results from DEAP Version 2.1

Instruction file = baru17.ins

Data file = baru17.dta

Output orientated DEA

Scale assumption: VRS

Slacks calculated using multi-stage method

EFFICIENCY SUMMARY:

firm crste vrste scale

1	0.184	0.496	0.371	drs
2	1.000	1.000	1.000	-
3	1.000	1.000	1.000	-
4	0.340	0.432	0.786	drs
5	0.137	0.536	0.256	drs
6	0.447	0.498	0.897	drs
7	1.000	1.000	1.000	-
8	0.753	0.781	0.965	drs
9	0.266	1.000	0.266	irs
10	1.000	1.000	1.000	-

mean 0.613 0.774 0.754

Note: crste = technical efficiency from CRS DEA

vrste = technical efficiency from VRS DEA

scale = scale efficiency = crste/vrste

Note also that all subsequent tables refer to VRS results

#### SUMMARY OF OUTPUT SLACKS:

firm output:	1	2
1	98.810	0.000
2	0.000	0.000
3	0.000	0.000
4	0.000	0.000
5	1.215	0.000
6	0.000	0.000
7	0.000	0.000
8	0.000	2.322
9	0.000	0.000
10	0.000	0.000

mean 10.003 0.232

#### SUMMARY OF INPUT SLACKS:

firm input:	1	2	3
1	0.000	595.547	453.019
2	0.000	0.000	0.000
3	0.000	0.000	0.000
4	333.529	159.347	0.000
5	804.000	229.000	335.000
6	256.406	0.000	213.261
7	0.000	0.000	0.000
8	733.000	625.000	3.000
9	0.000	0.000	0.000
10	0.000	0.000	0.000
mean	212.694	160.889	100.428

#### SUMMARY OF PEERS:

firm peers:

1	10	3
2	2	
3	3	
4	10	2 3
5	3	
6	3	10 7
7	7	
8	10	
9	9	
10	10	

SUMMARY OF PEER WEIGHTS:

(in same order as above)

firm peer weights:

1	0.943	0.057
2	1.000	
3	1.000	
4	0.080	0.313 0.608
5	1.000	
6	0.348	0.135 0.517
7	1.000	
8	1.000	
9	1.000	
10	1.000	

PEER COUNT SUMMARY:

(i.e., no. times each firm is a peer for another)

firm peer count:

1	0
2	1
3	4
4	0
5	0
6	0
7	1
8	0



9 0

10 4

#### SUMMARY OF OUTPUT TARGETS:

firm output:	1	2
1	466.113	793.132
2	2.000	582.000
3	18.000	912.000
4	50.939	798.810
5	18.000	912.000
6	74.309	779.240
7	3.000	688.000
8	493.000	786.000
9	2.000	17.000
10	493.000	786.000

#### SUMMARY OF INPUT TARGETS:

firm input:	1	2	3
1	9.000	324.453	80.981
2	32.000	348.000	5.000
3	109.000	82.000	64.000
4	76.471	185.653	47.000
5	109.000	82.000	64.000
6	229.594	81.000	444.739
7	370.000	13.000	796.000

8	3.000	339.000	82.000
9	675.000	6.000	618.000
10	3.000	339.000	82.000

FIRM BY FIRM RESULTS:

Results for firm: 1

Technical efficiency = 0.496

Scale efficiency = 0.371 (drs)

PROJECTION SUMMARY:

variable		original	radial	slack	projected
		value	movement	movement	value
output	1	182.000	185.303	98.810	466.113
output	2	393.000	400.132	0.000	793.132
input	1	9.000	0.000	0.000	9.000
input	2	920.000	0.000	-595.547	324.453
input	3	534.000	0.000	-453.019	80.981

LISTING OF PEERS:

peer lambda weight

10 0.943

3 0.057

Results for firm: 2

Technical efficiency = 1.000

Scale efficiency = 1.000 (crs)

PROJECTION SUMMARY:

variable		original	radial	slack	projected
		value	movement	movement	value
output	1	2.000	0.000	0.000	2.000
output	2	582.000	0.000	0.000	582.000
input	1	32.000	0.000	0.000	32.000
input	2	348.000	0.000	0.000	348.000
input	3	5.000	0.000	0.000	5.000

LISTING OF PEERS:

peer	lambda	weight
2	1.000	

Results for firm: 3

Technical efficiency = 1.000

Scale efficiency = 1.000 (crs)

PROJECTION SUMMARY:

variable		original	radial	slack	projected
		value	movement	movement	value
output	1	18.000	0.000	0.000	18.000
output	2	912.000	0.000	0.000	912.000
input	1	109.000	0.000	0.000	109.000
input	2	82.000	0.000	0.000	82.000
input	3	64.000	0.000	0.000	64.000

LISTING OF PEERS:

peer	lambda	weight
3	1.000	

Results for firm: 4

Technical efficiency = 0.432

Scale efficiency = 0.786 (drs)

PROJECTION SUMMARY:

variable		original	radial	slack	projected
		value	movement	movement	value
output	1	22.000	28.939	0.000	50.939
output	2	345.000	453.810	0.000	798.810
input	1	410.000	0.000	-333.529	76.471
input	2	345.000	0.000	-159.347	185.653
input	3	47.000	0.000	0.000	47.000

LISTING OF PEERS:

peer	lambda	weight
10	0.080	
2	0.313	
3	0.608	

Results for firm: 5

Technical efficiency = 0.536

Scale efficiency = 0.256 (drs)

PROJECTION SUMMARY:

variable		original	radial	slack	projected
		value	movement	movement	value
output	1	9.000	7.785	1.215	18.000
output	2	489.000	423.000	0.000	912.000
input	1	913.000	0.000	-804.000	109.000
input	2	311.000	0.000	-229.000	82.000
input	3	399.000	0.000	-335.000	64.000

LISTING OF PEERS:

peer lambda weight

3 1.000

Results for firm: 6

Technical efficiency = 0.498

Scale efficiency = 0.897 (drs)

PROJECTION SUMMARY:

variable		original	radial	slack	projected
		value	movement	movement	value
output	1	37.000	37.309	0.000	74.309
output	2	388.000	391.240	0.000	779.240
input	1	486.000	0.000	-256.406	229.594
input	2	81.000	0.000	0.000	81.000
input	3	658.000	0.000	-213.261	444.739

LISTING OF PEERS:

peer lambda weight

3 0.348

10 0.135

7 0.517

Results for firm: 7

Technical efficiency = 1.000

Scale efficiency = 1.000 (crs)

PROJECTION SUMMARY:

variable		original	radial	slack	projected
		value	movement	movement	value

output	1	3.000	0.000	0.000	3.000
output	2	688.000	0.000	0.000	688.000
input	1	370.000	0.000	0.000	370.000
input	2	13.000	0.000	0.000	13.000
input	3	796.000	0.000	0.000	796.000

LISTING OF PEERS:

peer	lambda	weight
7	1.000	

Results for firm: 8

Technical efficiency = 0.781

Scale efficiency = 0.965 (drs)

PROJECTION SUMMARY:

variable	original	radial	slack	projected
	value	movement	movement	value
output 1	385.000	108.000	0.000	493.000
output 2	612.000	171.678	2.322	786.000
input 1	736.000	0.000	-733.000	3.000
input 2	964.000	0.000	-625.000	339.000
input 3	85.000	0.000	-3.000	82.000

LISTING OF PEERS:

peer	lambda	weight
10	1.000	

Results for firm: 9

Technical efficiency = 1.000

Scale efficiency = 0.266 (irs)

PROJECTION SUMMARY:

variable		original	radial	slack	projected
		value	movement	movement	value
output	1	2.000	0.000	0.000	2.000
output	2	17.000	0.000	0.000	17.000
input	1	675.000	0.000	0.000	675.000
input	2	6.000	0.000	0.000	6.000
input	3	618.000	0.000	0.000	618.000

LISTING OF PEERS:

peer	lambda	weight
9	1.000	

Results for firm: 10

Technical efficiency = 1.000

Scale efficiency = 1.000 (crs)

PROJECTION SUMMARY:

variable		original	radial	slack	projected
		value	movement	movement	value
output	1	493.000	0.000	0.000	493.000
output	2	786.000	0.000	0.000	786.000
input	1	3.000	0.000	0.000	3.000
input	2	339.000	0.000	0.000	339.000
input	3	82.000	0.000	0.000	82.000

LISTING OF PEERS:

peer	lambda	weight
10	1.000	

