In [2]:

import pandas as pd
import numpy as np

In [64]:

odis = pd.read_csv("captains_ODI.csv")

In [65]:

odis.head(5)

Out[65]:

	Player	Country	Career	Matches	Won	Lost	Tied	Toss
0	Ponting, R T	Australia	1995-2012	230	165	51	14	124
1	Fleming, S P	New Zealand	1994-2007	218	98	106	14	105
2	Ranatunga, A	Sri Lanka	1982-1999	193	89	95	9	102
3	Dhoni, M S*	India	2004-	186	103	68	15	88
4	Border, A R	Australia	1979-1994	178	107	67	4	86

In [66]:

odis.sort(["Won"], ascending = False)[0:5]

Out[66]:

	Player	Country	Career	Matches	Won	Lost	Tied	Toss
0	Ponting, R T	Australia	1995-2012	230	165	51	14	124
4	Border, A R	Australia	1979-1994	178	107	67	4	86
3	Dhoni, M S*	India	2004-	186	103	68	15	88
8	Cronje, W J	South Africa	1992-2000	140	99	37	4	74
1	Fleming, S P	New Zealand	1994-2007	218	98	106	14	105

In [69]:

odis.sort(["Country", "Won"], ascending = [True, False])[0:10]

Out[69]:

	Player	Country	Career	Matches	Won	Lost	Tied	Toss
82	Mohammad Nabi*	Afghanistan	2009-	28	13	15	0	12
92	Nawroz Mangal*	Afghanistan	2009-	22	12	10	0	11
0	Ponting, R T	Australia	1995- 2012	230	165	51	14	124
4	Border, A R	Australia	1979- 1994	178	107	67	4	86
14	Waugh, S R	Australia	1986- 2002	106	67	35	4	48
26	Clarke, M J	Australia	2003- 2015	74	50	21	3	30
34	Taylor, M A	Australia	1989- 1997	67	36	30	1	34
51	Chappell, G S	Australia	1971- 1983	49	21	25	3	29
53	Hughes, K J	Australia	1977- 1985	49	21	23	5	31
50	Wessels, K C	Australia	1983- 1994	50	20	28	2	23

In [9]:

top20 = odis.sort(["Won"], ascending = False)[0:20]

In [10]:

top20

Out[10]:

	Player	Country	Career	Matches	Won	Lost	Tied	Toss
0	Ponting, R T	Australia	1995- 2012	230	165	51	14	124
4	Border, A R	Australia	1979- 1994	178	107	67	4	86
3	Dhoni, M S*	India	2004-	186	103	68	15	88
8	Cronje, W J	South Africa	1992- 2000	140	99	37	4	74
1	Fleming, S P	New Zealand	1994- 2007	218	98	106	14	105
6	Smith, G C	South Africa	2002- 2013	149	91	51	7	74
2	Ranatunga, A	Sri Lanka	1982- 1999	193	89	95	9	102
5	Azharuddin, M	India	1985- 2000	174	89	77	8	96
7	Ganguly, S C	India	1992- 2007	147	76	66	5	74
9	Imran Khan	Pakistan	1974- 1992	139	75	59	5	70
10	Jayawardene, D P M	Sri Lanka	1998- 2015	130	72	49	9	60
14	Waugh, S R	Australia	1986- 2002	106	67	35	4	48
15	Richards, I V A	West Indies	1975- 1991	105	67	36	2	43
13	Wasim Akram	Pakistan	1984- 2003	109	66	41	2	58
12	Jayasuriya, S T	Sri Lanka	1989- 2011	117	65	47	5	61
21	Lloyd, C H	West Indies	1973- 1985	84	64	18	2	41
16	Pollock, S M	South Africa	1996- 2008	98	60	34	4	49
11	Lara, B C	West Indies	1990- 2007	125	59	59	7	57
17	Inzamam-ul-Haq	Pakistan	1991- 2007	89	52	33	4	50

26 Clarke, M J Australia	2003- 2015	74	50	21	3	30	
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In [72]:

top20.groupby(["Country"]).count()

Out[72]:

	Player	Career	Matches	Won	Lost	Tied	Toss
Country							
Australia	4	4	4	4	4	4	4
India	3	3	3	3	3	3	3
New Zealand	1	1	1	1	1	1	1
Pakistan	3	3	3	3	3	3	3
South Africa	3	3	3	3	3	3	3
Sri Lanka	3	3	3	3	3	3	3
West Indies	3	3	3	3	3	3	3

In [74]:

top20_a = top20[["Country","Won"]]

In [78]:

top20_a

Out[78]:

	Country	Won
0	Australia	165
4	Australia	107
3	India	103
8	South Africa	99
1	New Zealand	98
6	South Africa	91
2	Sri Lanka	89
5	India	89
7	India	76
9	Pakistan	75
10	Sri Lanka	72
14	Australia	67
15	West Indies	67
13	Pakistan	66
12	Sri Lanka	65
21	West Indies	64
16	South Africa	60
11	West Indies	59
17	Pakistan	52
26	Australia	50

In [77]:

```
top20_a.groupby( ["Country"] ).sum()
```

Out[77]:

	Won
Country	
Australia	389
India	268
New Zealand	98
Pakistan	193
South Africa	250
Sri Lanka	226
West Indies	190

In [13]:

In [79]:

```
odis["Won_pc1"] = odis["Won"] / odis["Matches"]
```

In [80]:

odis.head()

Out[80]:

	Player	Country	Career	Matches	Won	Lost	Tied	Toss	Won_pc1
0	Ponting, R T	Australia	1995- 2012	230	165	51	14	124	0.717391
1	Fleming, S P	New Zealand	1994- 2007	218	98	106	14	105	0.449541
2	Ranatunga, A	Sri Lanka	1982- 1999	193	89	95	9	102	0.461140
3	Dhoni, M S*	India	2004-	186	103	68	15	88	0.553763
4	Border, A R	Australia	1979- 1994	178	107	67	4	86	0.601124

In [15]:

In [16]:

odis.head()

Out[16]:

	Player	Country	Career	Matches	Won	Lost	Tied	Toss	Won_pc
0	Ponting, R T	Australia	1995- 2012	230	165	51	14	124	71.74
1	Fleming, S P	New Zealand	1994- 2007	218	98	106	14	105	44.95
2	Ranatunga, A	Sri Lanka	1982- 1999	193	89	95	9	102	46.11
3	Dhoni, M S*	India	2004-	186	103	68	15	88	55.38
4	Border, A R	Australia	1979- 1994	178	107	67	4	86	60.11

In [17]:

In [18]:

odis.head()

Out[18]:

	Player	Country	Career	Matches	Won	Lost	Tied	Toss	Won_pc	Los
0	Ponting, R T	Australia	1995- 2012	230	165	51	14	124	71.74	22.
1	Fleming, S P	New Zealand	1994- 2007	218	98	106	14	105	44.95	48.6
2	Ranatunga, A	Sri Lanka	1982- 1999	193	89	95	9	102	46.11	49.2
3	Dhoni, M S*	India	2004-	186	103	68	15	88	55.38	36.
4	Border, A R	Australia	1979- 1994	178	107	67	4	86	60.11	37.6

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In [20]:

odis.sort(["Won_pc"], ascending = False)[:10]

Out[20]:

	Player	Country	Career	Matches	Won	Lost	Tied	Toss	Won_pc	L
21	Lloyd, C H	West Indies	1973- 1985	84	64	18	2	41	76.19	2
0	Ponting, R T	Australia	1995- 2012	230	165	51	14	124	71.74	2
81	Mashrafe Bin Mortaza*	Bangladesh	2001-	28	20	8	0	11	71.43	2
8	Cronje, W J	South Africa	1992- 2000	140	99	37	4	74	70.71	2
63	Gatting, M W	England	1977- 1993	37	26	11	0	18	70.27	2
26	Clarke, M J	Australia	2003- 2015	74	50	21	3	30	67.57	2
68	Shoaib Malik*	Pakistan	1999-	36	24	12	0	17	66.67	3
15	Richards, I V A	West Indies	1975- 1991	105	67	36	2	43	63.81	3.
14	Waugh, S R	Australia	1986- 2002	106	67	35	4	48	63.21	3
70	Saleem Malik	Pakistan	1982- 1999	34	21	11	2	14	61.76	3

In [22]:

Let's consider only the captains that have played atleast 100 matches....
odis100 = odis[odis.Matches > 50]

odis100[0:10]

Out[23]:

	Player	Country	Career	Matches	Won	Lost	Tied	Toss	Won_pc	Los
0	Ponting, R T	Australia	1995- 2012	230	165	51	14	124	71.74	22.
1	Fleming, S P	New Zealand	1994- 2007	218	98	106	14	105	44.95	48.
2	Ranatunga, A	Sri Lanka	1982- 1999	193	89	95	9	102	46.11	49.
3	Dhoni, M S*	India	2004-	186	103	68	15	88	55.38	36.
4	Border, A R	Australia	1979- 1994	178	107	67	4	86	60.11	37.
5	Azharuddin, M	India	1985- 2000	174	89	77	8	96	51.15	44.
6	Smith, G C	South Africa	2002- 2013	149	91	51	7	74	61.07	34.
7	Ganguly, S C	India	1992- 2007	147	76	66	5	74	51.70	44.
8	Cronje, W J	South Africa	1992- 2000	140	99	37	4	74	70.71	26.
9	Imran Khan	Pakistan	1974- 1992	139	75	59	5	70	53.96	42.

↓

In [24]:

odis100.sort(["Won_pc"], ascending = False)[:10]

Out[24]:

	Player	Country	Career	Matches	Won	Lost	Tied	Toss	Won_pc	Lost
21	Lloyd, C H	West Indies	1973- 1985	84	64	18	2	41	76.19	21.4
0	Ponting, R T	Australia	1995- 2012	230	165	51	14	124	71.74	22.1
8	Cronje, W J	South Africa	1992- 2000	140	99	37	4	74	70.71	26.4
26	Clarke, M J	Australia	2003- 2015	74	50	21	3	30	67.57	28.3
15	Richards, I V A	West Indies	1975- 1991	105	67	36	2	43	63.81	34.2
14	Waugh, S R	Australia	1986- 2002	106	67	35	4	48	63.21	33.0
16	Pollock, S M	South Africa	1996- 2008	98	60	34	4	49	61.22	34.6
6	Smith, G C	South Africa	2002- 2013	149	91	51	7	74	61.07	34.2
13	Wasim Akram	Pakistan	1984- 2003	109	66	41	2	58	60.55	37.6
4	Border, A R	Australia	1979- 1994	178	107	67	4	86	60.11	37.6

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In [25]:

odis100.sort(["Lost_pc"], ascending = False)[:10]

Out[25]:

	Player	Country	Career	Matches	Won	Lost	Tied	Toss	Won_po
39	Mendis, L R D	Sri Lanka	1975- 1989	61	11	46	4	29	18.03
43	Chigumbura, E*	Zimbabwe	2004-	56	16	40	0	36	28.57
32	Utseya, P*	Zimbabwe	2004-	69	20	48	1	39	28.99
33	Streak, H H	Zimbabwe	1993- 2005	68	18	47	3	29	26.47
47	Flower, A	Zimbabwe	1992- 2003	52	12	35	5	28	23.08
20	Campbell, A D R	Zimbabwe	1992- 2003	86	30	52	4	42	34.88
28	Tikolo, S O	Kenya	1996- 2014	73	27	44	2	36	36.99
29	Tendulkar, S R	India	1989- 2012	72	23	42	7	41	31.94
31	Habibul Bashar	Bangladesh	1995- 2007	69	29	40	0	31	42.03
46	Gayle, C H*	West Indies	1999-	53	17	30	6	26	32.08

◆

In [40]:

odis100.sort(["Toss_pc"], ascending = False)[1:10]

Out[40]:

	Player	Country	Career	Matches	Won	Lost	Tied	Toss	Won_pc	
23	Dravid, R	India	1996- 2011	79	42	33	4	46	53.16	4
22	Vettori, D L	New Zealand	1997- 2015	82	41	33	8	47	50.00	
29	Tendulkar, S R	India	1989- 2012	72	23	42	7	41	31.94	ļ
32	Utseya, P*	Zimbabwe	2004-	69	20	48	1	39	28.99	$\left[\cdot \right]$
30	Cook, A N*	England	2006-	69	36	30	3	39	52.17	Ľ
17	Inzamam- ul-Haq	Pakistan	1991- 2007	89	52	33	4	50	58.43	,
5	Azharuddin, M	India	1985- 2000	174	89	77	8	96	51.15	4
24	de Villiers, A B*	South Africa	2005-	76	44	28	4	41	57.89	,
0	Ponting, R T	Australia	1995- 2012	230	165	51	14	124	71.74	

In [43]:

tests = pd.read_csv("captains_Test.csv")

In [45]:

tests.head(10)

Out[45]:

	Player	Country	Career	Tests	Won	Lost	Drawn	Toss
0	Smith, G C	South Africa	2002-2014	109	53	29	27	58
1	Border, A R	Australia	1978-1994	93	32	22	38	47
2	Fleming, S P	New Zealand	1994-2008	80	28	27	25	38
3	Ponting, R T	Australia	1995-2012	77	48	16	13	37
4	Lloyd, C H	West Indies	1966-1984	74	36	12	26	35
5	Dhoni, M S*	India	2005-	60	27	18	15	27
6	Waugh, S R	Australia	1985-2004	57	41	9	7	31
7	Ranatunga, A	Sri Lanka	1982-2000	56	12	19	25	29
8	Atherton, M A	England	1989-2001	54	13	21	20	23
9	Cronje, W J	South Africa	1992-2000	53	27	11	15	22

In [49]:

In [51]:

tests.head(10)

Out[51]:

	Player	Country	Career	Tests	Won	Lost	Drawn	Toss	Won_pc
0	Smith, G C	South Africa	2002- 2014	109	53	29	27	58	48.623853
1	Border, A R	Australia	1978- 1994	93	32	22	38	47	34.408602
2	Fleming, S P	New Zealand	1994- 2008	80	28	27	25	38	35.000000
3	Ponting, R T	Australia	1995- 2012	77	48	16	13	37	62.337662
4	Lloyd, C H	West Indies	1966- 1984	74	36	12	26	35	48.648649
5	Dhoni, M S*	India	2005-	60	27	18	15	27	45.000000
6	Waugh, S R	Australia	1985- 2004	57	41	9	7	31	71.929825
7	Ranatunga, A	Sri Lanka	1982- 2000	56	12	19	25	29	21.428571
8	Atherton, M A	England	1989- 2001	54	13	21	20	23	24.074074
9	Cronje, W J	South Africa	1992- 2000	53	27	11	15	22	50.943396

```
In [53]:
```

```
tests.merge( odis, on = ['Player'], how = 'inner' )
```

Out[53]:

	Player	Country_x	Career_x	Tests	Won_x	Lost_x	Drawn	Toss_x
0	Smith, G C	South Africa	2002- 2014	109	53	29	27	58
1	Border, A R	Australia	1978- 1994	93	32	22	38	47
2	Fleming, S P	New Zealand	1994- 2008	80	28	27	25	38
3	Ponting, R T	Australia	1995- 2012	77	48	16	13	37
4	Lloyd, C H	West Indies	1966- 1984	74	36	12	26	35
5	Dhoni, M S*	India	2005-	60	27	18	15	27
6	Waugh, S R	Australia	1985- 2004	57	41	9	7	31
7	Ranatunga, A	Sri Lanka	1982- 2000	56	12	19	25	29
8	Atherton, M A	England	1989- 2001	54	13	21	20	23
9	Cronje, W J	South Africa	1992- 2000	53	27	11	15	22
10	Vaughan, M P	England	1999- 2008	51	26	11	14	24
11	Richards, I V A	West Indies	1974- 1991	50	27	8	15	23
12	Strauss, A J	England	2004- 2012	50	23	11	16	28
13	Taylor, M A	Australia	1989- 1999	50	26	13	11	26
14	Ganguly, S C	India	1996- 2008	49	21	13	15	21
15	Chappell, G S	Australia	1970- 1984	48	21	13	14	29
16	Imran Khan	Pakistan	1971- 1992	48	14	8	26	25
17	Azharuddin, M	India	1984- 2000	47	14	14	19	29
18	Clarke, M J	Australia	2004- 2015	47	24	16	7	24

19	Gavaskar, S M	India	1971- 1987	47	9	8	30	22
20	Lara, B C	West Indies	1990- 2006	47	10	26	11	20
21	Hussain, N	England	1990- 2004	45	17	15	13	19
22	Misbah-ul- Haq*	Pakistan	2001-	42	20	11	11	22
23	Cook, A N*	England	2006-	41	17	14	10	18
24	Jayasuriya, S T	Sri Lanka	1991- 2007	38	18	12	8	25
25	Jayawardene, D P M	Sri Lanka	1997- 2014	38	18	12	8	21
26	Gooch, G A	England	1975- 1995	34	10	12	12	16
27	Javed Miandad	Pakistan	1976- 1993	34	14	6	14	12
28	Kapil Dev	India	1978- 1994	34	4	7	22	15
29	Gower, D I	England	1978- 1992	32	5	18	9	14
30	Vettori, D L	New Zealand	1997- 2014	32	6	16	10	17
31	Brearley, J M	England	1976- 1981	31	18	4	9	13
32	Inzamam-ul- Haq	Pakistan	1992- 2007	31	11	10	10	15
33	Howarth, G P	New Zealand	1975- 1985	30	11	7	12	17
34	Sammy, D J G*	West Indies	2007-	30	8	12	10	14
35	Hughes, K J	Australia	1977- 1984	28	4	13	11	13
36	McCullum, B B*	New Zealand	2004-	27	9	9	9	11
37	Pollock, S M	South Africa	1995- 2008	26	14	5	7	9
38	Dravid, R	India	1996- 2012	25	8	6	11	15
	Tendulkar, S		1989-					

39	R	India	2013	25	4	9	12	15
40	Wasim Akram	Pakistan	1985- 2002	25	12	8	5	8
41	Mushfiqur Rahim*	Bangladesh	2005-	24	4	11	9	11
42	Richardson, R B	West Indies	1983- 1995	24	11	6	7	12
43	Gatting, M W	England	1978- 1995	23	2	5	16	14
44	Mathews, A D*	Sri Lanka	2009-	23	10	8	5	15
45	Hooper, C L	West Indies	1987- 2002	22	4	11	7	15
46	Walsh, C A	West Indies	1984- 2001	22	6	7	9	13
47	Campbell, A D R	Zimbabwe	1992- 2002	21	2	12	7	15
48	Streak, H H	Zimbabwe	1993- 2005	21	4	11	6	13
49	Flower, A	Zimbabwe	1992- 2002	20	1	10	9	10
50	Gayle, C H*	West Indies	2000-	20	3	9	8	8

In [55]:

```
all_caps = tests[["Player", "Won_pc"]].merge( odis[["Player", "Won_pc"]], on =
['Player'], how = 'inner')
```

In [57]:

all_caps.head(10)

Out[57]:

	Player	Won_pc_x	Won_pc_y
0	Smith, G C	48.623853	61.07
1	Border, A R	34.408602	60.11
2	Fleming, S P	35.000000	44.95
3	Ponting, R T	62.337662	71.74
4	Lloyd, C H	48.648649	76.19
5	Dhoni, M S*	45.000000	55.38
6	Waugh, S R	71.929825	63.21
7	Ranatunga, A	21.428571	46.11
8	Atherton, M A	24.074074	46.51
9	Cronje, W J	50.943396	70.71

In [60]:

```
all_caps.columns = ["Player", "ODI_Wins", "Test_Wins"]
```

In [62]:

```
all_caps.head( 10 )
```

Out[62]:

	Player	ODI_Wins	Test_Wins
0	Smith, G C	48.623853	61.07
1	Border, A R	34.408602	60.11
2	Fleming, S P	35.000000	44.95
3	Ponting, R T	62.337662	71.74
4	Lloyd, C H	48.648649	76.19
5	Dhoni, M S*	45.000000	55.38
6	Waugh, S R	71.929825	63.21
7	Ranatunga, A	21.428571	46.11
8	Atherton, M A	24.074074	46.51
9	Cronje, W J	50.943396	70.71

```
In [63]:
```

```
all_caps.sort( ["Test_Wins"] , ascending = False )
```

Out[63]:

	Player	ODI_Wins	Test_Wins
4	Lloyd, C H	48.648649	76.19
3	Ponting, R T	62.337662	71.74
9	Cronje, W J	50.943396	70.71
43	Gatting, M W	8.695652	70.27
18	Clarke, M J	51.063830	67.57
11	Richards, I V A	54.000000	63.81
6	Waugh, S R	71.929825	63.21
37	Pollock, S M	53.846154	61.22
0	Smith, G C	48.623853	61.07
40	Wasim Akram	48.000000	60.55
1	Border, A R	34.408602	60.11
31	Brearley, J M	58.064516	60.00
32	Inzamam-ul-Haq	35.483871	58.43
24	Jayasuriya, S T	47.368421	55.56
25	Jayawardene, D P M	47.368421	55.38
5	Dhoni, M S*	45.000000	55.38
36	McCullum, B B*	33.333333	54.55
28	Kapil Dev	11.764706	54.05
16	Imran Khan	29.166667	53.96
13	Taylor, M A	52.000000	53.73
10	Vaughan, M P	50.980392	53.33
44	Mathews, A D*	43.478261	53.33
38	Dravid, R	32.000000	53.16
42	Richardson, R B	45.833333	52.87
23	Cook, A N*	41.463415	52.17
22	Misbah-ul-Haq*	47.619048	51.72
14	Ganguly, S C	42.857143	51.70
33	Howarth, G P	36.666667	51.67
46	Walsh, C A	27.272727	51.16
17	Azharuddin, M	29.787234	51.15
30	Vettori, D L	18.750000	50.00

21	Hussain, N	37.777778	50.00	
26	Gooch, G A	29.411765	48.00	
20	Lara, B C	21.276596	47.20	
45	Hooper, C L	18.181818	46.94	
8	Atherton, M A	24.074074	46.51	
7	Ranatunga, A	21.428571	46.11	
2	Fleming, S P	35.000000	44.95	
12	Strauss, A J	46.000000	43.55	
15	Chappell, G S	43.750000	42.86	
35	Hughes, K J	14.285714	42.86	
27	Javed Miandad	41.176471	41.94	
29	Gower, D I	15.625000	41.67	
19	Gavaskar, S M	19.148936	36.84	
34	Sammy, D J G*	26.666667	36.00	
47	Campbell, A D R	9.523810	34.88	
50	Gayle, C H*	15.000000	32.08	
39	Tendulkar, S R	16.000000	31.94	
41	Mushfiqur Rahim*	16.666667	29.73	
48	Streak, H H	19.047619	26.47	
49	Flower, A	5.000000	23.08	

In [27]:

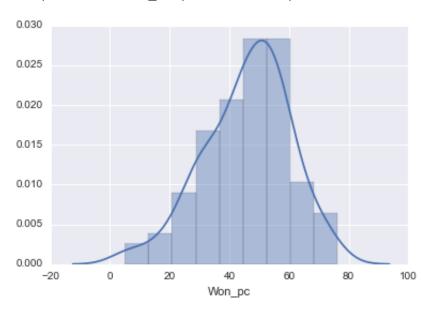
import matplotlib as plt
import seaborn as sn
%matplotlib inline

In [28]:

sn.distplot(odis.Won_pc)

Out[28]:

<matplotlib.axes._subplots.AxesSubplot at 0x91ef550>

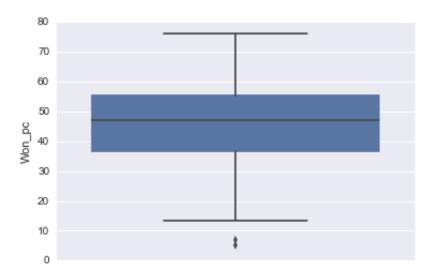


In [29]:

sn.boxplot(y = odis.Won_pc)

Out[29]:

<matplotlib.axes._subplots.AxesSubplot at 0x928b6a0>



In [30]:

odis[odis.Won_pc < 10]</pre>

Out[30]:

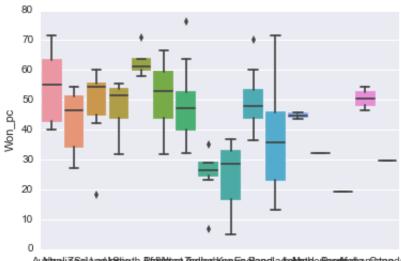
	Player	Country	Career	Matches	Won	Lost	Tied	Toss	Won_pc	Lo
79	Taibu, T	Zimbabwe	2001- 2012	29	2	27	0	12	6.9	93.
96	Odumbe, M O	Kenya	1996- 2003	20	1	18	1	11	5.0	90.

In [31]:

 $sn.boxplot(y = odis.Won_pc, x = odis.Country)$

Out[31]:

<matplotlib.axes._subplots.AxesSubplot at 0x9976cf8>

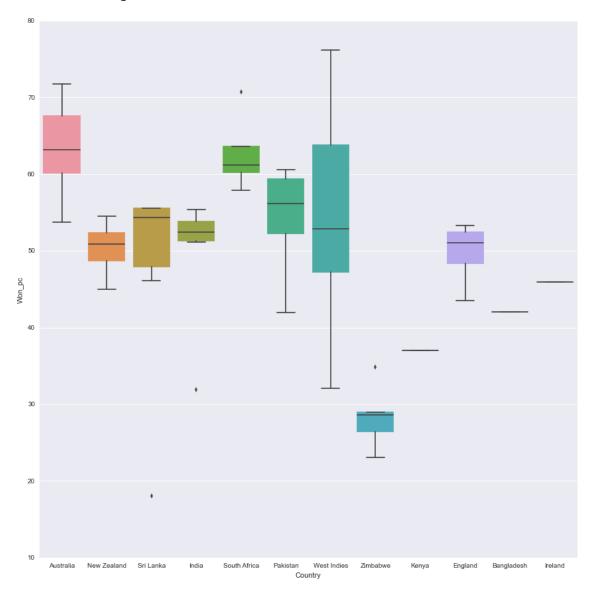


AuksterwiiZiSalabadı katibath *Rafikhteen ZirdleedKen ⊊a g*Bangladre**kte**rbler⊞endegdan üstaada Country

In [32]:

Out[32]:

<seaborn.axisgrid.FacetGrid at 0xab56710>

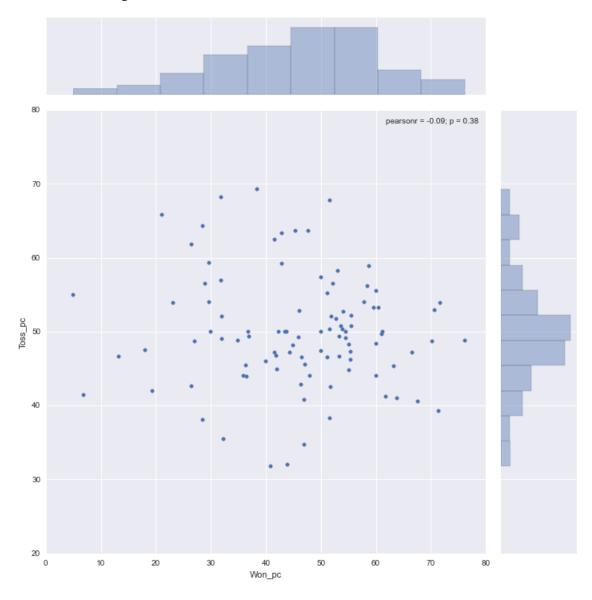


In [33]:

sn.jointplot(odis.Won_pc, odis.Toss_pc, size = 10)

Out[33]:

<seaborn.axisgrid.JointGrid at 0xb035f60>



In []: