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Match and runs scored

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ABSTRACT

In this paper, with the use of mathematic techniques, I will understand and analyze the relation between number of matches played by a cricket player and the number of runs scored by him. Using correlation technique, we will understand the relation between number of matches and runs scored for 802 cricketers.

Keywords— Cricket, Correlation, Regression, Runs

1. INTRODUCTION

Cricket is a sport where in two teams of eleven players each engage in a competitive game. The team who scores more runs is declared the winner. A team consists of batsmen, bowlers and a wicketkeeper. The role of a batsman is to score runs, whereas a bowler needs to stop the batsman from scoring runs. Every team bats and fields in a match of cricket. Two umpires on the field are the neutral entities which ensure fair run of play. Over the year the game of sport has evolved and rules have been tweaked, however the basics remain constant. In this paper I have tried to understand the relation between the number of runs a player scores with regards to the number of matches he has played.

2. DATA

Table 1: Data

Player	Mat	Runs	Player	Mat	Runs
EL a'Beckett	3	133	C Blythe	9	75
AC Agar	2	130	RS Bopara	4	105
TM Alderman	17	76	SG Borthwick	1	5
G Alexander	1	13	BJT Bosanquet	7	147
HH Alexander	1	17	IT Botham	32	1486
PJ Allan	1	0	WE Bowes	6	19
RC Allen	1	44	G Boycott	34	2579
TJE Andrews	13	541	WM Bradley	2	23
J Angel	1	11	LC Braund	20	830
KA Archer	3	152	JM Brearley	15	572
RG Archer	12	294	W Brearley	3	21
WW Armstrong	42	2172	TT Bresnan	7	176
CL Badcock	7	160	J Briggs	31	809
GJ Bailey	5	183	BC Broad	7	569
CT Bancroft	7	223	SCJ Broad	32	899
AC Bannerman	21	733	W Brockwell	7	202
W Bardsley	30	1487	DJ Brown	8	34
SG Barnes	9	846	FR Brown	6	260
BA Barnett	4	195	G Brown	3	250
JE Barrett	2	80	JT Brown	8	470
MA Beer	1	4	RJ Burns	5	390
R Benaud	27	767	MA Butcher	20	1287
MJ Bennett	1	23	JC Buttler	10	369
MG Bevan	6	124	AR Caddick	18	313
AJ Bichel	3	101	DJ Capel	1	21

JM Bird	2	5
JM Blackham	25	501
DD Blackie	3	24
GS Blewett	8	630
DE Bollinger	1	7
GJ Bonnor	14	401
DC Boon	30	2041
BC Booth	15	824
AR Border	42	3222
HF Boyle	4	42
DG Bradman	37	5028
RJ Bright	8	169
EH Bromley	2	38
WA Brown	13	980
W Bruce	14	702
PJP Burge	22	1179
JW Burke	14	676
EJK Burn	2	41
FJ Burton	2	4
ST Callaway	3	87
GD Campbell	1	0
W Carkeek	3	5
PH Carlson	2	23
H Carter	21	776
GS Chappell	30	2154
IM Chappell	28	1986
TM Chappell	3	79
PC Charlton	2	29
AG Chipperfield	9	356
SR Clark	7	123
MJ Clarke	35	2241
DJ Colley	3	84
HL Collins	16	1012
A Coningham	1	13
AN Connolly	7	19
WH Cooper	1	6
GE Corling	5	5
GJ Cosier	2	52
JT Cottam	1	4
A Cotter	16	377
EJM Cowan	1	14
RM Cowper	9	686
ID Craig	2	55
WPA Crawford	1	0
PJ Cummins	10	237
J Darling	31	1632
LS Darling	7	245
WM Darling	4	221
AK Davidson	25	750
IC Davis	3	107
JH de Courcy	3	81
AR Dell	1	6
XJ Doherty	2	27
H Donnan	5	75
B Dooland	2	49
RA Duff	19	1079
JRF Duncan	1	3
GC Dyer	1	0
G Dymock	4	28
J Dyson	10	489
CJ Eady	2	20
KH Eastwood	1	5
HI Ebeling	1	43
JD Edwards	3	48

MA Carberry	5	281
AW Carr	4	13
DW Carr	1	0
TW Cartwright	2	4
APF Chapman	16	784
S Christopherson	1	17
EW Clark	2	6
DB Close	2	42
LJ Coldwell	4	9
PD Collingwood	16	783
DCS Compton	28	1842
AN Cook	35	2493
G Cook	3	54
NGB Cook	3	45
DG Cork	3	65
NG Cowans	5	90
MC Cowdrey	43	2433
A Coxon	1	19
MS Crane	1	6
J Cranston	1	31
K Cranston	1	10
JF Crapp	3	88
JN Crawford	5	162
JP Crawley	14	662
RDB Croft	7	105
SM Curran	1	32
TK Curran	2	66
TS Curtis	3	71
RKJ Dawson	4	87
H Dean	2	0
PAJ DeFreitas	13	329
JL Denly	5	312
MH Denness	6	329
D Denton	1	12
JG Dewes	3	34
ER Dexter	19	1358
GR Dilley	9	198
AE Dipper	1	51
BL D'Oliveira	13	865
HE Dollery	2	38
A Dolphin	1	1
JWHT Douglas	17	696
PR Downton	7	125
NF Druce	5	252
A Ducat	1	5
G Duckworth	10	163
KS Duleepsinhji	4	416
FJ Durston	1	8
MA Ealham	4	105
PH Edmonds	13	124
JH Edrich	32	2644
WJ Edrich	21	1184
RM Ellison	2	3
JE Emburey	23	733
GM Emmett	1	10
AJ Evans	1	18
TG Evans	31	783
AE Fagg	2	42
FL Fane	4	192
K Farnes	8	23
PGH Fender	5	198
A Fielder	6	78
ST Finn	7	14
LB Fishlock	1	14

R Edwards	13	805
WJ Edwards	3	68
MTG Elliott	6	556
SH Emery	2	0
E Evans	3	46
AG Fairfax	5	215
JP Faulkner	1	45
LE Favell	6	203
JJ Ferris	8	98
JHW Fingleton	12	671
LO Fleetwood-Smith	7	48
DW Fleming	7	135
BC Francis	3	52
EW Freeman	2	37
FAW Freer	1	28
TW Garrett	12	208
RA Gaunt	1	3
DRA Gehrs	2	19
G Giffen	26	1131
WF Giffen	3	11
DR Gilbert	1	1
AC Gilchrist	20	1083
JN Gillespie	18	217
GJ Gilmour	1	6
JW Gleeson	13	131
H Graham	6	301
JM Gregory	21	941
RG Gregory	2	153
SE Gregory	52	2193
CV Grimmett	22	366
ATW Grout	22	301
CEJ Guest	1	11
BJ Haddin	20	1366
RA Hamence	1	31
PSP Handscomb	2	62
MS Harris	3	58
RJ Harris	12	230
J Harry	1	8
MJ Hartigan	2	170
AEV Hartkopf	1	80
MR Harvey	1	43
RN Harvey	37	2416
AL Hasset	24	1572
NM Hauritz	3	45
NJN Hawke	12	115
ML Hayden	20	1461
JR Hazlewood	13	64
GR Hazlitt	6	87
TM Head	4	191
IA Healy	33	1269
HSTL Hendry	9	284
JD Higgs	5	46
AMJ Hilditch	7	428
BW Hilfenhaus	9	95
C Hill	41	2660
JC Hill	2	12
RM Hogg	11	121
TV Hohns	5	127
GB Hole	9	439
RG Holland	4	15
DW Hookes	10	627
AJY Hopkins	17	434
TP Horan	7	208
HV Hordern	5	173

JA Flavell	4	31
KWR Fletcher	14	656
A Flintoff	14	856
W Flowers	8	254
FGJ Ford	5	168
FR Foster	8	281
JS Foster	1	25
NA Foster	5	107
RE Foster	5	486
G Fowler	3	207
ARC Fraser	12	176
AP Freeman	2	80
CB Fry	18	825
MW Gatting	25	1585
LH Gay	1	37
G Geary	9	202
PA Gibb	1	24
N Gifford	5	57
AF Giles	9	253
AER Gilligan	5	64
TWJ Goddard	1	0
GA Gooch	39	2436
D Gough	17	240
DI Gower	38	3037
WG Grace	20	901
TW Graveney	22	1075
AW Greig	20	1244
G Gunn	11	844
JR Gunn	6	85
W Gunn	11	392
NE Haig	1	3
S Haigh	4	40
C Hallows	1	16
WR Hammond	33	2852
JH Hampshire	4	168
HTW Hardinge	1	30
J Hardstaff	5	311
J Hardstaff	9	559
SJ Harmison	16	211
Lord Harris	2	24
EG Hayes	1	13
TW Hayward	29	1747
DW Headley	6	80
JT Hearne	11	86
JW Hearne	16	554
WK Hegg	2	30
EE Hemmings	5	230
EH Hendren	28	1740
M Hendrick	12	72
GA Hick	10	669
K Higgs	2	6
GH Hirst	21	744
JW Hitch	6	103
JB Hobbs	41	3636
MJ Hoggard	12	87
WE Hollies	1	0
AJ Hollioake	2	51
BC Hollioake	1	30
P Holmes	1	38
JL Hopwood	2	12
AN Hornby	1	4
H Howell	4	15
J Humphries	3	44
J Hunter	5	93

PM Hornibrook	6	60
WP Howell	16	147
KJ Hughes	18	1115
MG Hughes	20	278
PJ Hughes	7	237
AG Hurst	6	44
MEK Hussey	15	1304
RJ Inverarity	5	160
FA Iredale	14	807
H Ironmonger	6	18
JB Iverson	5	3
A Jackson	4	350
BN Jarman	7	111
AH Jarvis	11	303
TJ Jenner	4	136
CB Jennings	3	44
IWG Johnson	22	485
MG Johnson	19	533
WA Johnston	17	138
DM Jones	16	1240
E Jones	18	126
SP Jones	9	359
BP Julian	2	61
MS Kasprowicz	6	65
SM Katich	13	701
C Kelleway	18	874
JJ Kelly	33	613
MF Kent	3	171
UT Khawaja	12	627
AF Kippax	13	753
LF Kline	2	5
M Labuschagne	4	353
JL Langer	21	1658
GRA Langley	9	97
TJ Laughlin	1	7
FJ Laver	15	196
WM Lawry	29	2233
GF Lawson	21	383
B Lee	18	334
PK Lee	1	57
DS Lehmann	5	146
DK Lillee	24	384
RR Lindwall	29	795
HSB Love	1	8
ML Love	2	95
SJE Loxton	6	219
NM Lyon	23	236
JJ Lyons	14	731
PA McAlister	8	252
CG Macartney	26	1640
SJ McCabe	24	1931
CL McCool	5	272
EL McCormick	7	35
RB McCosker	12	871
CJ McDermott	16	221
CC McDonald	15	1043
EA McDonald	8	101
PS McDonnell	14	586
SCG MacGill	6	71
GD McGrath	30	105
J McIlwraith	1	9
PE McIntyre	1	0
KD Mackay	16	497
GD McKenzie	25	252

N Hussain	23	1581
KL Hutchings	7	341
L Hutton	27	2428
AP Igglesden	1	2
JT Ikin	5	184
R Illingworth	18	663
MC Illott	3	28
DJ Insole	1	5
Hon.FS Jackson	20	1415
HL Jackson	1	8
DR Jardine	10	540
PW Jarvis	2	33
GL Jessop	13	433
AO Jones	12	291
GO Jones	8	292
IJ Jones	4	29
SP Jones	5	66
VWC Jupp	2	65
WW Keeton	1	37
D Kenyon	2	29
SC Kerrigan	1	1
RWT Key	4	141
R Kilner	7	174
JH King	1	64
SP Kinneir	1	52
AE Knight	3	81
BR Knight	5	52
DJ Knight	2	54
APE Knott	33	1625
JC Laker	15	277
AJ Lamb	20	1138
W Larkins	4	199
H Larwood	15	386
MN Lathwell	2	78
MJ Leach	4	54
CFH Leslie	3	70
JK Lever	4	48
P Lever	9	120
CC Lewis	5	154
M Leyland	20	1705
AFA Lilley	32	801
D Lloyd	4	196
PJ Loader	2	7
GAR Lock	13	166
WH Lockwood	12	231
GA Lohmann	15	203
AP Lucas	2	67
BW Luckhurst	11	677
A Lyth	5	115
Hon.A Lyttelton	2	56
GG Macaulay	1	76
MJ McCague	3	21
CP McGahey	2	38
G MacGregor	8	96
AJW McIntyre	1	8
AC MacLaren	35	1931
SI Mahmood	3	18
JWH Makepeace	4	279
DJ Malan	5	383
DE Malcolm	15	103
F Martin	1	1
PJ Martin	1	23
JR Mason	5	129
PBH May	21	1566

TR McKibbin	5	88
JW McLaren	1	0
JA Maclean	4	79
CE McLeod	17	573
RW McLeod	6	146
PG McShane	3	26
LV Maddocks	5	156
AA Mailey	18	201
AA Mallett	14	199
MF Malone	1	46
GA Manou	1	21
AP Marr	1	5
GR Marsh	16	1090
MR Marsh	7	409
RW Marsh	37	1409
SE Marsh	6	447
DR Martyn	17	925
HH Massie	4	92
RAL Massie	4	22
CD Matthews	2	21
GRJ Matthews	10	589
TJ Matthews	5	74
TBA May	8	54
ER Mayne	1	0
I Meckiff	4	9
WE Midwinter	5	91
CR Miller	3	17
KR Miller	29	1511
RB Minnett	6	309
FM Misson	2	25
J Moroney	1	0
AR Morris	24	2080
S Morris	1	14
H Moses	6	198
WL Murdoch	9	450
HA Musgrove	1	13
LE Nagel	1	21
LJ Nash	1	17
PM Nevill	4	143
MJ Nicholson	1	14
MA Noble	39	1905
MJ North	7	416
OE Nothling	1	52
LPJ O'Brien	3	104
JDA O'Connor	4	86
SP O'Donnell	5	184
KJ O'Keefe	5	167
WAS Oldfield	38	1116
NCL O'Neill	19	1072
WJ O'Reilly	19	277
RK Oxenham	3	88
TD Paine	10	372
GE Palmer	11	198
RL Park	1	0
LS Pascoe	3	23
JL Pattinson	4	141
CE Pellew	9	478
WB Phillips	6	350
PI Philpott	3	22
WH Ponsford	20	1558
RT Ponting	35	2476
RJ Pope	1	3
CG Rackemann	2	14
VS Ransford	15	893

MP Maynard	2	39
CP Mead	7	415
W Mead	1	7
C Milburn	2	109
G Miller	13	446
CA Milton	2	38
TB Mitchell	3	14
AW Mold	3	0
F Morley	2	2
JB Mortimore	2	67
AE Moss	1	0
MD Moxon	1	18
AD Mullally	5	20
JT Murray	6	163
W Newham	1	26
PJ Newport	2	84
MS Nichols	1	7
ASM Oakman	2	14
TC O'Brien	2	24
CM Old	10	248
G Onions	3	19
J Ormond	1	35
C Overton	3	88
LCH Palairt	2	49
MS Panesar	6	50
PH Parfitt	9	302
CWL Parker	1	3
PWG Parker	1	13
WGA Parkhouse	2	77
CH Parkin	9	152
JM Parks	10	497
Nawab of Pataudi	3	144
E Paynter	7	591
E Peate	4	28
IAR Peebles	2	9
R Peel	20	427
H Philipson	5	63
KP Pietersen	27	2158
R Pilling	4	30
PI Pocock	1	16
R Pollard	2	3
JSE Price	3	24
WFF Price	1	6
RM Prideaux	1	66
DR Pringle	5	141
MJ Prior	18	753
G Pullar	9	457
WG Quaife	7	228
MR Ramprakash	12	933
DW Randall	15	957
KS Ranjitsinhji	15	989
WB Rankin	1	13
CMW Read	2	35
JM Read	14	426
WW Read	16	662
AE Relf	3	64
SJ Rhodes	5	72
W Rhodes	41	1706
CJ Richards	5	264
PE Richardson	9	526
T Richardson	14	177
TL Richmond	1	6
RWV Robins	6	183
RT Robinson	7	502

IR Redpath	23	1512
JC Reedman	1	21
BA Reid	9	27
PR Reiffel	7	241
AJ Richardson	9	403
VY Richardson	14	622
KE Rigg	3	118
DT Ring	2	34
GM Ritchie	10	666
WR Robertson	1	2
RD Robinson	3	100
RH Robinson	1	5
CJL Rogers	15	1310
GF Rorke	2	2
J Ryder	17	1060
RA Sagers	1	5
JV Saunders	12	34
HJH Scott	8	359
CS Serjeant	3	106
AP Sheahan	9	341
BK Shepherd	2	94
PM Siddle	24	452
MW Sievers	3	67
RB Simpson	19	1405
DJ Sincok	1	56
KN Slater	1	1
MJ Slater	20	1669
PR Sleep	3	25
DBM Smith	2	30
SPD Smith	27	2800
FR Spofforth	13	153
KR Stackpole	13	1164
MA Starc	13	362
A Symonds	3	232
HB Taber	1	16
SW Tait	2	8
D Tallon	15	340
JM Taylor	18	957
MA Taylor	33	2496
PL Taylor	1	53
G Thomas	3	147
AL Thomson	4	22
JR Thomson	20	286
PM Toohey	5	149
ERH Toshack	9	65
JPF Travers	1	10
GE Tribe	3	35
AE Trott	3	205
GHS Trott	24	921
H Trumble	31	838
JW Trumble	7	243
VT Trumper	40	2263
A Turner	3	77
CTB Turner	17	323
TR Veivers	9	242
AC Voges	5	201
MS Wade	5	337
MG Waite	2	11
MHN Walker	15	397
TW Wall	14	83
FH Walters	1	12
KD Walters	35	1911
FA Ward	4	36
SK Warne	36	946

GRJ Roope	3	149
CF Root	3	0
JE Root	24	1694
JJ Roy	4	110
FE Rumsey	1	3
CAG Russell	6	474
RC Russell	9	391
WE Russell	1	0
A Sandham	3	49
WH Scotton	11	352
J Sharp	3	188
JW Sharpe	3	44
PJ Sharpe	2	71
Rev.DS Sheppard	9	580
M Sherwin	3	30
A Shrewsbury	19	1091
J Shuter	1	28
K Shuttleworth	2	9
A Sidebottom	1	2
CEW Silverwood	1	10
RT Simpson	9	434
JM Sims	2	3
RA Sinfield	1	6
GC Small	7	136
AC Smith	4	47
AM Smith	1	4
EJ Smith	7	69
MJK Smith	9	248
RA Smith	15	1074
TPB Smith	2	32
JA Snow	20	392
RH Spooner	7	233
JB Statham	22	236
AG Steel	10	388
DS Steele	3	365
JP Stephenson	1	36
GTS Stevens	2	63
AJ Stewart	33	1810
AE Stoddart	16	996
BA Stokes	14	921
MD Stoneman	5	232
W Storer	6	215
AJ Strauss	20	1421
H Strudwick	17	149
CT Studd	3	81
GB Studd	3	19
R Subba Row	5	468
PM Such	7	58
FH Sugg	2	55
H Sutcliffe	27	2741
GP Swann	18	499
R Swetman	2	56
FW Tate	1	9
MW Tate	20	578
R Tattersall	3	18
CJ Tavare	8	399
K Taylor	1	24
LB Taylor	2	1
RW Taylor	14	366
Hon.LH Tennyson	4	229
GJ Thompson	1	6
GP Thorpe	16	1235
FJ Titmus	19	716
CL Townsend	2	51

DA Warner	23	1615	CT Tremlett	4	34
GD Watson	2	21	ME Trescothick	15	1013
SR Watson	19	1487	IJL Trott	12	917
WJ Watson	1	21	FS Trueman	19	338
ME Waugh	29	2204	AJ Tudor	5	52
SR Waugh	45	3173	PCR Tufnell	12	30
DM Wellham	3	163	GE Tyldesley	5	257
KC Wessels	10	754	JT Tyldesley	26	1389
MR Whitney	2	4	RK Tyldesley	3	17
WJ Whitty	6	35	EFS Tylecote	5	147
GM Wood	18	943	FH Tyson	8	117
WM Woodfull	25	1675	G Ulyett	15	263
SMJ Woods	3	32	DL Underwood	25	286
J Worrall	11	478	MP Vaughan	10	959
KJ Wright	2	37	H Verity	18	344
GN Yallop	12	707	GF Vernon	1	14
B Yardley	9	289	JM Vince	5	242
S Young	1	4	J Vine	2	46
TJ Zoehrer	4	102	W Voce	11	67
R Abel	11	555	A Waddington	2	16
U Afzaal	3	83	E Wainwright	5	132
JP Agnew	1	2	CF Walters	5	401
MM Ali	11	476	A Ward	7	487
DA Allen	10	232	IJ Ward	3	68
GOB Allen	13	479	JH Wardle	8	166
PJW Allott	5	93	PF Warner	7	287
LEG Ames	17	675	JJ Warr	2	4
DL Amiss	10	237	A Warren	1	7
JM Anderson	32	236	C Washbrook	17	996
KV Andrew	1	11	SL Watkin	1	17
R Appleyard	5	45	AJ Watkins	1	2
JC Archer	4	48	W Watson	7	272
EG Arnold	8	144	AW Wellard	1	42
GG Arnold	8	56	JJ Whitaker	1	11
MA Atherton	33	1900	C White	7	192
CWJ Athey	5	303	JC White	7	110
W Attewell	10	150	WW Whysall	4	209
TE Bailey	23	875	P Willey	5	218
JM Bairstow	19	890	RGD Willis	31	356
JT Ball	1	15	ER Wilson	1	10
GS Ballance	3	123	CR Woakes	9	276
RW Barber	7	447	A Wood	1	53
GD Barlow	1	6	B Wood	4	262
RG Barlow	11	348	H Wood	1	8
SF Barnes	20	210	MA Wood	4	103
W Barnes	18	663	R Wood	1	6
CJ Barnett	9	624	FE Woolley	32	1664
KJ Barnett	3	141	RA Woolmer	9	642
KF Barrington	23	2111	TS Worthington	3	74
W Bates	10	407	DVP Wright	14	126
G Bean	3	92	RES Wyatt	12	633
AV Bedser	21	373	EG Wynyard	1	13
IR Bell	33	1983	NWD Yardley	10	402
MP Bicknell	2	26	HI Young	2	43
Hon.IFW Bligh	3	33	JA Young	3	17
RA Young	2	27			

3. ANALYSIS

	<i>Mat</i>	<i>Runs</i>
<i>Mat</i>	1	
<i>Runs</i>	0.846142251	1

The number of matches played and runs scored has a positive correlation, this shows as a player plays more matches he tends to score more runs, it means runs scored and number of matches are directly related.

Regression
SUMMARY OUTPUT

<i>Regression Statistics</i>	
Multiple R	0.846142251
R Square	0.715956709
Adjusted R Square	0.715601211
Standard Error	324.9821813
Observations	801

a=-109.52
b=54.24
Y=a+bX
Y=54.24X-109.52

The above equation states that with every extra one match played the player tends to score 54.24 runs. The above correlation also states that the relation between number of matches and runs scored is directly related. Which means, when a player plays more number of matches he is likely to score more runs.

4. CONCLUSION

From the above analysis it can be concluded that when the player plays more number of matches he is likely to score more runs. This can be credited to the more experience, exposure and better oppositions. This also shows that when a player bats more times he is likely to score more and increase his average score.