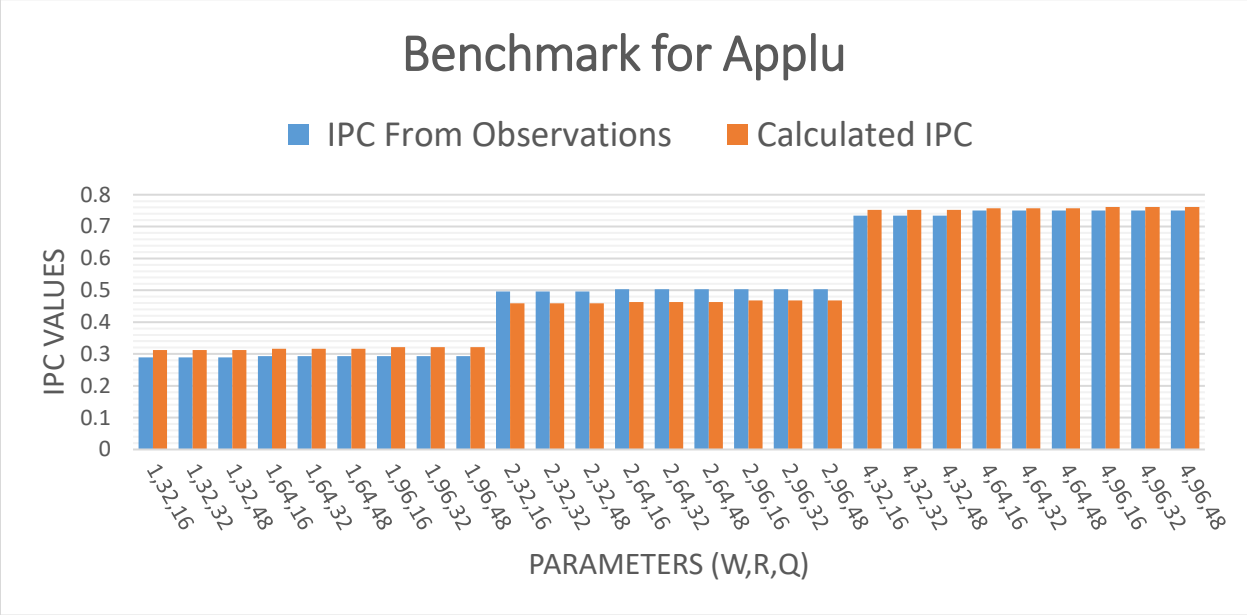
Q1) Regression Models and Tables showing coefficient for each parameter

1. For Applu

IPC = 0.16067 + 0.14686 x W + 0.00014 x R – 3.63E-19 x Q

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	0.1606667	0.02290218	7.015344	3.78E-07	0.113289898	0.208043435	0.113289898	0.208043435
W	0.1468571	0.004520558	32.48651	1.01E-20	0.137505655	0.15620863	0.137505655	0.15620863
R	0.0001406	0.00021579	0.651676	0.521069	-0.00030577	0.00058702	-0.00030577	0.00058702
Q	-3.63E-19	0.000431579	-8.4E-16	1	-0.00089279	0.00089279	-0.00089279	0.00089279

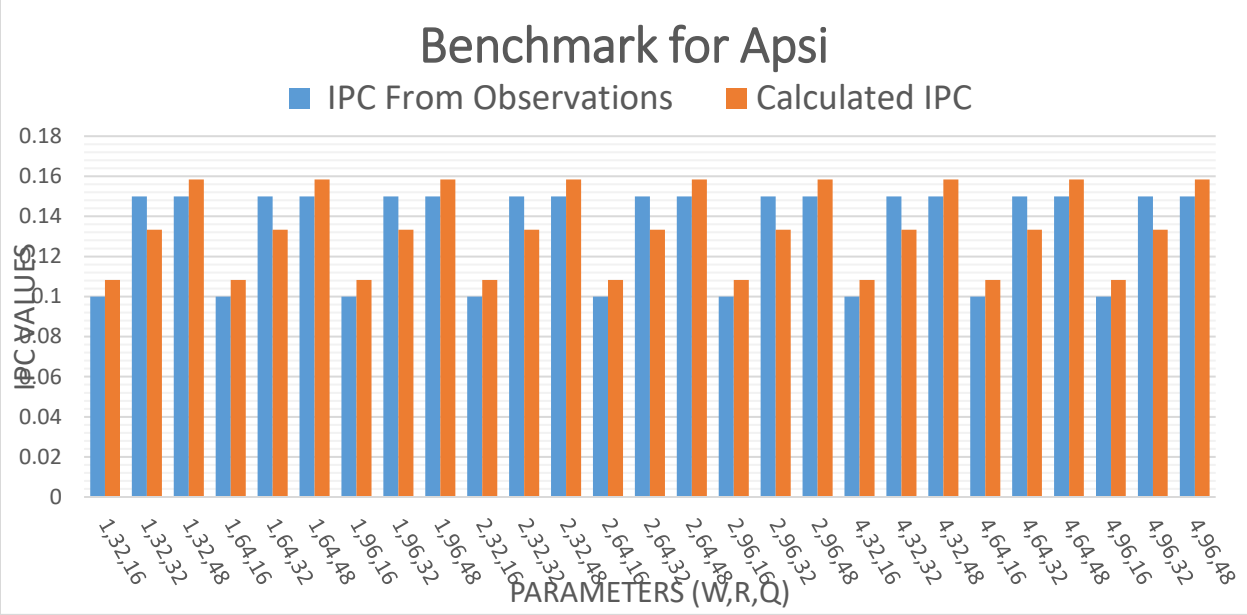


Sum of squared difference = 0.0197406429

2. For Apsi

IPC = 0.0833333 + 8E-19 x W + 4.6E-20 x R + 0.00156 x Q

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	0.0833333	0.009981868	8.348471	2.05E-08	0.062684267	0.1039824	0.062684267	0.1039824
W	8.03E-19	0.001970276	4.08E-16	1	-0.00407583	0.004075826	-0.00407583	0.004075826
R	4.6E-20	9.40514E-05	4.89E-16	1	-0.00019456	0.00019456	-0.00019456	0.00019456
Q	0.0015625	0.000188103	8.306624	2.24E-08	0.00117338	0.00195162	0.00117338	0.00195162

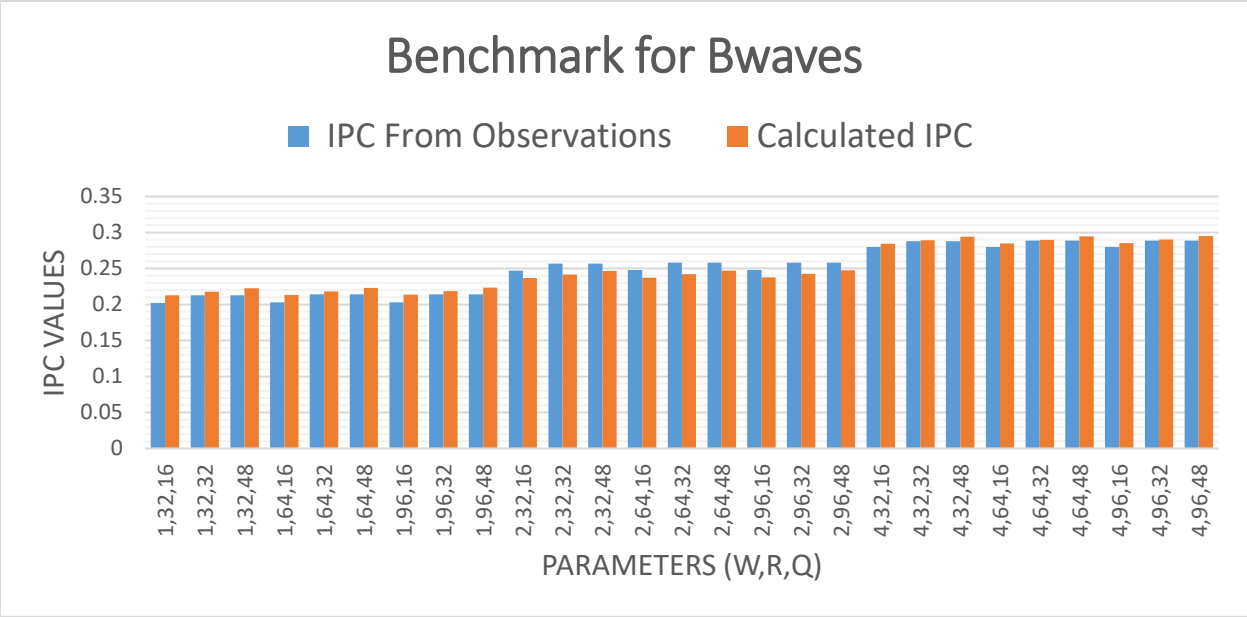


Sum of squared difference = 0.0037500000

3. For Bwaves_06

IPC = 0.1835 + 0.0239 x W + 1.4E-5 x R + 0.00031 x Q

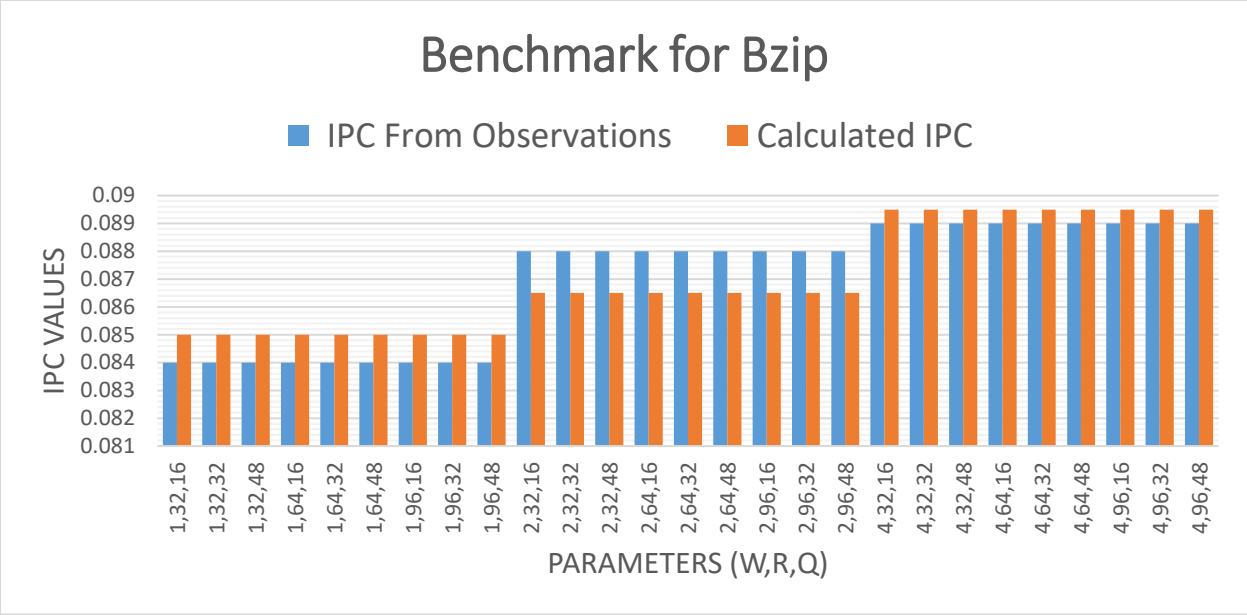
	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	0.1835	0.007747207	23.68596	1.18E-17	0.167473682	0.199526318	0.167473682	0.199526318
W	0.0238968	0.001529186	15.62715	9.67E-14	0.020733463	0.027060188	0.020733463	0.027060188
R	1.389E-05	7.2996E-05	0.190269	0.850767	-0.00013711	0.000164893	-0.00013711	0.000164893
Q	0.000309	0.000145992	2.116746	0.045312	7.02049E-06	0.000611035	7.02049E-06	0.000611035



Sum of squared difference = 0.0022589048

4. For Bzip_source
   IPC = 0.0835 + 0.0015 x W + 6.4E-21 x R + 1.1E-20 x Q

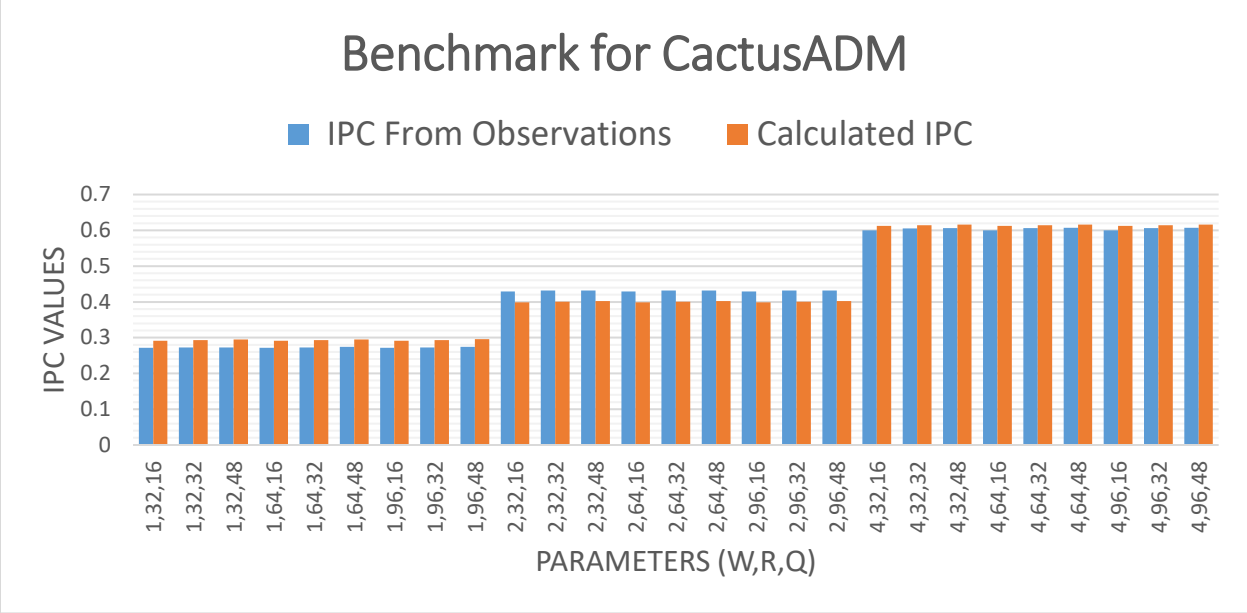
	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	0.0835	0.000914853	91.27147	5.96E-31	0.081607482	0.085392518	0.081607482	0.085392518
W	0.0015	0.000180579	8.306624	2.24E-08	0.001126444	0.001873556	0.001126444	0.001873556
R	6.389E-21	8.61996E-06	7.41E-16	1	-1.7832E-05	1.78317E-05	-1.7832E-05	1.78317E-05
Q	1.078E-20	1.72399E-05	6.26E-16	1	-3.5663E-05	3.56635E-05	-3.5663E-05	3.56635E-05



Sum of squared difference = 0.0000315000

5. For cactusADM_06
   IPC = 0.18222 + 0.0107 x W + 5.2E-06 x R + 0.0012 x Q

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	0.1822222	0.018729969	9.728912	1.28E-09	0.14347633	0.220968115	0.14347633	0.220968115
W	0.107	0.003697024	28.94219	1.35E-19	0.099352122	0.114647878	0.099352122	0.114647878
R	5.208E-06	0.000176478	0.029513	0.97671	-0.00035986	0.000370281	-0.00035986	0.000370281
Q	0.0001181	0.000352956	0.334477	0.741051	-0.00061209	0.000848201	-0.00061209	0.000848201

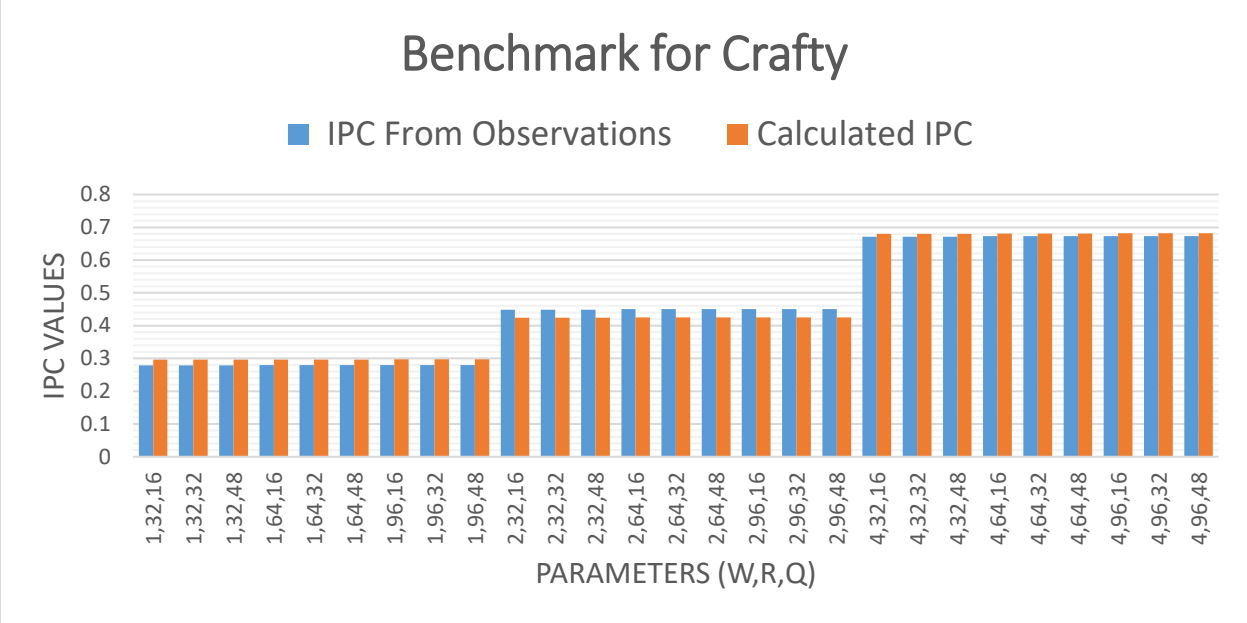


Sum of squared difference = 0.0132032778

6. For Crafty

IPC = 0. 0.167 + 0.12805 x W + 2.6E-05 x R + 2.7E-18 x Q

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	0.167	0.015600754	10.70461	2.08E-10	0.134727381	0.199272619	0.134727381	0.199272619
W	0.1280476	0.003079363	41.5825	3.78E-23	0.121677472	0.134417766	0.121677472	0.134417766
R	2.604E-05	0.000146994	0.177162	0.860932	-0.00027804	0.000330122	-0.00027804	0.000330122
Q	2.693E-18	0.000293988	9.16E-15	1	-0.00060816	0.00060816	-0.00060816	0.00060816



Sum of squared difference = 0.0091600714

From my observation of the graphs it can been seen that the difference in the calculated and observed values is highest in Bzip_source benchmarking. However, the error is not consistent as sometimes the calculated value is higher and sometimes the observed value is higher. Only for Applu benchmark the effect of Q is negative for everything else it is always positive.