Appendix D.1: empty network payoffs

This section contains t test to compare average comulative paoff of agent 1 with the comulative paoff of all other agents
when the game starts from a randomised initial network.

empy pay N = 3

R - Inertia	Agent Number	Average Payoff	SE	t-test 1	p_value
0.01	1	10.5	0.07		
0.01	2	11.29	0.08	10.56	0.00
0.01	3	11.31	0.08	10.82	0.00
0.2	1	11.57	0.09		
0.2	2	12.36	0.1	11.74	0.00
0.2	3	12.54	0.1	13.75	0.00
0.5	1	13.08	0.15		
0.5	2	13.62	0.16	8.54	0.00
0.5	3	14.02	0.17	11.35	0.00
0.8	1	33.65	0.46		
0.8	2	33.96	0.45	72.09	0.00
0.8	3	34.23	0.47	71.50	0.00

empty pay N = 4

R - Inertia	Agent Number	Average Payoff	SE	t-test	p_value
0.01	1	16.78	0.14		
0.01	2	18.5	0.17	11.15	0.00
0.01	3	18.5	0.17	11.15	0.00
0.01	4	18.52	0.17	11.28	0.00
0.2	1	19.16	0.17		
0.2	2	20.74	0.19	8.79	0.00
0.2	3	21.17	0.19	11.18	0.00
0.2	4	21.27	0.19	11.74	0.00
0.5	1	20.47	0.27		
0.5	2	21.53	0.29	3.79	0.00
0.5	3	22.37	0.29	6.79	0.00
0.5	4	22.58	0.29	7.54	0.00
0.8	1	44.08	0.72		
0.8	2	45.01	0.72	1.29	0.10
0.8	3	45.3	0.73	1.68	0.05
0.8	4	46.33	0.75	3.06	0.00

empty pay N = 5

R - Inertia	Agent Number	Average Payoff	SE	t-test	p_value
0.01	1	23.99	0.23		
0.01	2	26.75	0.26	11.29	0.00
0.01	3	26.79	0.26	11.45	0.00
0.01	4	26.76	0.26	11.33	0.00
0.01	5	26.73	0.26	11.20	0.00
0.2	1	28.45	0.27		
0.2	2	31.03	0.3	9.07	0.00
0.2	3	31.67	0.3	11.31	0.00
0.2	4	31.82	0.31	11.65	0.00
0.2	5	31.79	0.3	11.74	0.00
0.5	1	33.94	0.45		0.50
0.5	2	36.02	0.47	4.52	0.00
0.5	3	36.91	0.49	6.32	0.00
0.5	4	37.35	0.49	7.26	0.00
0.5	5	37.33	0.49	7.22	0.00
0.8	1	56.69	1.01		
0.8	2	58.59	1.03	1.86	0.03
0.8	3	58.8	1.05	2.05	0.02
0.8	4	59.49	1.05	2.72	0.00
0.8	5	59.82	1.05	3.04	0.00

empty pay N = 6

R - Inertia	Agent Number	Average Payoff	SE	t-test	p_value
0.01	1	32.21	0.37		
0.01	2	36.03	0.41	9.81	0.000
0.01	3	36.14	0.41	10.09	0.000
0.01	4	36.1	0.41	9.99	0.000
0.01	5	36.1	0.41	9.99	0.000
0.01	6	36.08	0.41	9.94	0.000
0.2	1	39.46	0.42		
0.2	2	42.91	0.45	7.94	0.000
0.2	3	43.68	0.45	9.71	0.000
0.2	4	43.94	0.45	10.30	0.000
0.2	5	43.88	0.45	10.17	0.000
0.2	6	44.03	0.46	10.40	0.000
0.5	1	47.95	0.59		
0.5	2	50.89	0.64	4.78	0.000
0.5	3	52.11	0.65	6.72	0.000
0.5	4	52.5	0.65	7.35	0.000
0.5	5	53.12	0.65	8.35	0.000
0.5	6	52.94	0.65	8.06	0.000
0.8	1	72.14	1.24		
0.8	2	73.67	1.26	1.22	0.110

R - Inertia	Agent Number	Average Payoff	SE	t-test	p_value
0.8	3	73.58	1.24	1.16	0.123
0.8	4	74.73	1.26	2.07	0.019
0.8	5	75.47	1.3	2.62	0.004
0.8	6	76.73	1.28	3.64	0.000

empty pay N = 7

R - Inertia	Agent Number	Average Payoff	SE	t-test	p_value
0.01	1	41.46	0.55		
0.01	2	46.35	0.6	8.51	0.000
0.01	3	46.42	0.6	8.63	0.000
0.01	4	46.4	0.6	8.60	0.000
0.01	5	46.44	0.6	8.67	0.000
0.01	6	46.41	0.6	8.62	0.000
0.01	7	46.42	0.6	8.63	0.000
0.2	1	50.22	0.57		
0.2	2	54.73	0.61	7.65	0.000
0.2	3	55.88	0.6	9.68	0.000
0.2	4	55.89	0.61	9.62	0.000
0.2	5	55.95	0.62	9.64	0.000
0.2	6	56.08	0.61	9.94	0.000
0.2	7	56.02	0.61	9.84	0.000
0.5	1	66.92	0.87		
0.5	2	70.67	0.92	4.19	0.000
0.5	3	72.41	0.91	6.17	0.000
0.5	4	72.88	0.93	6.63	0.000
0.5	5	73.79	0.93	7.64	0.000
0.5	6	73.9	0.93	7.76	0.000
0.5	7	73.6	0.93	7.43	0.000
0.8	1	82.75	1.48		
0.8	2	84.61	1.49	1.25	0.105
0.8	3	85.66	1.49	1.96	0.025
0.8	4	86.95	1.55	2.77	0.003
0.8	5	86.75	1.53	2.66	0.004
0.8	6	87.66	1.56	3.23	0.001
0.8	7	88.03	1.54	3.50	0.000

empty pay N = 8

R - Inertia	Agent Number	Average Payoff	SE	t-test	p_value
0.01	1	52.36	0.78		
0.01	2	58.49	0.84	7.57	0.000
0.01	3	58.56	0.84	7.66	0.000
0.01	4	58.59	0.84	7.70	0.000
0.01	5	58.48	0.84	7.56	0.000
0.01	6	58.57	0.84	7.67	0.000
0.01	7	58.59	0.84	7.70	0.000
0.01	8	58.58	0.84	7.68	0.000
0.2	1	66.04	0.8		
0.2	2	72.4	0.86	7.67	0.000
0.2	3	73	0.86	8.39	0.000
0.2	4	73.26	0.87	8.65	0.000
0.2	5	73.48	0.87	8.92	0.000
0.2	6	73.36	0.87	8.77	0.000
0.2	7	73.28	0.86	8.73	0.000
0.2	8	73.29	0.87	8.69	0.000
0.5	1	86.65	1.12		
0.5	2	91.16	1.16	3.96	0.000
0.5	3	93.19	1.17	5.71	0.000
0.5	4	94.27	1.19	6.60	0.000
0.5	5	94.13	1.19	6.48	0.000
0.5	6	95.16	1.18	7.40	0.000
0.5	7	94.92	1.21	7.10	0.000
0.5	8	94.78	1.17	7.10	0.000
0.8	1	92.69	1.77		
0.8	2	95.02	1.84	1.29	0.098
0.8	3	94.42	1.84	0.96	0.169
0.8	4	97.57	1.85	2.70	0.004
0.8	5	96.86	1.85	2.30	0.011
0.8	6	97.47	1.88	2.62	0.004
0.8	7	98.95	1.9	3.41	0.000
0.8	8	99.58	1.88	3.78	0.000

R - Inertia	Agent Number	Average Payoff	SE	t-test	p_value

Appendix D.2: Random payoff F test

This section contains F test to compare average comulative paoff of agents when the game starts from a randomised initial network.

Random pay N = 3

C	ag	R = 0.01		F	R = 0.2		F	R = 0.5		F	R = 0.8		F
0.50	1.00	9.23	0.09	1628.94	191.63	11.38	265.48	118.43	7.06	264.51	89.91	5.10	278.16
0.50	2.00	9.31	0.09	1628.94	191.63	11.38	265.48	118.45	7.06	264.51	89.99	5.10	278.16
0.50	3.00	9.36	0.09	1628.94	191.70	11.38	265.48	118.51	7.06	264.51	90.07	5.10	278.16
mean		9.30			191.65			118.46			89.99		
1.50	1.00	15.82	0.82	304.45	145.03	8.72	262.20	99.67	5.93	265.03	80.44	4.48	283.31
1.50	2.00	15.83	0.82	304.45	145.02	8.72	262.20	99.68	5.93	265.03	80.53	4.48	283.31
1.50	3.00	15.86	0.81	308.21	145.07	8.72	262.20	99.74	5.93	265.03	80.57	4.48	283.31
mean		15.84			145.04			99.70			80.51		

Random pay N = 4

C	ag	R = 0.01		F	R = 0.2		F	R = 0.5		F	R = 0.8		F
0.50	1.00	14.84	0.16	973.60	11.21	0.14	838.03	11.18	0.12	977.26	13.88	0.20	727.96
0.50	2.00	14.89	0.16	973.60	11.19	0.14	838.03	11.17	0.12	30.90	13.88	0.20	727.96
0.50	3.00	14.86	0.16	973.60	11.17	0.14	838.03	11.17	0.12	30.90	13.83	0.20	727.96
0.50	4.00	14.76	0.16	973.60	11.13	0.14	838.03	11.16	0.12	30.90	13.88	0.20	727.96
		14.84			11.18			11.17			13.87		
1.50	1.00	11.81	0.13	954.18	10.83	0.11	1032.93	11.17	0.11	1064.67	14.78	0.19	817.80
1.50	2.00	11.83	0.13	954.18	10.83	0.11	1032.93	11.16	0.11	1064.67	14.86	0.19	817.80
1.50	3.00	11.82	0.13	954.18	10.82	0.11	1032.93	11.13	0.11	1064.67	14.70	0.19	817.80
1.50	4.00	11.80	0.13	954.18	10.81	0.11	1032.93	11.16	0.11	1064.67	14.86	0.19	817.80
		11.82			10.82			11.16			14.80		

Random pay N = 5

C	ag	R = 0.01		F	R = 0.2		F	R = 0.5		F	R = 0.8		F
0.50	1.00	20.81	0.27	603.54	20.04	1.65	95.40	17.72	0.93	149.66	19.02	0.67	224.03
0.50	2.00	20.80	0.27	603.54	20.08	1.65	95.40	17.77	0.93	149.66	19.11	0.67	224.03
0.50	3.00	20.76	0.27	603.54	20.07	1.65	95.40	17.74	0.93	149.66	19.12	0.67	224.03
0.50	4.00	20.67	0.27	603.54	20.01	1.65	95.40	17.69	0.93	149.66	19.12	0.67	224.03
0.50	5.00	20.54	0.26	626.75	19.85	1.65	95.40	17.55	0.93	149.66	19.04	0.67	224.03
		20.72			20.01			17.69			19.08		
1.50	1.00	16.99	0.19	702.99	19.20	1.38	109.33	17.79	0.83	168.26	19.98	0.62	254.91
1.50	2.00	17.07	0.19	702.99	19.25	1.38	109.33	17.82	0.83	168.26	20.12	0.62	254.91
1.50	3.00	17.06	0.19	702.99	19.24	1.38	109.33	17.82	0.83	168.26	20.10	0.62	254.91
1.50	4.00	16.95	0.19	702.99	19.19	1.37	110.13	17.73	0.83	168.26	20.19	0.62	254.91
1.50	5.00	16.83	0.18	742.04	19.02	1.37	110.13	17.61	0.83	168.26	20.07	0.62	254.91
		16.98			19.18			17.75			20.09		

Random pay N = 6

C	ag	R = 0.01		F	R = 0.2		F	R = 0.5		F	R = 0.8		F
0.50	1.00	27.93	0.39	447.99	18.07	0.24	471.15	18.24	0.21	545.24	20.14	0.25	506.16
0.50	2.00	27.96	0.39	447.99	18.12	0.24	471.15	18.33	0.21	545.24	20.10	0.25	506.16
0.50	3.00	27.90	0.39	447.99	18.14	0.24	471.15	18.34	0.21	545.24	20.41	0.25	506.16
0.50	4.00	27.84	0.38	459.78	18.05	0.24	471.15	18.30	0.21	545.24	20.15	0.25	506.16
0.50	5.00	27.73	0.38	459.78	17.91	0.24	471.15	18.11	0.21	545.24	19.95	0.25	506.16
0.50	6.00	27.39	0.37	472.20	17.63	0.24	471.15	17.96	0.21	545.24	20.02	0.25	506.16
		27.79			17.99			18.21			20.13		
1.50	1.00	23.07	0.26	556.61	18.49	0.21	550.98	18.92	0.20	594.35	21.57	0.25	541.86
1.50	2.00	23.14	0.26	556.61	18.50	0.21	550.98	19.01	0.20	594.35	21.50	0.25	541.86
1.50	3.00	23.15	0.26	556.61	18.55	0.21	550.98	19.06	0.20	594.35	21.77	0.25	541.86
1.50	4.00	23.13	0.25	578.87	18.48	0.21	550.98	19.00	0.20	594.35	21.56	0.25	541.86
1.50	5.00	22.97	0.25	578.87	18.34	0.21	550.98	18.79	0.20	594.35	21.49	0.25	541.86
1.50	6.00	22.66	0.25	578.87	18.07	0.21	550.98	18.67	0.20	594.35	21.40	0.25	541.86
		23.02			18.41			18.91			21.55		

Random pay N = 7

C	ag	R = 0.01		F value	R = 0.2		F value	R = 0.5		F value	R = 0.8		F value
0.50	1.00	37.70	0.62	316.34	22.03	0.58	197.86	21.92	0.37	308.86	23.39	0.34	358.39
0.50	2.00	37.70	0.62	316.34	22.10	0.58	197.86	22.05	0.37	308.86	23.43	0.34	358.39
0.50	3.00	37.62	0.62	316.34	22.12	0.58	197.86	22.04	0.37	308.86	23.48	0.34	358.39
0.50	4.00	37.61	0.62	316.34	22.11	0.58	197.86	21.90	0.37	308.86	23.35	0.34	358.39
0.50	5.00	37.53	0.62	316.34	22.01	0.58	197.86	21.81	0.37	308.86	23.20	0.34	358.39
0.50	6.00	37.23	0.61	321.53	21.76	0.58	197.86	21.74	0.37	308.86	23.26	0.34	358.39
0.50	7.00	36.94	0.60	326.89	21.36	0.58	197.86	21.39	0.37	308.86	22.87	0.34	358.39
		37.48			21.93			21.84			23.28		
1.50	1.00	31.01	0.40	404.93	22.83	0.51	233.25	23.02	0.35	342.75	24.97	0.34	384.45
1.50	2.00	31.17	0.39	415.31	22.90	0.51	233.25	23.09	0.35	342.75	25.13	0.33	396.10
1.50	3.00	31.17	0.39	415.31	22.90	0.51	233.25	23.09	0.35	342.75	25.21	0.34	384.45
1.50	4.00	31.16	0.39	415.31	22.91	0.51	233.25	23.00	0.35	342.75	25.06	0.34	384.45
1.50	5.00	31.03	0.39	415.31	22.80	0.51	233.25	22.89	0.35	342.75	24.91	0.34	384.45
1.50	6.00	30.79	0.39	415.31	22.57	0.51	233.25	22.85	0.35	342.75	24.90	0.33	396.10
1.50	7.00	30.31	0.39	415.31	22.20	0.51	233.25	22.51	0.35	342.75	24.65	0.34	384.45
		30.95			22.73			22.92			24.98		

Random pay N = 8

C	ag	R=0.01		F value	R=0.2		F value	R=0.5		F value	R=0.8		F value
0.50	1.00	46.49	0.77	2.85	24.69	0.35	4.10	25.18	0.30	4.33	26.53	0.32	4.62
0.50	2.00	46.51	0.77	2.85	24.80	0.35	4.10	25.12	0.30	4.33	26.39	0.33	4.48
0.50	3.00	46.48	0.77	2.85	24.84	0.34	4.22	25.16	0.30	4.33	26.40	0.33	4.48
0.50	4.00	46.46	0.77	2.85	24.90	0.35	4.10	25.10	0.30	4.33	26.34	0.33	4.48
0.50	5.00	46.38	0.77	2.85	24.84	0.34	4.22	25.19	0.30	4.33	26.63	0.33	4.48
0.50	6.00	46.15	0.76	2.89	24.68	0.34	4.22	25.09	0.30	4.33	26.40	0.33	4.48
0.50	7.00	46.01	0.76	2.89	24.45	0.34	4.22	24.92	0.30	4.33	26.18	0.33	4.48
0.50	8.00	45.52	0.74	2.97	23.81	0.34	4.22	24.34	0.30	4.33	25.51	0.33	4.48
		46.25			24.63			25.01			26.30		
1.50	1.00	38.19	0.49	407.30	26.05	0.32	424.55	26.58	0.29	477.52	28.43	0.33	447.03
1.50	2.00	38.36	0.49	407.30	26.11	0.32	424.55	26.59	0.29	477.52	28.31	0.33	447.03
1.50	3.00	38.42	0.49	407.30	26.17	0.32	424.55	26.60	0.29	477.52	28.19	0.33	447.03
1.50	4.00	38.44	0.49	407.30	26.17	0.32	424.55	26.56	0.30	461.60	28.27	0.33	447.03
1.50	5.00	38.36	0.49	407.30	26.14	0.32	424.55	26.68	0.29	477.52	28.54	0.33	447.03
1.50	6.00	38.18	0.48	415.78	26.03	0.32	424.55	26.52	0.29	477.52	28.26	0.33	447.03
1.50	7.00	37.91	0.49	407.30	25.83	0.32	424.55	26.36	0.30	461.60	28.11	0.34	433.89
1.50	8.00	37.21	0.48	415.78	25.17	0.32	424.55	25.79	0.30	461.60	27.39	0.34	433.89
		38.13			25.96			26.46			28.19		