

Figure 4.1: Flow diagram of the proposed approach.

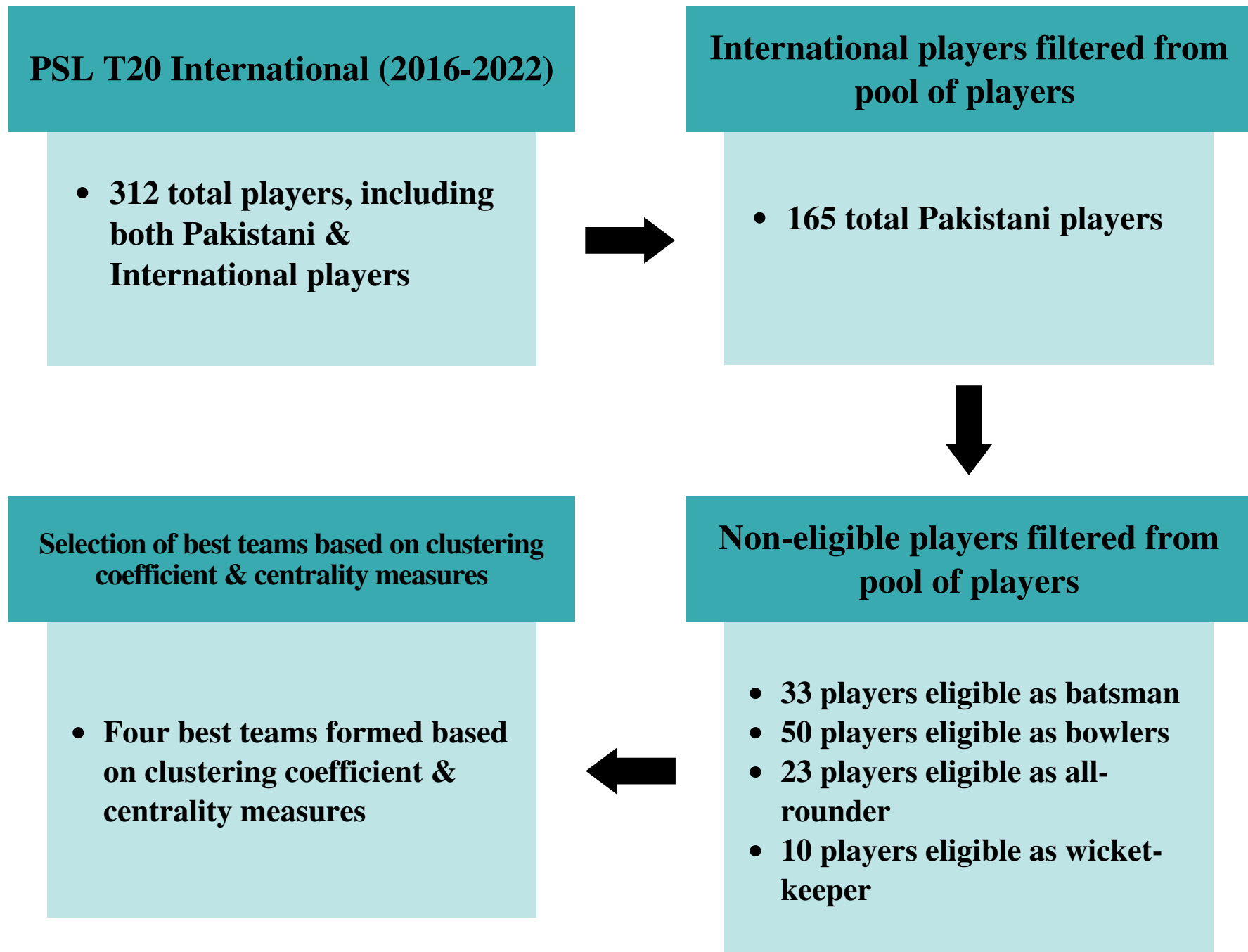


Fig 5.1.1: PSL 2016 Network

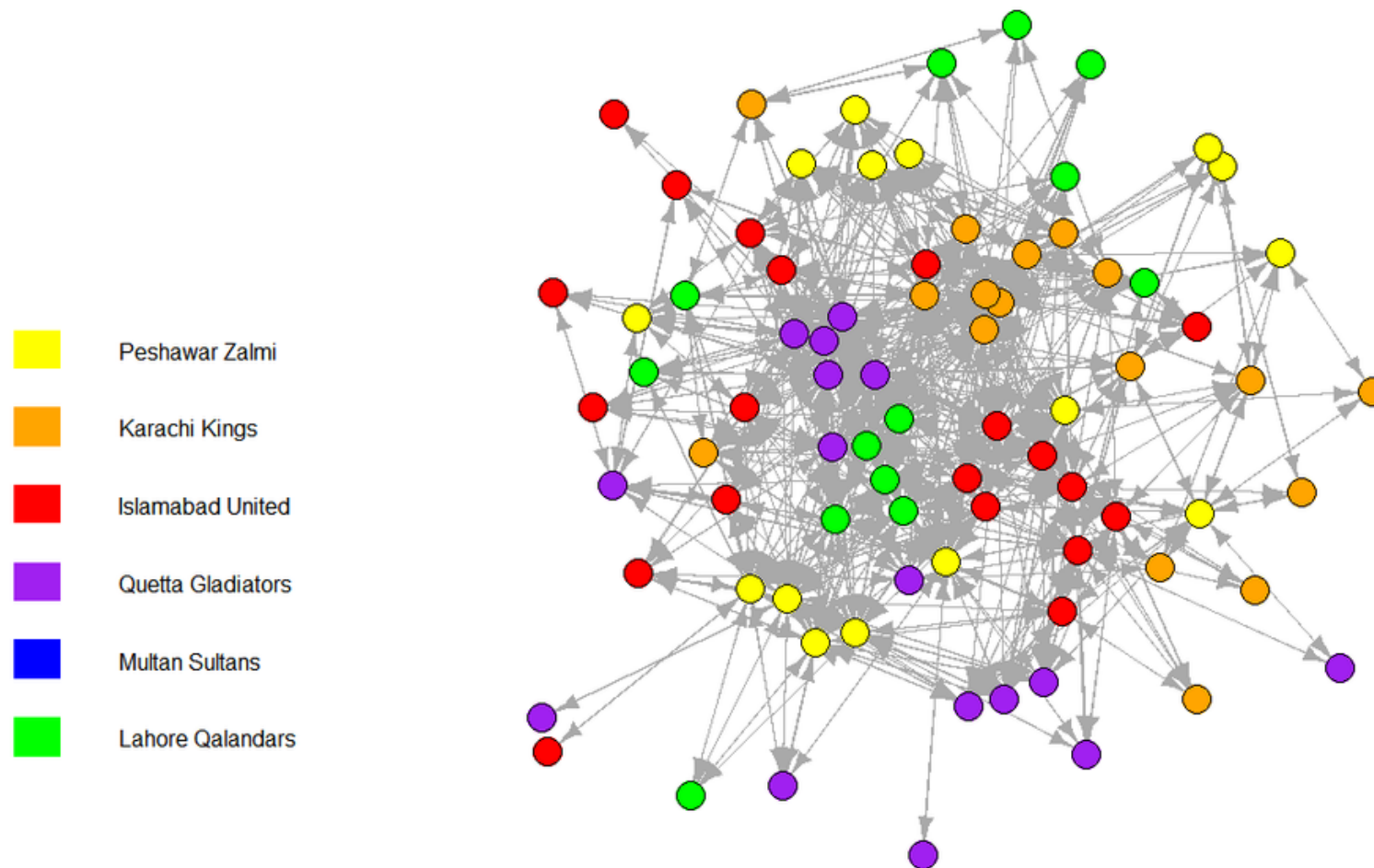


Fig 5.1.2: PSL 2017 Network

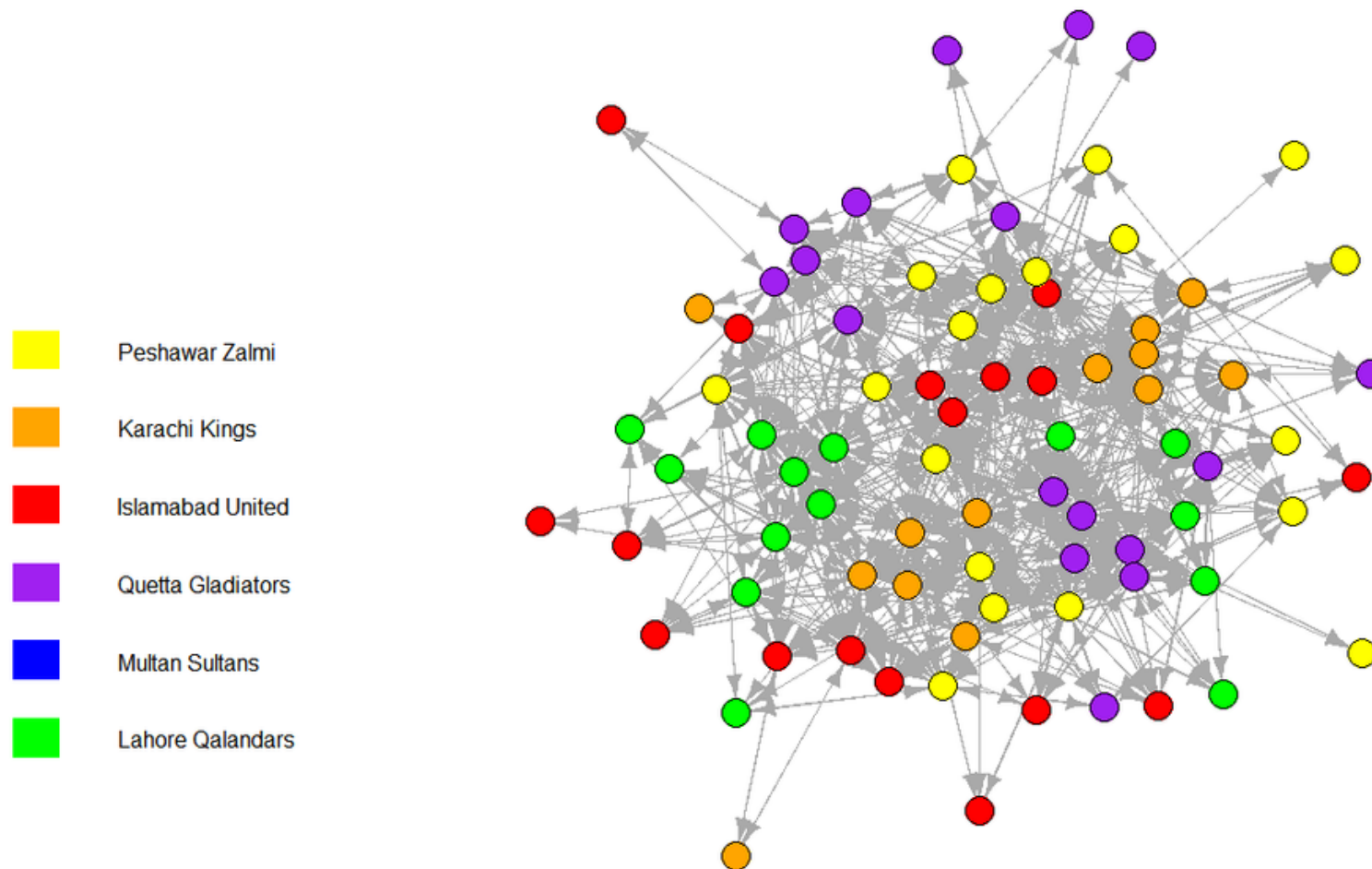


Fig 5.1.3: PSL 2018 Network

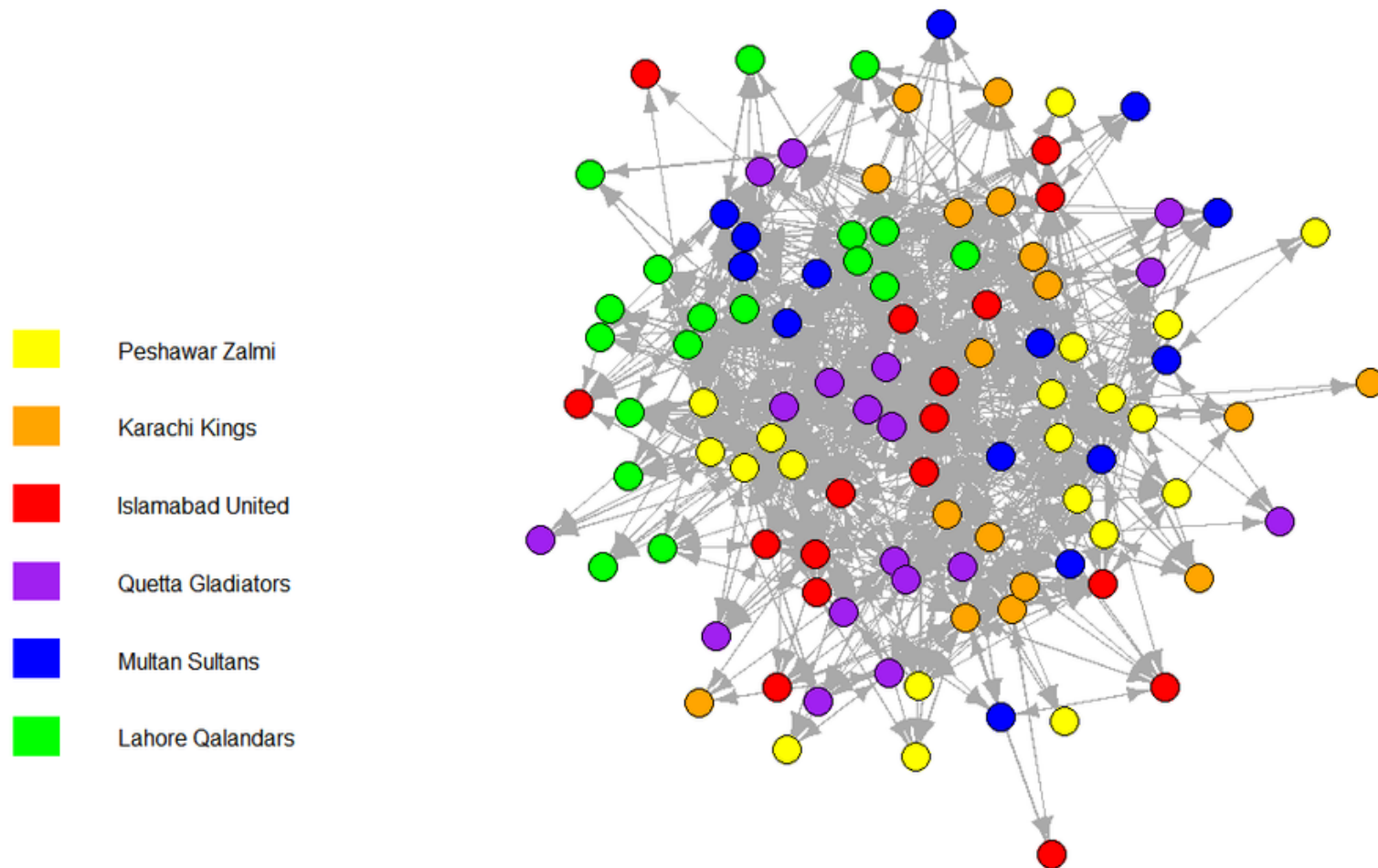


Fig 5.1.4: PSL 2019 Network

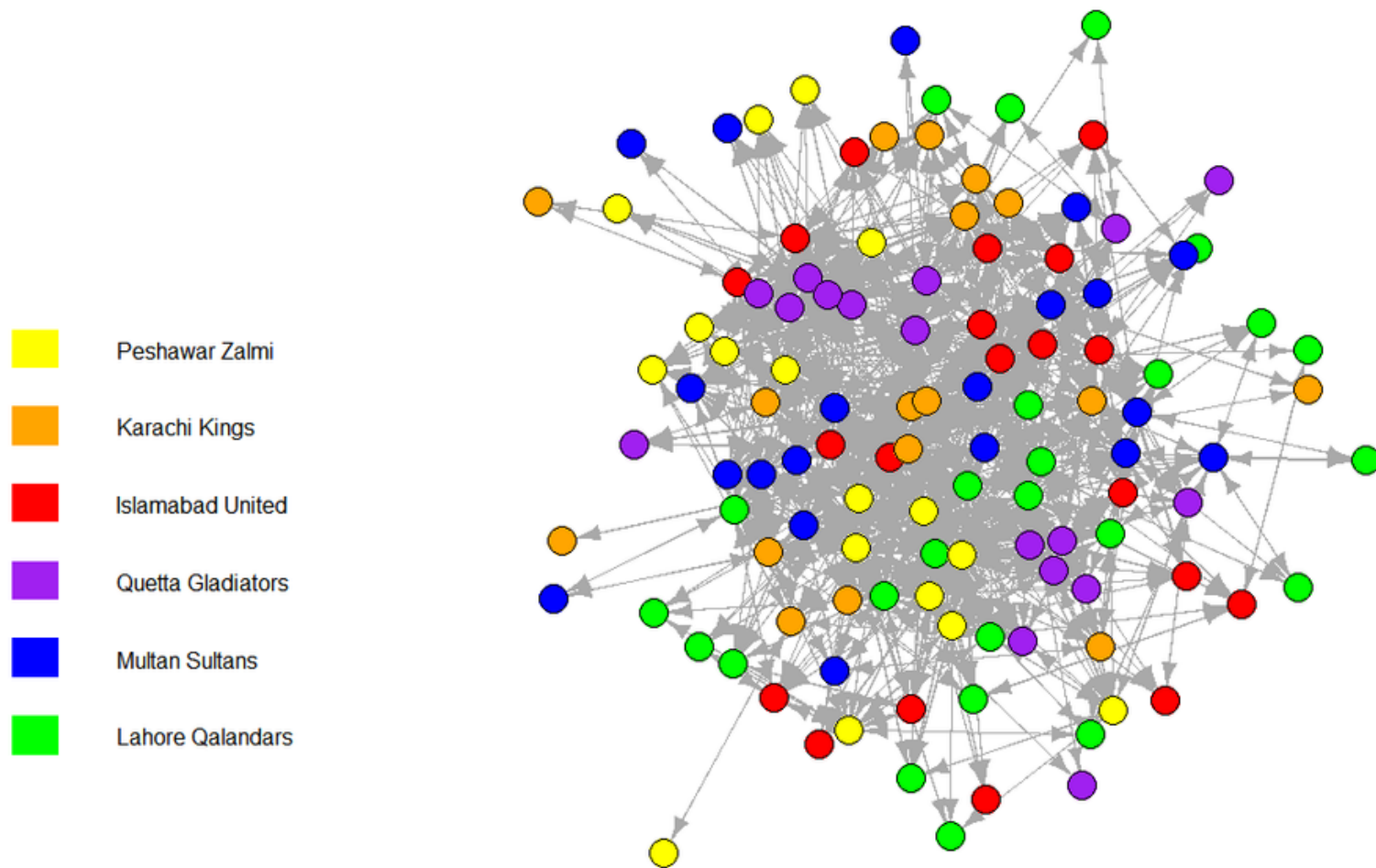


Fig 5.1.5: PSL 2020 Network

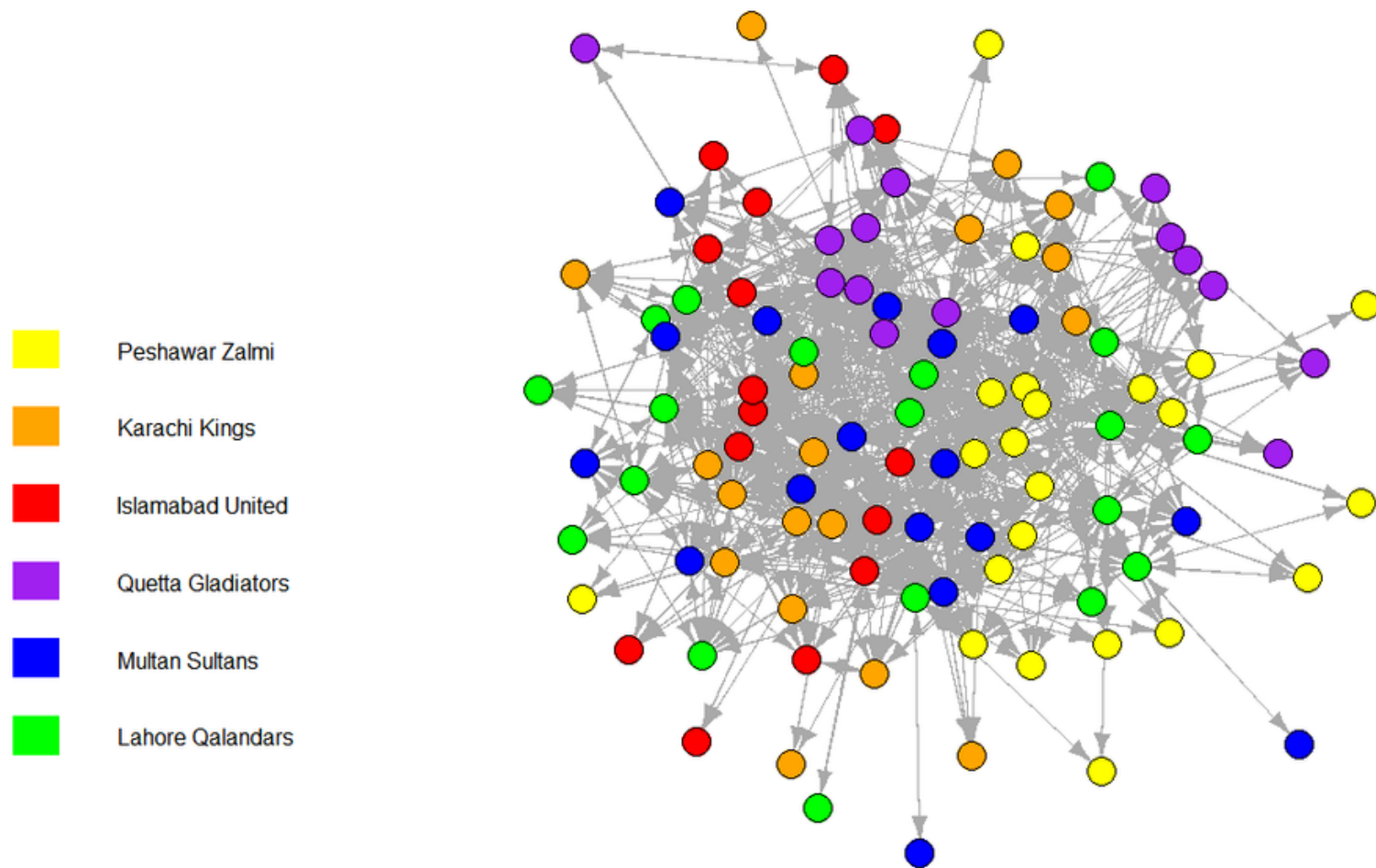


Fig 5.1.6: PSL 2021 Network

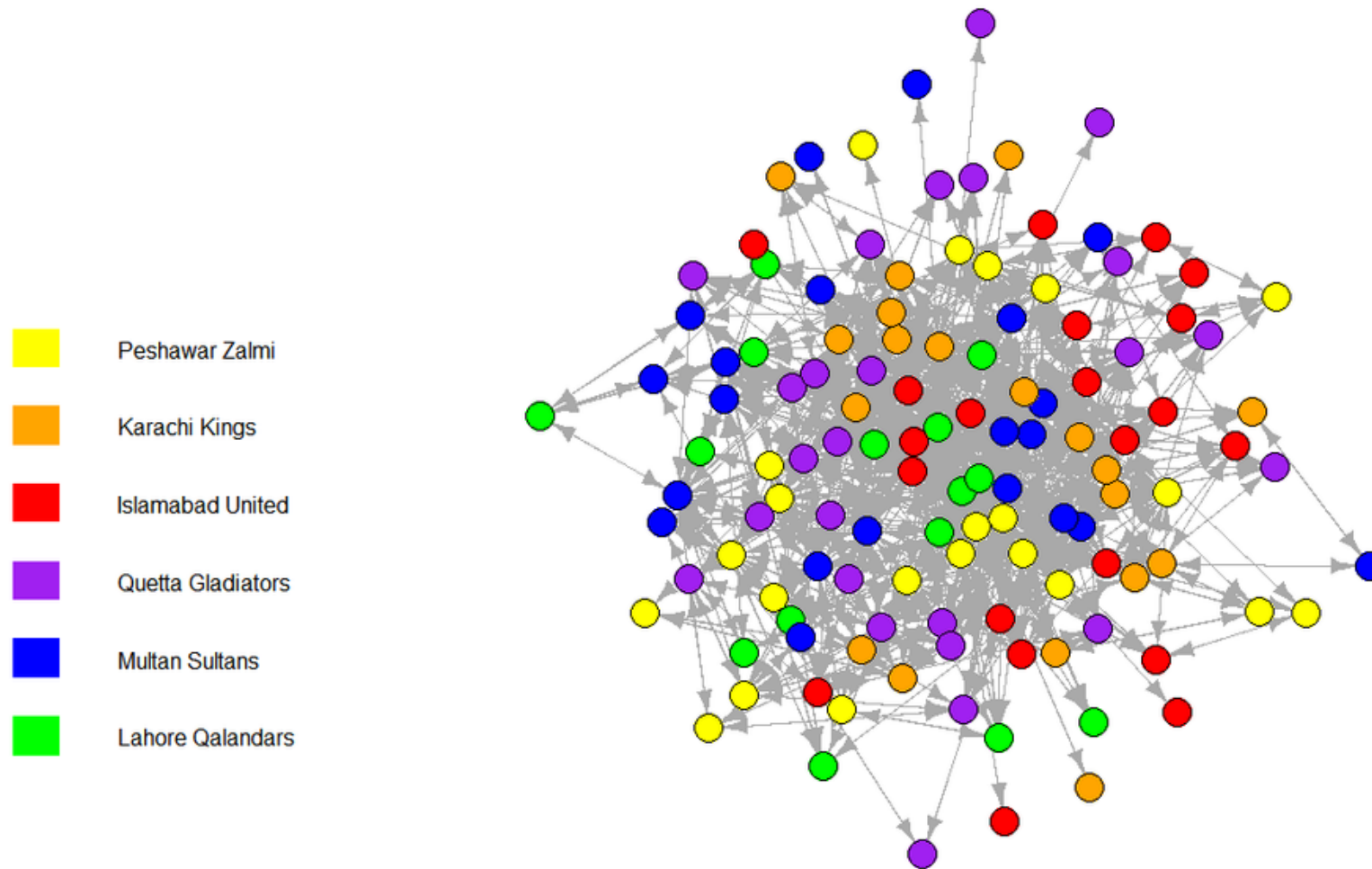


Fig 5.1.7: PSL 2022 Network

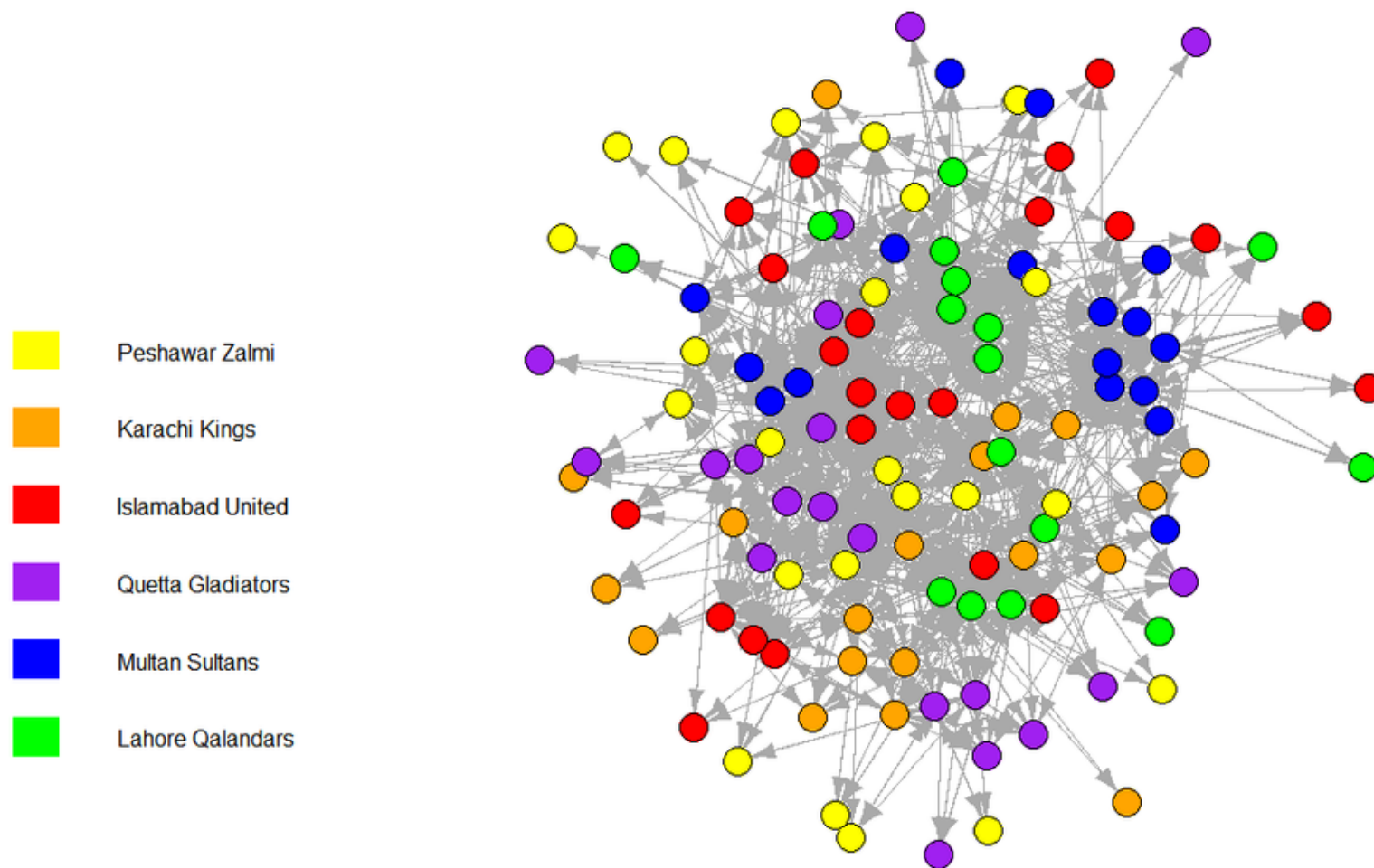


Fig 5.1.8: PSL seasons and their respective number of players.

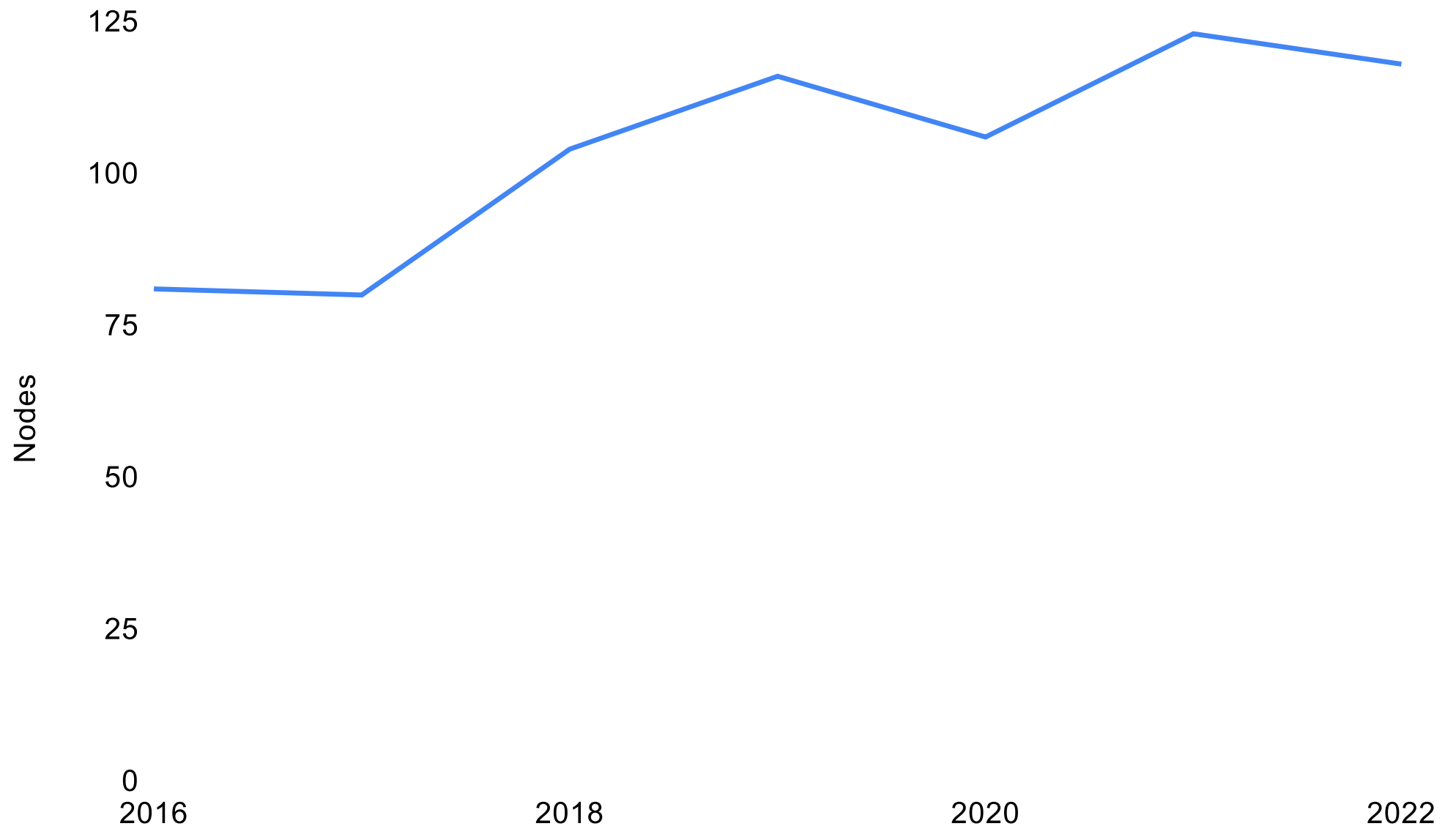


Fig 5.1.9: PSL seasons and their respective average path lengths.

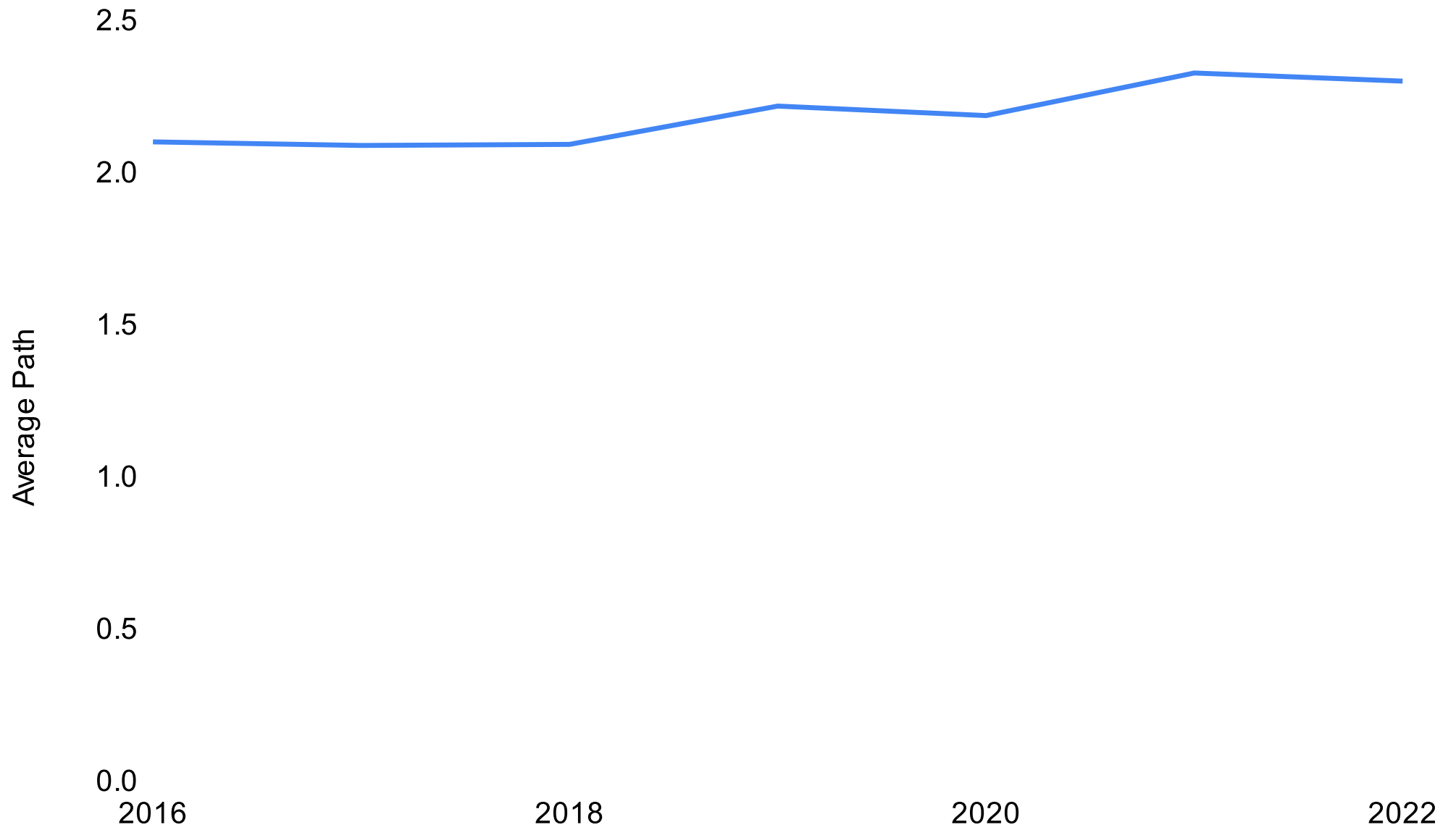


Fig 5.1.10: PSL seasons and their respective average degrees.

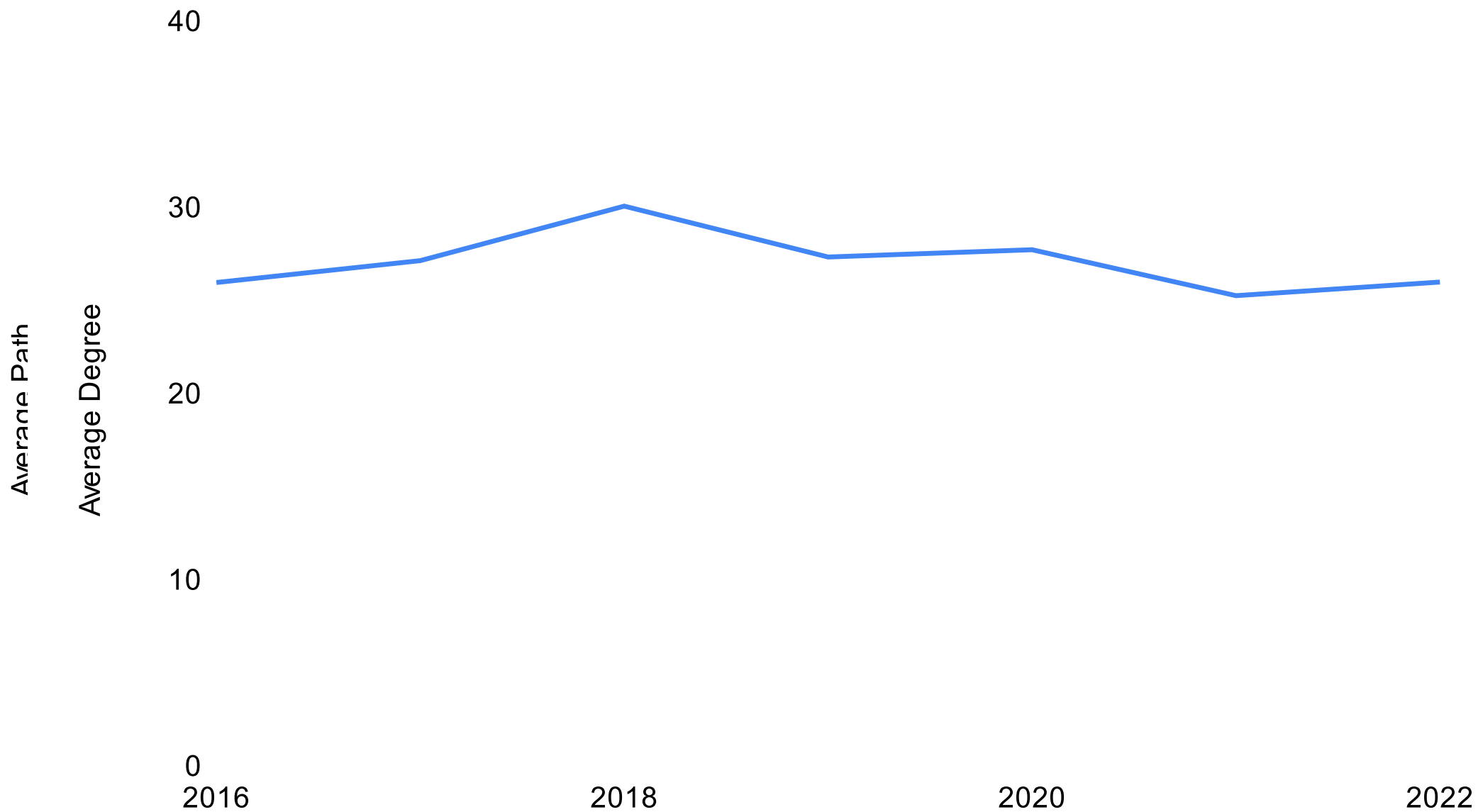


Fig 5.2.1: Entire PSL T20 Network

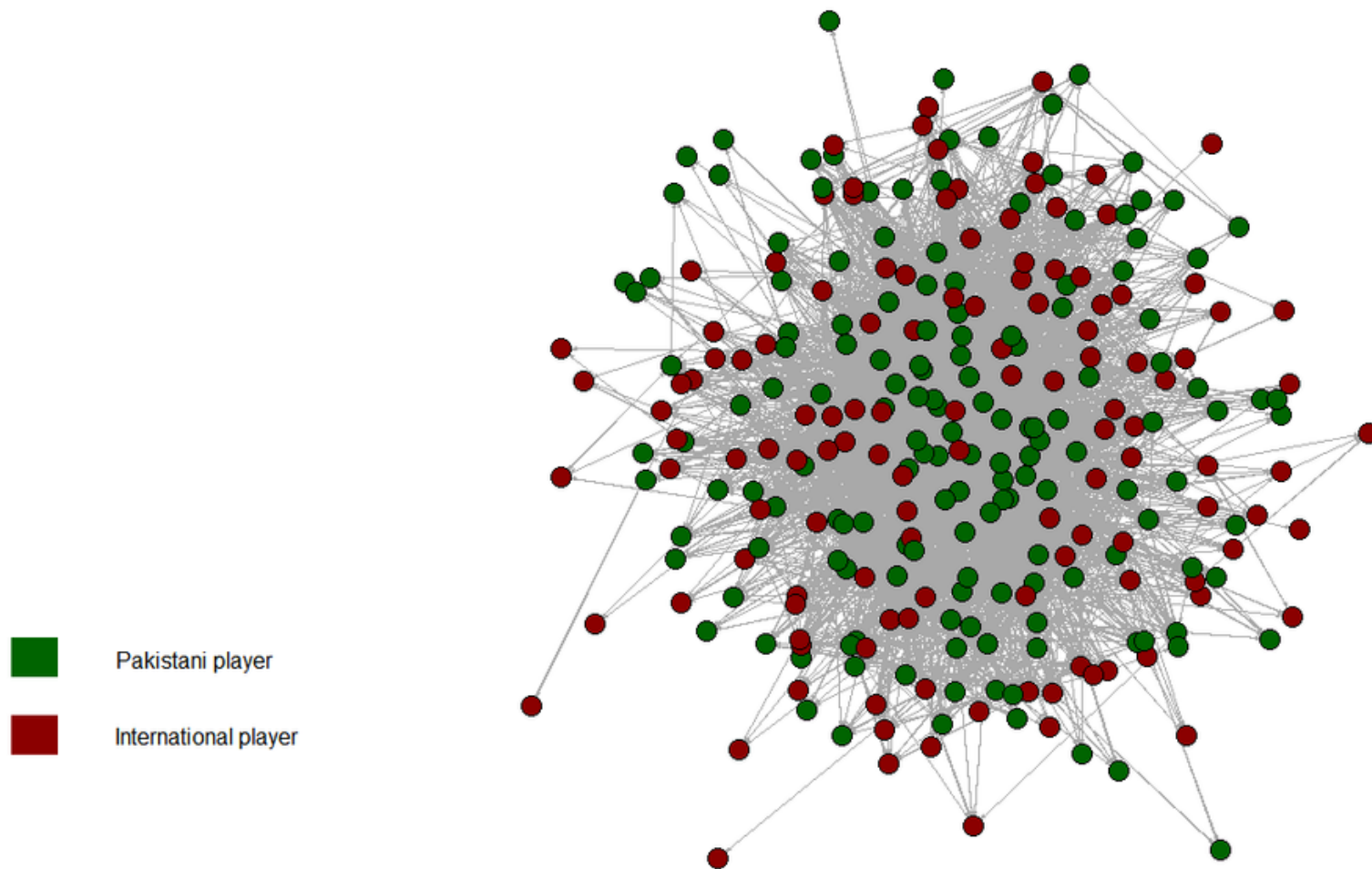


Fig 5.2.2: PSL Erdos Renyi Network

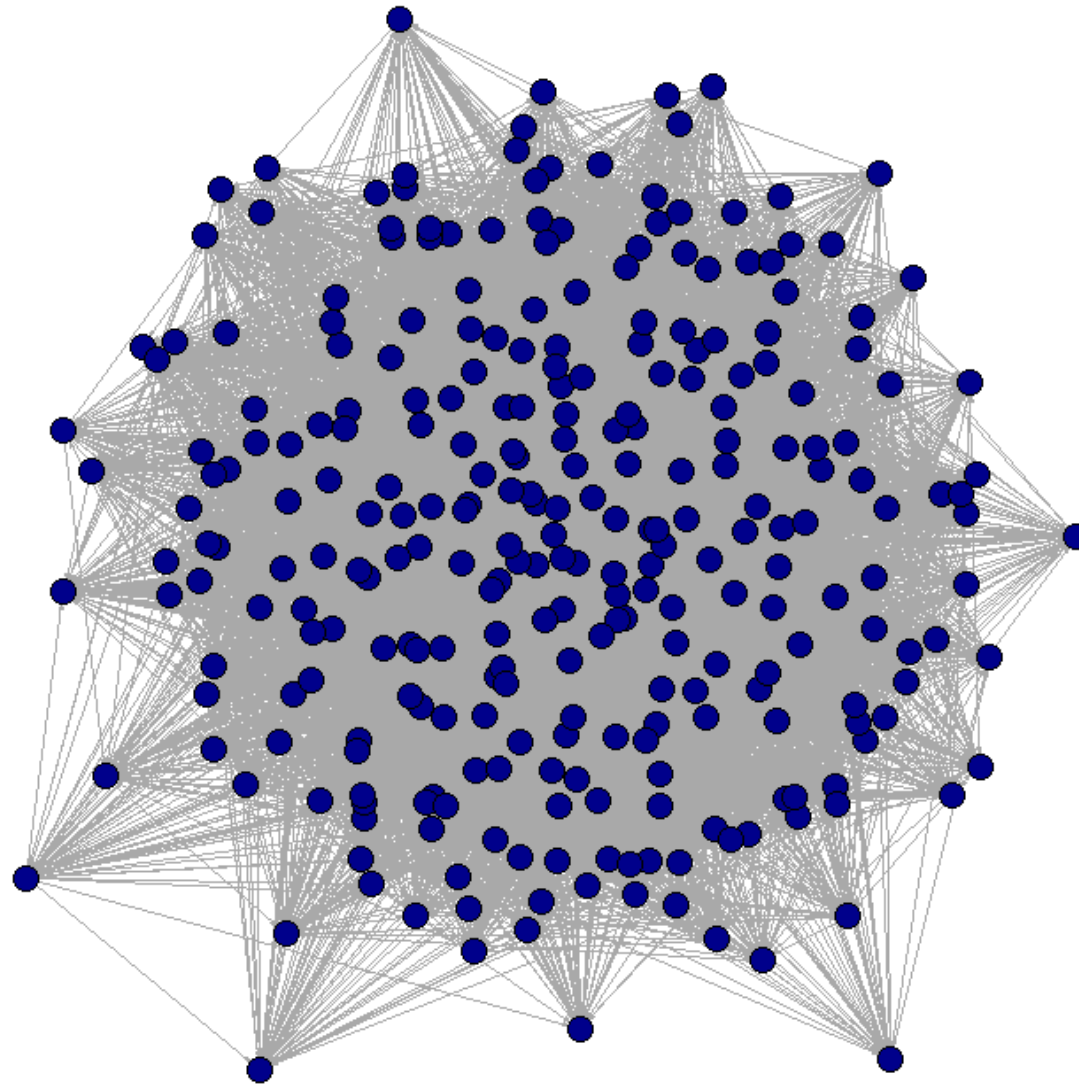


Fig 5.2.3: PSL Watts-Strogatz Network

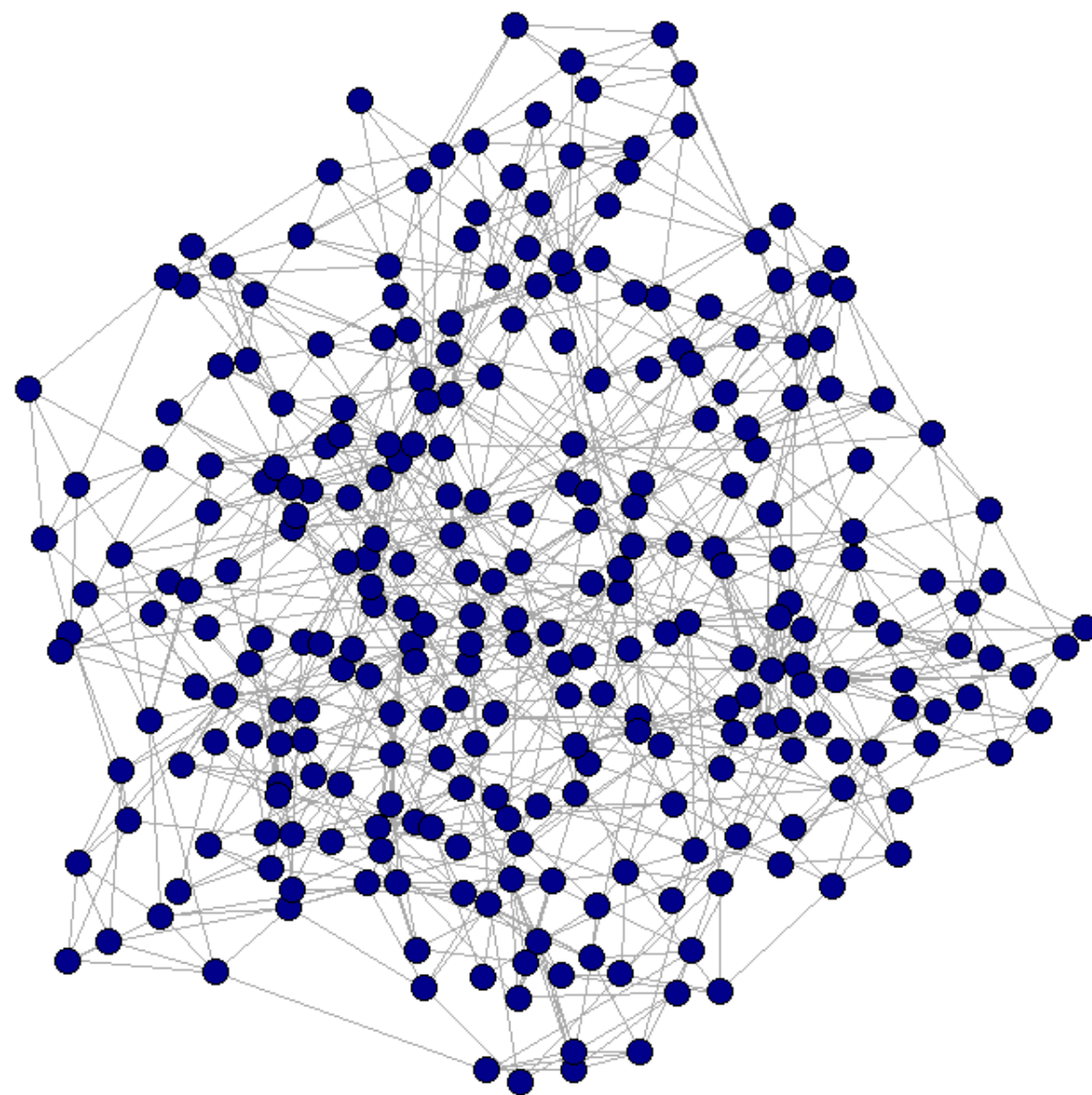


Fig 5.2.4: PSL Barabasi-Albert Network

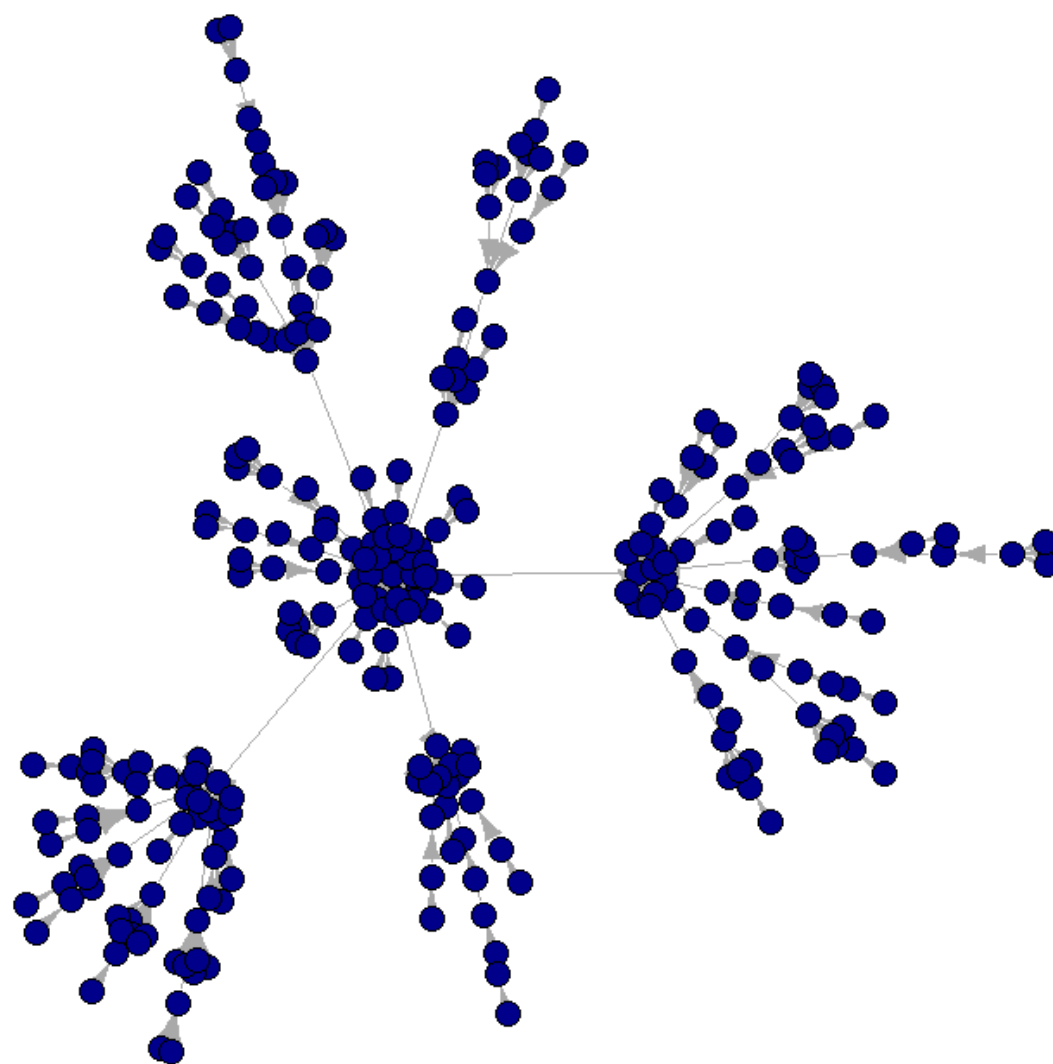


Fig 5.2.5: E-R Degree Distribution of PSL Network

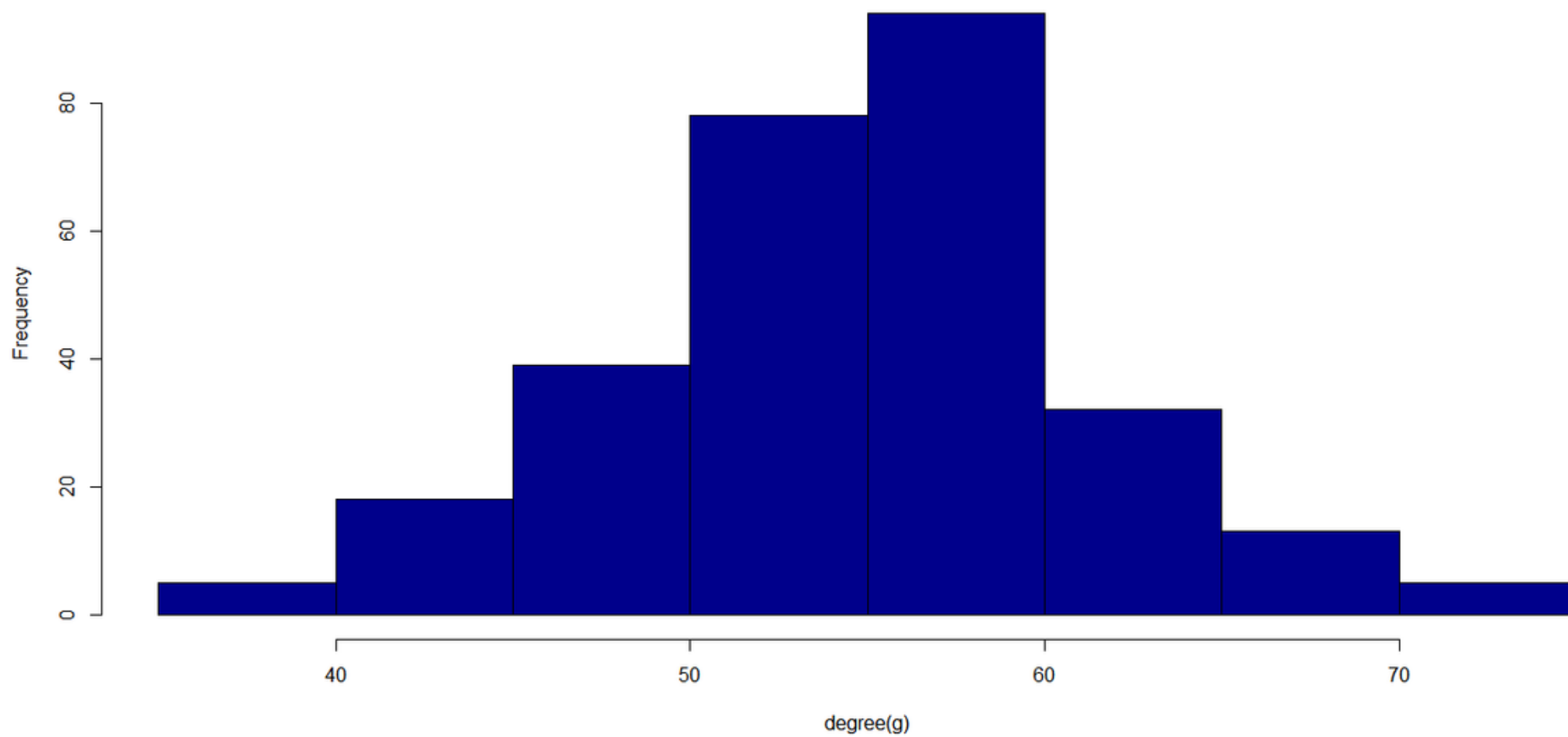


Fig 5.2.6: W-S Degree Distribution of PSL Network

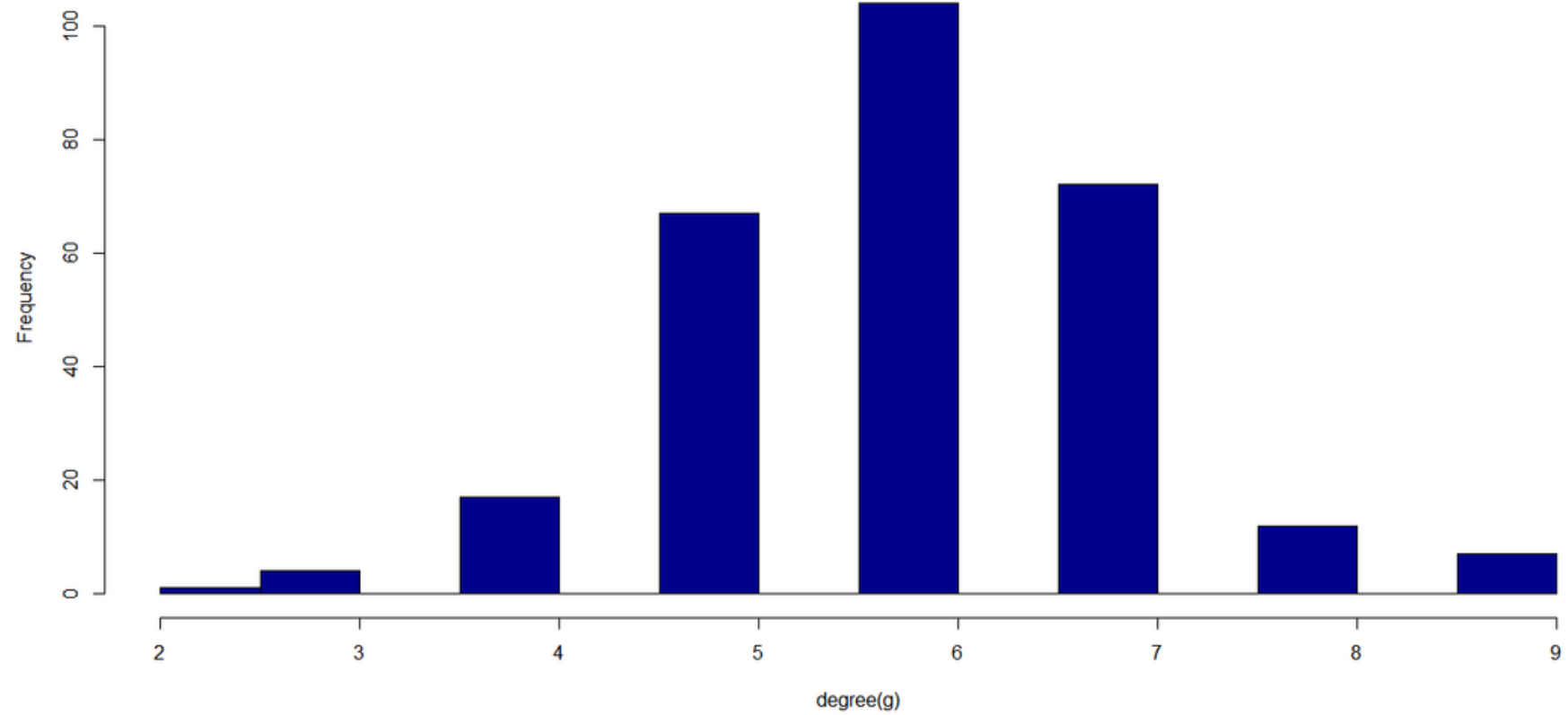


Fig 5.2.7: B-A Degree Distribution of PSL Network

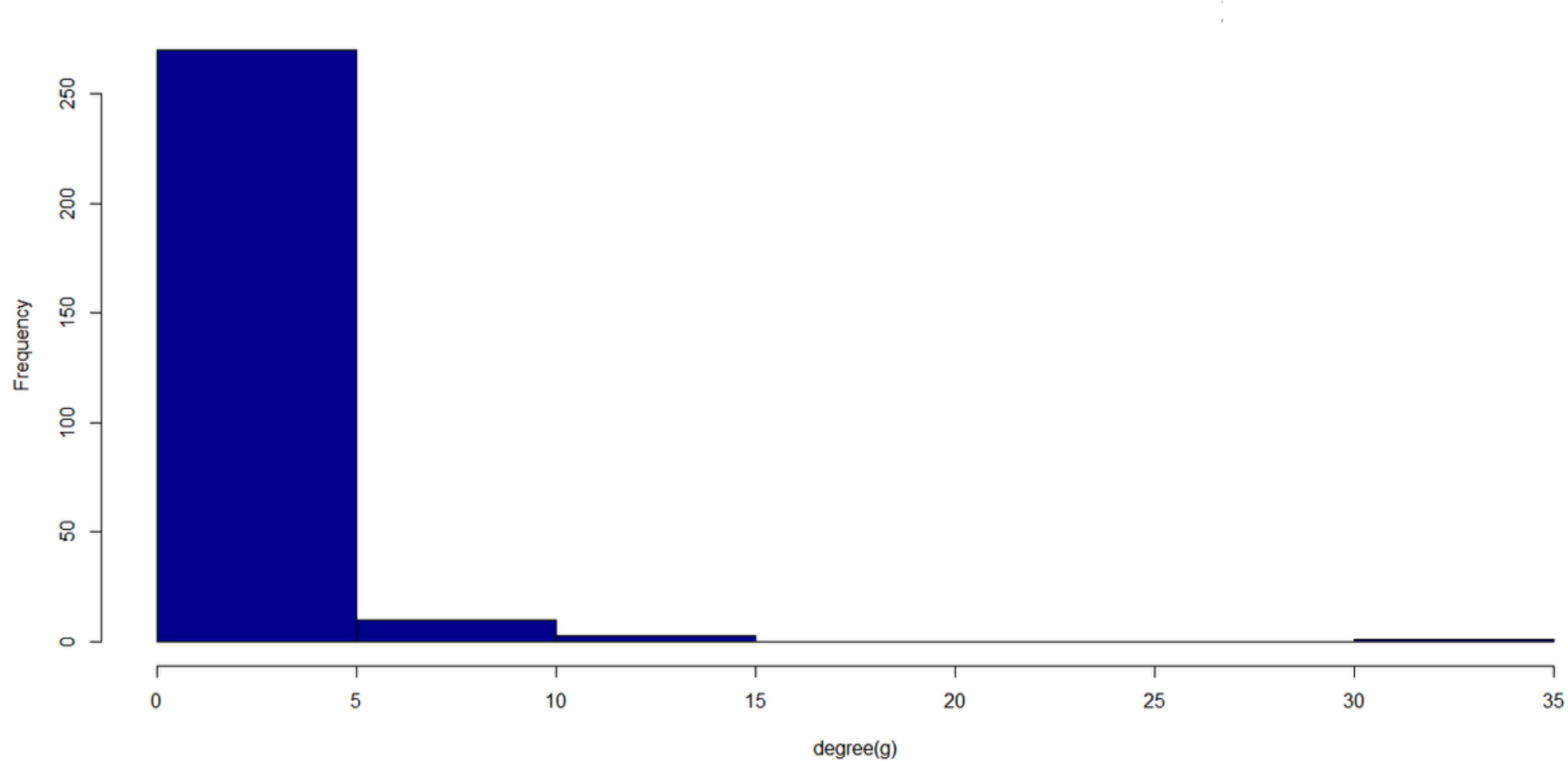


Fig 5.3.1: Degree Distribution of PSL Network

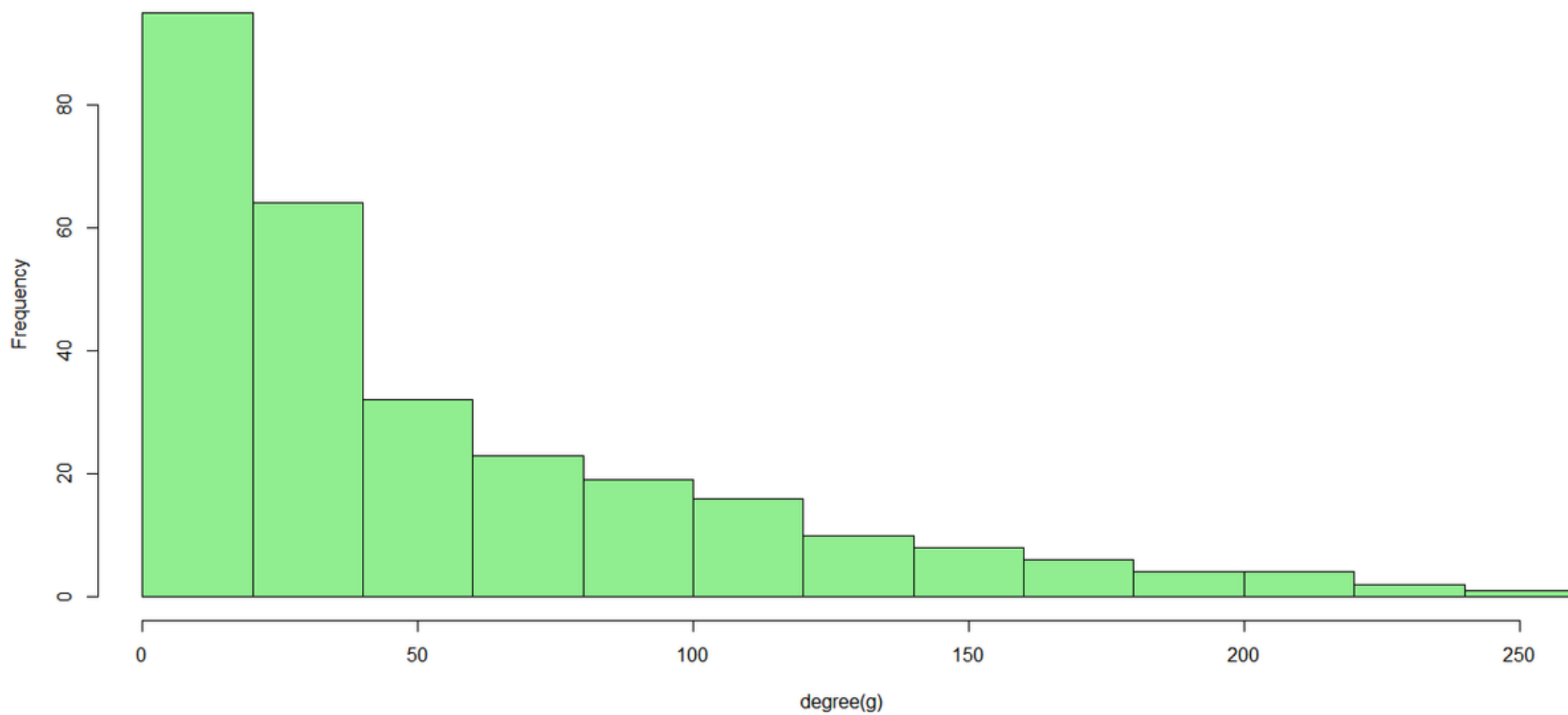


Fig 5.3.2: Betweenness Distribution of PSL Network

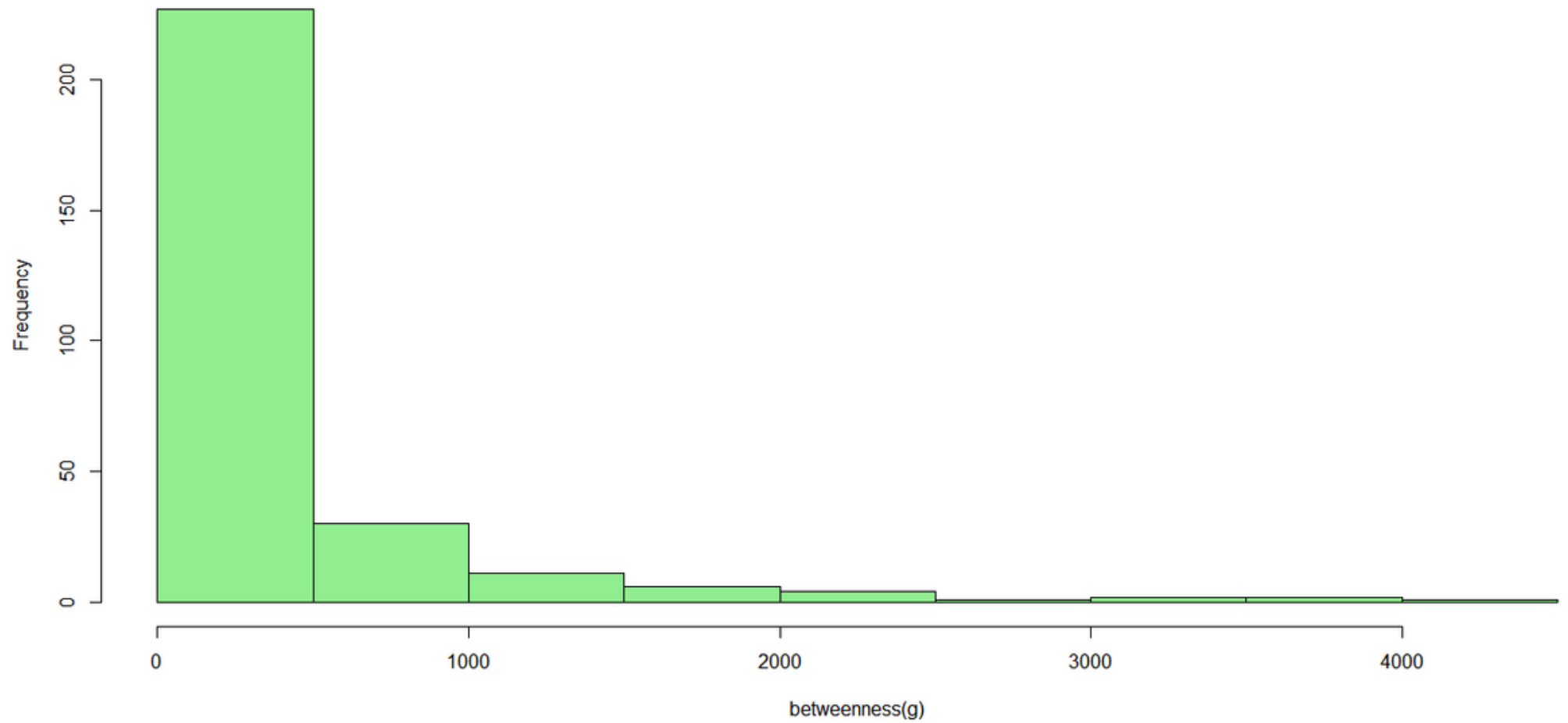


Fig 5.3.3: Closeness Distribution of PSL Network

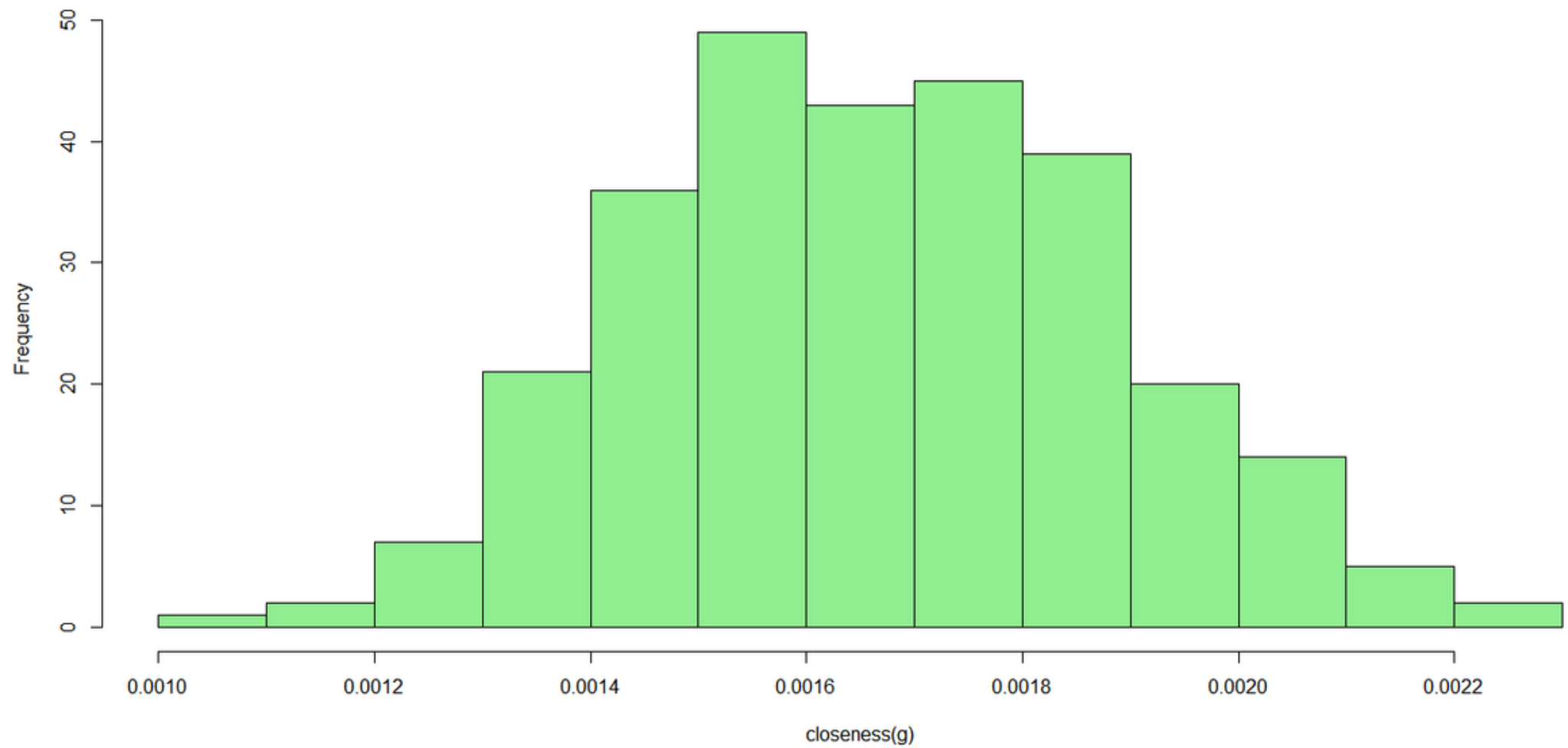


Fig 5.3.4: Clustering Coefficient Distribution of PSL Network

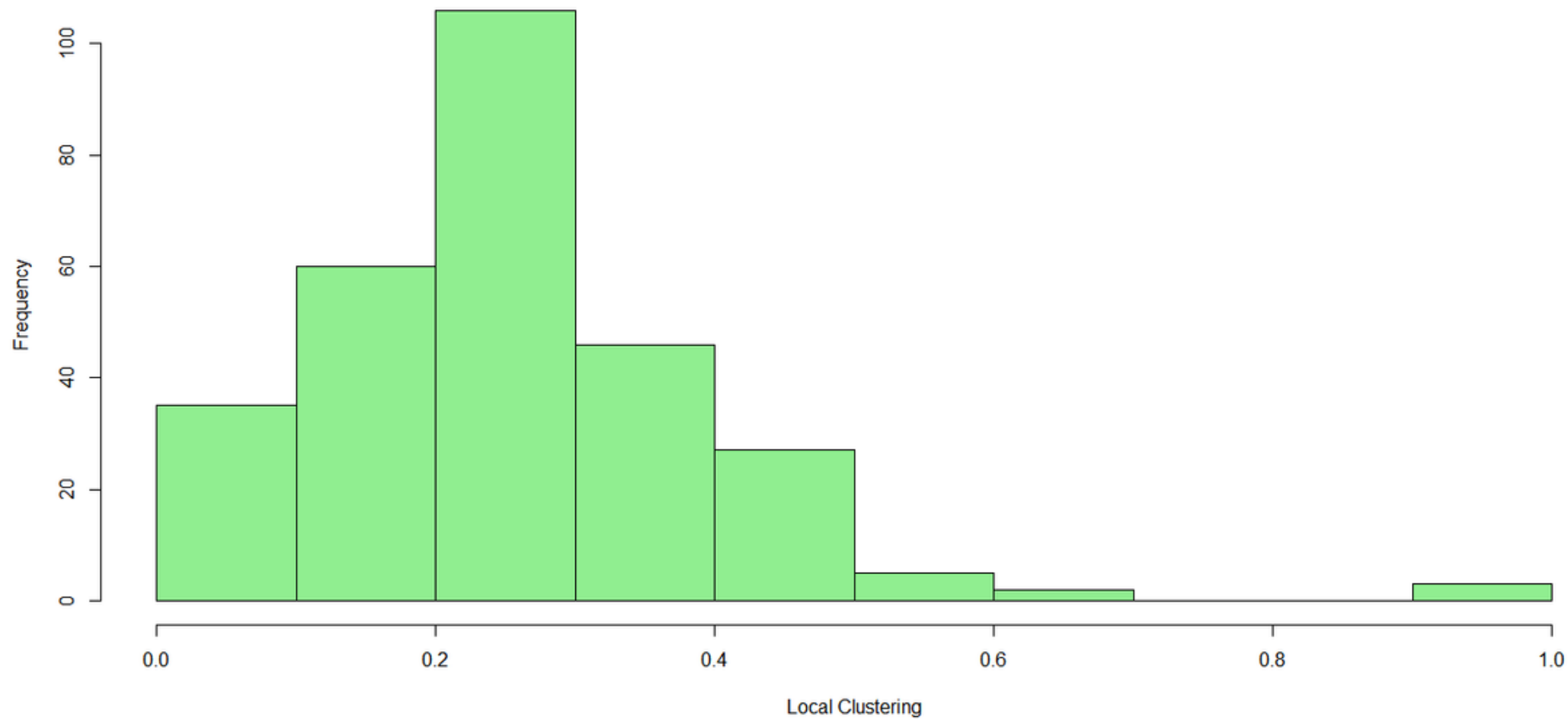


Table 5.1: PSL seasons and their respective number of players, average path length, and average degree.

| Season | Nodes | Average Path | Average Degree |
|--------|-------|--------------|----------------|
| 2016 | 81 | 2.100617 | 25.97531 |
| 2017 | 80 | 2.088924 | 27.15 |
| 2018 | 104 | 2.09242 | 30.07692 |
| 2019 | 116 | 2.218291 | 27.34483 |
| 2020 | 106 | 2.187062 | 27.73585 |
| 2021 | 123 | 2.327069 | 25.26829 |
| 2022 | 118 | 2.300304 | 26 |

Table 6.1: Our selected team with respect to degree centrality, closeness centrality, betweenness centrality, and clustering coefficient.

| Degree Centrality | Closeness Centrality | Betweenness Centrality | Clustering Coefficient |
|----------------------------|----------------------------|----------------------------|---------------------------|
| Fakhar Zaman (BAT) | Fakhar Zaman (BAT) | Fakhar Zaman (BAT) | Saif Badar (BAT) |
| Babar Azam (BAT) | Babar Azam (BAT) | Babar Azam (BAT) | Gulraiz Sadaf (BAT) |
| Iftikhar Ahmed (BAT) | Iftikhar Ahmed (BAT) | Iftikhar Ahmed (BAT) | Umar Siddiq (BAT) |
| Sohaib Maqsood (BAT) | Sohaib Maqsood (BAT) | Asif Ali (BAT) | Sahibzada Farhan (BAT) |
| Khushdil Shah (BAT) | Sharjeel Khan (BAT) | Sohaib Maqsood (BAT) | Imam-ul-Haq (BAT) |
| Sharjeel Khan (BAT) | Khushdil Shah (BAT) | Khushdil Shah (BAT) | Muhammad Faizan (BAT) |
| Mohammad Rizwan (WK) | Mohammad Rizwan (WK) | Mohammad Rizwan (WK) | Bismillah Khan (WK) |
| Sarfaraz Ahmed (WK) | Sarfaraz Ahmed (WK) | Sarfaraz Ahmed (WK) | Gauhar Ali (WK) |
| Imad Wasim (ALL) | Imad Wasim (ALL) | Imad Wasim (ALL) | Mohammad Taha (ALL) |
| Faheem Ashraf (ALL) | Faheem Ashraf (ALL) | Faheem Ashraf (ALL) | Agha Salman (ALL) |
| Shadab Khan (ALL) | Shadab Khan (ALL) | Mohammad Nawaz (ALL) | Ahmed Safi Abdullah (ALL) |
| Wahab Riaz (BALL) | Wahab Riaz (BALL) | Hasan Ali (BALL) | Mohammad Irfan (5) (BALL) |
| Hasan Ali (BALL) | Hasan Ali (BALL) | Wahab Riaz (BALL) | Zafar Gohar (BALL) |
| Shaheen Shah Afridi (BALL) | Shaheen Shah Afridi (BALL) | Shaheen Shah Afridi (BALL) | Mohammad Umar (BALL) |
| Mohammad Irfan (BALL) | Mohammad Irfan (BALL) | Rumman Raees (BALL) | Yasir Shah (BALL) |
| Haris Rauf (BALL) | Haris Rauf (BALL) | Mohammad Irfan (BALL) | Ahmed Daniyal (BALL) |
| Rumman Raees (BALL) | Rumman Raees (BALL) | Haris Rauf (BALL) | Mir Hamza (BALL) |
| Hassan Khan (BALL) | Hassan Khan (BALL) | Mohammad Hasnain (BALL) | Arshad Iqbal (BALL) |

BAT: Batsman; BALL: Bowler; WK: Wicket-keeper; All: All-rounder.

Table 6.2.1: Pool of players in our selected teams (but not in the World Cup team) with respect to their overall performance in their PSL Career.

| Player Name | Matches | Runs | Wickets | Role | Degree Centrality | Clustering Coefficient | Closeness Centrality | Betweenness Centrality |
|---------------------|---------|------|---------|---------------|-------------------|------------------------|----------------------|------------------------|
| Agha Salman | 15 | 219 | 0 | All-Rounder | 38 | 0.43056068 | 0.001658375 | 31.2252922 |
| Ahmed Daniyal | 10 | NA | 6 | Bowler | 56 | 0.34387282 | 0.001730104 | 66.7734497 |
| Ahmed Safi Abdullah | 3 | 9 | 4 | All-Rounder | 10 | 0.39593252 | 0.001428571 | 0.76647 |
| Arshad Iqbal | 17 | NA | 19 | Bowler | 60 | 0.31706627 | 0.001745201 | 78.8695543 |
| Bismillah Khan | 3 | 55 | NA | Wicket-Keeper | 4 | 1 | 0.001408451 | 0 |
| Faheen Ashraf | 49 | 488 | 64 | All-Rounder | 214 | 0.22135608 | 0.002155172 | 2588.312469 |
| Gauhar Ali | 3 | 30 | NA | Wicket-Keeper | 8 | 0.4756742 | 0.001481481 | 0.4237699 |
| Gulraiz Sadaf | 5 | 110 | NA | Batter | 22 | 0.45152691 | 0.001602564 | 6.0107237 |
| Hasan Ali | 64 | NA | 81 | Bowler | 238 | 0.15568352 | 0.002217295 | 4423.499451 |
| Hassan Khan | 28 | NA | 16 | Bowler | 122 | 0.21869258 | 0.001934236 | 625.5266583 |
| Imad Wasim | 68 | 682 | 42 | All-Rounder | 222 | 0.18523606 | 0.002169197 | 3078.209274 |
| Imam-ul-Haq | 22 | 542 | NA | Batter | 50 | 0.36778371 | 0.00174216 | 86.5271703 |
| Mir Hamza | 12 | NA | 12 | Bowler | 52 | 0.3240133 | 0.00174216 | 123.7060708 |
| Mohammad Irfan (5) | 2 | NA | 0 | Bowler | 4 | 1 | 0.001342282 | 0 |
| Mohammad Irfan | 53 | NA | 45 | Bowler | 144 | 0.17033465 | 0.001980198 | 1180.660648 |
| Mohammad Taha | 5 | 6 | 0 | All-Rounder | 6 | 0.6609608 | 0.001398601 | 0.1044749 |
| Mohammad Umar | 8 | NA | 7 | Bowler | 8 | 0.43162753 | 0.001351351 | 0.3154341 |
| Muhammad Faizan | 9 | 23 | NA | Batter | 20 | 0.3617044 | 0.001550388 | 4.9216323 |

Table 6.2.2: Pool of players in selected team (but not in the World Cup team) with respect to their overall performance in their PSL Career.

| Player Name | Matches | Runs | Wickets | Role | Degree Centrality | Clustering Coefficient | Closeness Centrality | Betweenness Centrality |
|------------------|---------|------|----------|---------------|-------------------|------------------------|----------------------|------------------------|
| Rumman Raees | 38 | NA | 37 | Bowler | 124 | 0.17944022 | 0.001945525 | 1282.036935 |
| Sahibzada Farhan | 14 | 191 | NA | Batter | 22 | 0.39451871 | 0.001615509 | 12.0804761 |
| Saif Badar | 10 | 21 | NA | Batter | 8 | 0.50416589 | 0.00148368 | 0.3279774 |
| Sarfaraz Ahmed | 72 | 1341 | NA | Wicket-Keeper | 102 | 0.3038579 | 0.001893939 | 331.0596556 |
| Sharjeel Khan | 45 | 1086 | NA | Batter | 112 | 0.21488112 | 0.001926782 | 611.9562497 |
| Sohaib Maqsood | 43 | 970 | NA | Batter | 132 | 0.21357839 | 0.001960784 | 821.7205978 |
| Umar Siddiq | 7 | 169 | Eligible | Batter | 36 | 0.42563547 | 0.001715266 | 14.6841768 |
| Wahab Riaz | 77 | NA | 103 | Bowler | 252 | 0.1820777 | 0.002257336 | 3981.626503 |
| Yasir Shah | 27 | NA | 26 | Bowler | 82 | 0.35320494 | 0.001834862 | 172.0487059 |
| Zafar Gohar | 17 | NA | 18 | Bowler | 40 | 0.44544252 | 0.001706485 | 14.5967611 |

Table 6.3: ICC T20 World Cup team with respect to their overall performance in their PSL Career.

| Player Name | Matches | Runs | Wickets | Role | Degree Centrality | Clustering Coefficient | Closeness Centrality | Betweenness Centrality |
|---------------------|---------|------|---------|---------------|-------------------|------------------------|----------------------|------------------------|
| Asif Ali | 67 | 1016 | 2 | Batter | 100 | 0.13023115 | 0.001886792 | 1042.266628 |
| Babar Azam | 68 | 2413 | 0 | Batter | 148 | 0.19584367 | 0.002 | 1385.095154 |
| Fakhar Zaman | 63 | 1939 | 2 | Batter | 152 | 0.16431757 | 0.002020202 | 1952.259558 |
| Haider Ali | 28 | 557 | 0 | Batter | 76 | 0.24877711 | 0.001798561 | 195.7738012 |
| Haris Rauf | 40 | 58 | 47 | Bowler | 134 | 0.19678674 | 0.001956947 | 1151.662226 |
| Iftikhar Ahmed | 48 | 584 | 9 | Batter | 132 | 0.20735194 | 0.001964637 | 1367.214146 |
| Khushdil Shah | 38 | 554 | 18 | Batter | 114 | 0.1987997 | 0.001908397 | 672.361488 |
| Mohammad Haris | 5 | 166 | 0 | Batter | 38 | 0.24323618 | 0.001675042 | 91.250794 |
| Mohammad Hasnain | 28 | 8 | 39 | Bowler | 106 | 0.23423663 | 0.001883239 | 999.5048612 |
| Mohammad Nawaz | 66 | 619 | 61 | All-Rounder | 184 | 0.13118633 | 0.00203252 | 2105.127196 |
| Mohammad Rizwan | 59 | 1446 | 0 | Wicket-Keeper | 130 | 0.2053143 | 0.001964637 | 960.8385612 |
| Mohammad Wasim | 19 | 77 | 20 | All-Rounder | 100 | 0.23345213 | 0.001862197 | 539.7155201 |
| Naseem Shah | 19 | 16 | 19 | Bowler | 102 | 0.24383662 | 0.001845018 | 597.4772633 |
| Shadab Khan | 61 | 800 | 65 | All-Rounder | 204 | 0.22625643 | 0.002109705 | 2087.340713 |
| Shaheen Shah Afridi | 50 | 88 | 70 | Bowler | 190 | 0.19165612 | 0.00209205 | 2134.657865 |
| Shahnawaz Dhani | 22 | 6 | 37 | Bowler | 76 | 0.11315427 | 0.00174216 | 462.721882 |
| Shan Masood | 34 | 1082 | 0 | Batter | 104 | 0.24943847 | 0.001890359 | 579.878053 |
| Usman Qadir | 12 | 29 | 13 | Bowler | 32 | 0.20308456 | 0.001572327 | 52.5758111 |