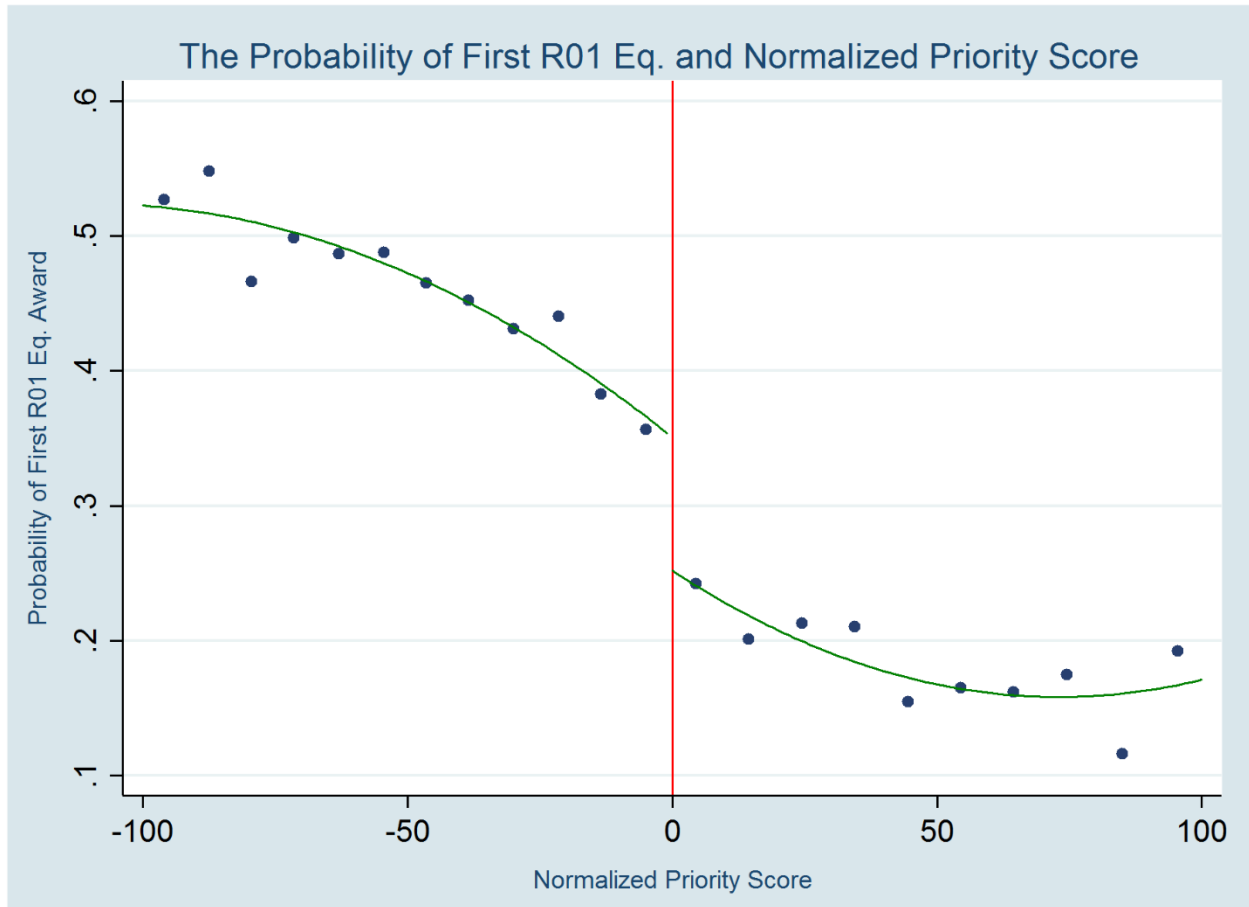


Supplemental Digital Appendix 1

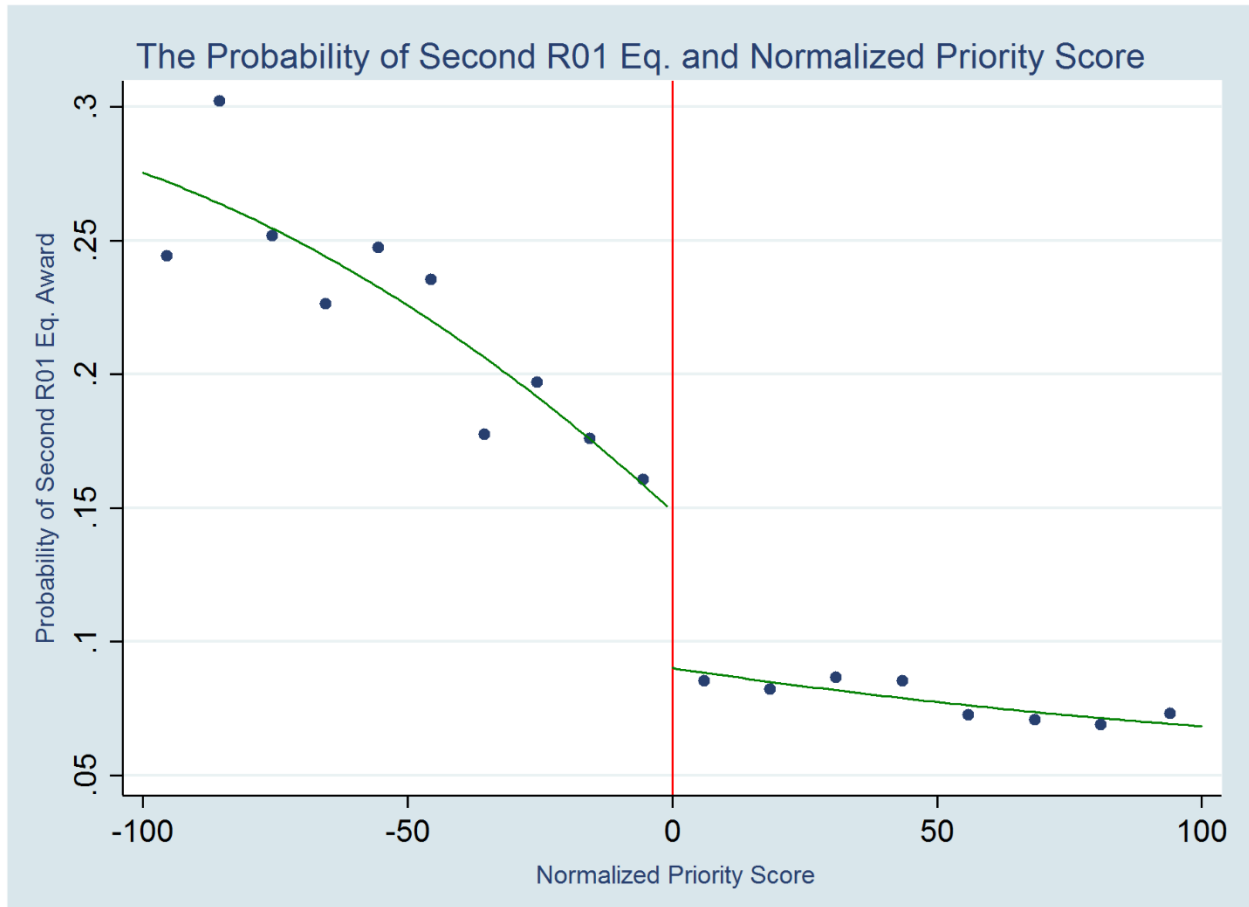
Relationship Between Normalized Priority Score and First R01 Eq. Award. From a Study of National Institutes of Health K Awards and Early-Career Scientist Research Trajectories, 1990–2016



Abbreviation: R01 Eq. indicates R01 equivalent award.

Supplemental Digital Appendix 2

Relationship Between Normalized Priority Score and Second R01 Eq. Award. From a Study of National Institutes of Health K Awards and Early-Career Scientist Research Trajectories, 1990–2016



Abbreviation: R01 Eq. indicates R01 equivalent award.

Supplemental Digital Appendix 3

Definitions of the Analysis Variables. From a Study of National Institutes of Health K Awards and Early-Career Scientist Research Trajectories, 1990–2016

| Variable | Definition |
|-------------------------------|--|
| First R01 Eq. | And R01 Eq. application includes R01, R23, R29, R37 and DP2. Defined as binary – 1 if an applicant has a first R01 Eq. award and 0 otherwise. |
| First RPG | Includes DP1, DP2, DP3, DP4, DP5, P01, P42, PN1, PM1, R00, R01, R03, R15, R21, R22, R23, R29, R33, R34, R35, R36, R37, R61, R50, R55, R56, RC1, RC2, RC3, RC4, RF1, RL1, RL2, RL9, RM1, UA5, UC1, UC2, UC3, UC4, UC7, UF1, UG3, UH2, UH3, UH5, UM1, UM2, U01, U19, and U34. Defined as binary – 1 if an applicant has a first RPG award and 0 otherwise. |
| Second R01 | Defined as binary – 1 if an applicant has a second R01 Eq. award and 0 otherwise. |
| Second RPG | Defined as binary – 1 if an applicant has a second RPG award and 0 otherwise. |
| Number of RPG | The number of RPG awards an K participant received after K award. |
| Number of R01 | The number of R01 Eq. awards an K participant received after K award. |
| Time to First R01 Eq. | The time in years between the first FY of K award, or last K application and the year the first R01 Eq. was awarded. (i.e. 0, 1, 2 ...). |
| Time to First RPG | The time in years between the first FY of K award, or last K application and the year the first RPG was awarded. |
| Time to Second R01 Eq. | The time in years between the first FY of K award, or last K application and the year the second R01 Eq. was awarded. |
| Time to Second RPG | The time in years between the first FY of K award, or last K application and the year the second RPG was awarded. |
| Priority Score | Normalized priority score ranges between 100 and -100 near the funding cutoff, and were generated from data where the priority score ranged from 100 to 500. |
| Age | Participants age in FY 2016 measured in years. |
| Female | Coded 1 if the participant is a female and 0 otherwise. |
| Male | Coded 1 if the participant is a male and 0 otherwise. |
| Gender Unknown | Coded 1 if the participant's gender is unknown and 0 otherwise. |
| Racial Minority | Coded 1 if the participant is African American/Black, American Indian/Alaska Native or Native Hawaiian/other Pacific Islander and 0 otherwise. |
| Hispanic | Coded 1 if the participant indicates s/he is Hispanic and zero otherwise. |
| Non-Hispanic | Coded 1 if the participant indicates s/he is non-Hispanic and zero otherwise. |
| Ethnicity Unknown | Coded 1 if the participant's ethnicity is unknown and zero otherwise. |
| Postdoc NRSA | Coded 1 if the participant was a NRSA post-doc prior to K award, and zero otherwise. |

| | |
|----------------------|--|
| Predoc NRSA | Coded 1 if the participant was a NRSA pre-doc prior to K award, and zero otherwise. |
| MD | Coded 1 if the participant reported having a MD degree and zero otherwise. |
| MD-PhD | Coded 1 if the participant reported having a MD-PhD degree and zero otherwise. |
| Other Degree | Coded 1 if the participant reported having a degree other than MD, MD-PhD, and PhD and zero otherwise. |
| PhD | Coded 1 if the participant reported having a PhD degree and zero otherwise. |
| Year | Fiscal Year of K award or K application. Coded as a series of binary variables in the data. |
| IC/Institute | NIH Institute/Center and coded as a series of binary variables in the data. |
| Council Round | The council round under which the application was reviewed. Coded as a series of binary variables in the data. |

Abbreviations: RPG indicates Research Project Grant; R01 Eq., R01 equivalent award; NRSA, National Research Service Award; IC, institute/center.

Supplemental Digital Appendix 4

Effect of K Award on Subsequent Grant Activity FY 1990–2009, Unmatched Sample. From a Study of National Institutes of Health K Awards and Early-Career Scientist Research Trajectories, 1990–2016^a

| Sample by Time Period | First R01 Eq. | First RPG | Second R01 Eq. | Second RPG | Number of R01 Eq. | Number of RPGs |
|---------------------------------|----------------------|----------------------|----------------|---------------------|----------------------|----------------------|
| Entire Sample (% effect) | | | | | | |
| All Years | 30.5% ^{***} | 30.5% ^{***} | -7.60% | 6.80% | 15.9% ^{**} | 16.9% ^{**} |
| Doubling | 23.6% ^{***} | 23.4% ^{***} | 3.60% | 12.1% ^{**} | 24.1% ^{***} | 21.2% ^{***} |
| Post-Doubling | 33.2% ^{***} | 34.1% ^{***} | | | 23.4% ^{**} | 21.7% [*] |
| K01 Sample (% effect) | | | | | | |
| Combined Sample | 18.8% [*] | 23.1% ^{***} | -2.50% | 4.00% | 6.30% | 6.50% |
| Doubling | -10.70% | 1.30% | 26.70% | 25.00% | -4.10% | 4.80% |
| Post-Doubling | 47.6% ^{***} | 45.3% ^{***} | | | 19.30% | 10.00% |
| K08 Sample (% effect) | | | | | | |
| Combined Sample | 33.3% ^{***} | 31% ^{***} | -13.90% | 8.10% | 10.70% | 12.90% |
| Doubling | 55.7% ^{***} | 47.7% ^{***} | -14.80% | 6.80% | 47.8% ^{***} | 30.6% ^{***} |
| Post-Doubling | -4.30% | -2.00% | | | -0.70% | 3.50% |
| K23 Sample (% effect) | | | | | | |
| Combined Sample | 55.8% ^{***} | 46.2% ^{***} | 0.30% | 10.70% | 84.7% ^{***} | 93.3% ^{***} |
| Doubling | 37.6% [*] | 27.00% | -7.50% | 10.70% | 39.5% ^{***} | 43.3% ^{***} |
| Post-Doubling | 43.9% ^{***} | 39.4% ^{***} | | | 42.3% ^{**} | 31.9% [*] |

^a Estimates produced by regressing the outcome on being below the cutoff (funded), linear and quadratic normalized priority scores, gender, race, ethnicity, degree type, age, previous National Research Service Award support (pre- or postdoctoral), indicators for years of evaluation, and indicators for National Institutes of Health institute/center (IC). Errors clustered at the IC level.

* $P < .10$.

** $P < .05$.

*** $P < .01$.