NBA Project.rmd

R Markdown

This is an R Markdown document. Markdown is a simple formatting syntax for authoring HTML, PDF, and MS Word documents. For more details on using R Markdown see http://rmarkdown.rstudio.com.

When you click the **Knit** button a document will be generated that includes both content as well as the output of any embedded R code chunks within the document. You can embed an R code chunk like this:

```
library(openxlsx)
library(huxtable)
library(jtools)
library(dplyr)
```

```
##
## Attaching package: 'dplyr'

## The following object is masked from 'package:huxtable':
##
##     add_rownames

## The following objects are masked from 'package:stats':
##
##     filter, lag

## The following objects are masked from 'package:base':
##
##     intersect, setdiff, setequal, union
```

```
library(stargazer)
```

```
##
## Please cite as:

##  Hlavac, Marek (2022). stargazer: Well-Formatted Regression and Summary Statistics Tables.

##  R package version 5.2.3. https://CRAN.R-project.org/package=stargazer
```

```
library(tidyverse)
```

```
## -- Attaching core tidyverse packages ----------------------- tidyverse 2.0.0 --
## v forcats   1.0.0     v readr     2.1.4
## v ggplot2   3.4.1     v stringr   1.5.0
## v lubridate 1.9.2     v tibble    3.1.8
## v purrr     1.0.1     v tidyr     1.3.0
```

```
## -- Conflicts ------------------------------------------ tidyverse_conflicts() --
## x dplyr::add_rownames() masks huxtable::add_rownames()
## x dplyr::filter()       masks stats::filter()
## x dplyr::lag()          masks stats::lag()
## x ggplot2::theme_grey() masks huxtable::theme_grey()
## i Use the conflicted package (<http://conflicted.r-lib.org/>) to force all conflicts to become errors
```

```
library(ggplot2)
library(wooldridge)
library(readr)
library(readxl)
library(officer)
```

```
##
## Attaching package: 'officer'
##
## The following object is masked from 'package:readxl':
##
##      read_xlsx
##
## The following objects are masked from 'package:huxtable':
##
##      to_html, to_rtf
```

```
library(flextable)
```

```
##
## Attaching package: 'flextable'
##
## The following object is masked from 'package:purrr':
##
##      compose
##
## The following object is masked from 'package:jtools':
##
##      theme_apa
##
## The following objects are masked from 'package:huxtable':
##
##      align, as_flextable, bold, font, height, italic, set_caption,
##      valign, width
```

```
library(nat)
```

```
## Loading required package: rgl
## Registered S3 method overwritten by 'nat':
##   method               from
##   as.mesh3d.ashape3d rgl
## Some nat functions depend on a CMTK installation. See ?cmtk and README.md for details.
##
## Attaching package: 'nat'
##
```

```
## The following objects are masked from 'package:lubridate':
##
##     intersect, setdiff, union
##
## The following objects are masked from 'package:dplyr':
##
##     intersect, setdiff, union
##
## The following objects are masked from 'package:base':
##
##     intersect, setdiff, union
```

```
library(tinytex)
```

```
## Rows: 1,266
## Columns: 31
## $ season          <dbl> 2022, 2022, 2022, 2022, 2022, 2022, 2022, 2022, 2022~
## $ lg              <chr> "NBA", "NBA", "NBA", "NBA", "NBA", "NBA", "NBA", "NB~
## $ team            <chr> "Atlanta Hawks", "Boston Celtics", "Brooklyn Nets", ~
## $ abbreviation    <chr> "ATL", "BOS", "BRK", "CHI", "CHO", "CLE", "DAL", "DE~
## $ playoffs        <lgl> TRUE, TRUE, TRUE, TRUE, FALSE, FALSE, TRUE, TRUE, FA~
## $ w               <dbl> 43, 51, 44, 46, 43, 44, 52, 48, 23, 53, 20, 25, 42, ~
## $ l               <dbl> 39, 31, 38, 36, 39, 38, 30, 34, 59, 29, 62, 57, 40, ~
## $ winpercent      <dbl> 52.43902, 62.19512, 53.65854, 56.09756, 52.43902, 53~
## $ g               <dbl> 82, 82, 82, 82, 82, 82, 82, 82, 82, 82, 82, 82, 82, ~
## $ mp              <dbl> 19705, 19905, 19755, 19730, 19880, 19730, 19755, 198~
## $ fg_per_100_poss  <dbl> 42.4, 41.7, 42.2, 42.3, 42.3, 41.2, 41.0, 42.3, 38.6~
## $ fga_per_100_poss <dbl> 90.3, 89.5, 89.0, 88.2, 90.5, 87.8, 88.9, 87.7, 89.6~
## $ fg_percent       <dbl> 0.470, 0.466, 0.475, 0.480, 0.468, 0.469, 0.461, 0.4~
## $ x3p_per_100_poss  <dbl> 13.2, 13.5, 11.5, 10.8, 13.8, 12.1, 13.7, 12.9, 11.4~
## $ x3pa_per_100_poss <dbl> 35.2, 38.0, 31.9, 29.3, 37.8, 34.0, 39.0, 36.5, 35.0~
## $ x3p_percent       <dbl> 37.4, 35.6, 36.1, 36.9, 36.5, 35.5, 35.0, 35.3, 32.6~
## $ x2p_per_100_poss  <dbl> 29.2, 28.2, 30.7, 31.6, 28.5, 29.1, 27.4, 29.4, 27.2~
## $ x2pa_per_100_poss <dbl> 55.1, 51.5, 57.0, 58.9, 52.7, 53.8, 49.9, 51.2, 54.6~
## $ x2p_percent       <dbl> 0.531, 0.547, 0.538, 0.535, 0.542, 0.541, 0.548, 0.5~
## $ ft_per_100_poss   <dbl> 18.5, 17.4, 17.6, 17.8, 15.7, 17.4, 17.1, 17.0, 17.4~
## $ fta_per_100_poss  <dbl> 22.8, 21.4, 21.9, 21.9, 21.2, 22.9, 22.2, 21.4, 22.3~
## $ ft_percent        <dbl> 0.812, 0.816, 0.805, 0.813, 0.740, 0.760, 0.771, 0.7~
## $ orb_per_100_poss  <dbl> 10.3, 10.8, 10.4, 8.8, 10.7, 10.6, 9.7, 9.3, 11.1, 9~
## $ drb_per_100_poss  <dbl> 34.7, 36.4, 34.3, 34.2, 33.4, 35.3, 35.3, 35.5, 32.4~
## $ trb_per_100_poss  <dbl> 45.0, 47.2, 44.7, 42.9, 44.1, 45.9, 44.9, 44.8, 43.5~
## $ ast_per_100_poss  <dbl> 25.2, 25.4, 25.4, 24.2, 27.8, 26.1, 24.4, 28.2, 23.7~
## $ stl_per_100_poss  <dbl> 7.3, 7.4, 7.1, 7.2, 8.5, 7.3, 7.0, 7.3, 7.8, 8.9, 7.~
## $ blk_per_100_poss  <dbl> 4.3, 6.0, 5.5, 4.2, 4.9, 4.3, 4.1, 3.8, 4.8, 4.6, 4.~
## $ tov_per_100_poss  <dbl> 12.1, 14.0, 14.1, 13.0, 13.1, 14.9, 13.1, 14.7, 14.3~
## $ pf_per_100_poss   <dbl> 19.1, 19.0, 20.5, 19.1, 19.7, 18.1, 20.5, 20.3, 22.2~
## $ pts_per_100_poss  <dbl> 116.5, 114.4, 113.6, 113.2, 114.1, 111.9, 112.8, 114~
```
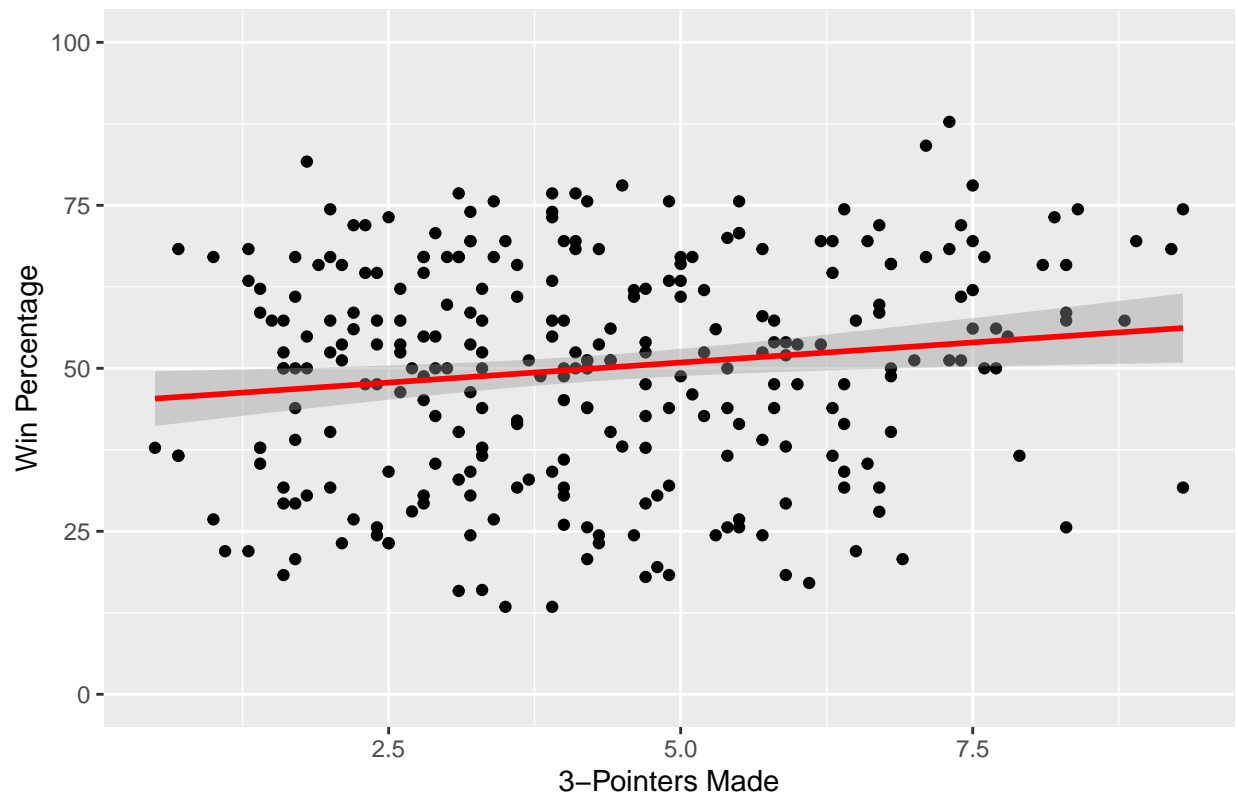
```
## Registered S3 methods overwritten by 'broom':
##   method            from
##   tidy.glht         jtools
##   tidy.summary.glht jtools
```
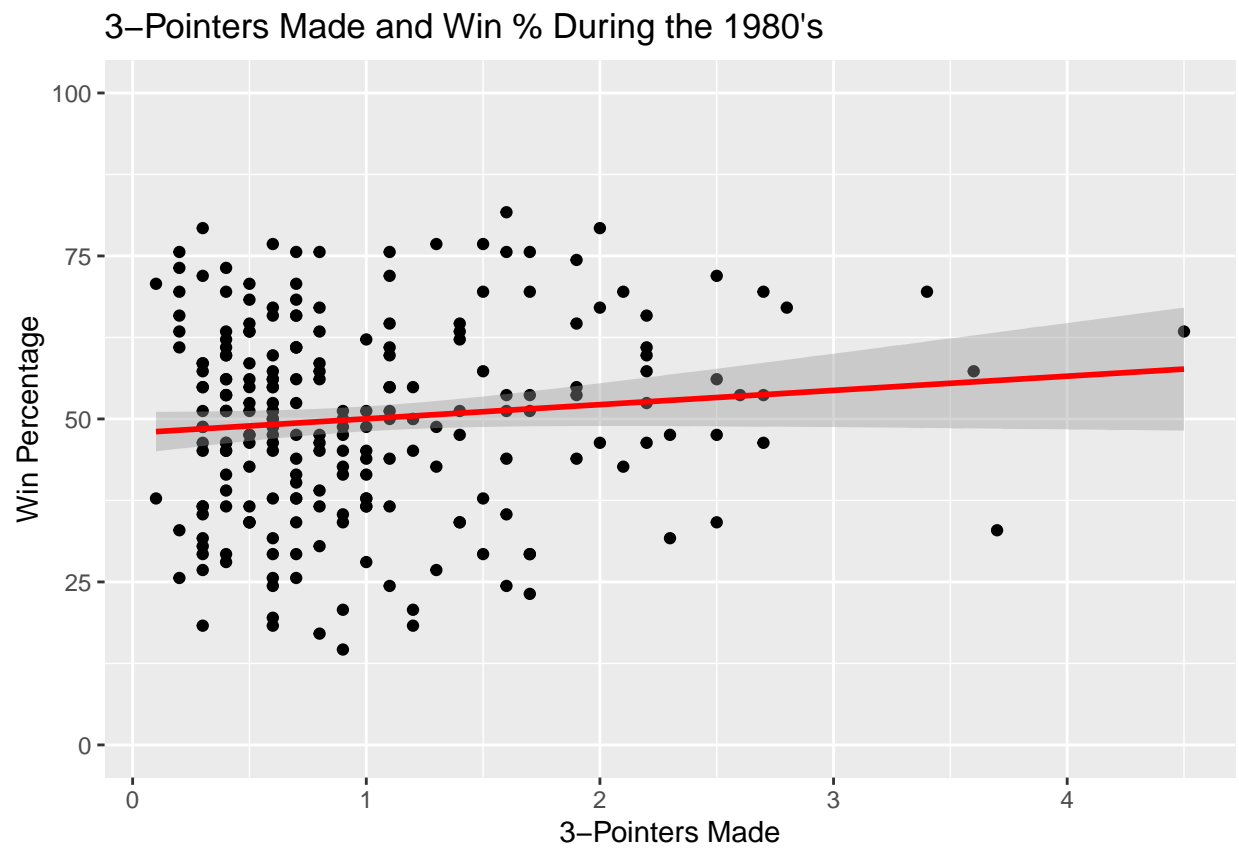
3−Pointers Made and Win % During the 1980's

3−Pointers Made and Win % During the 1990's


```
## `geom_smooth()` using formula = 'y ~ x'
```

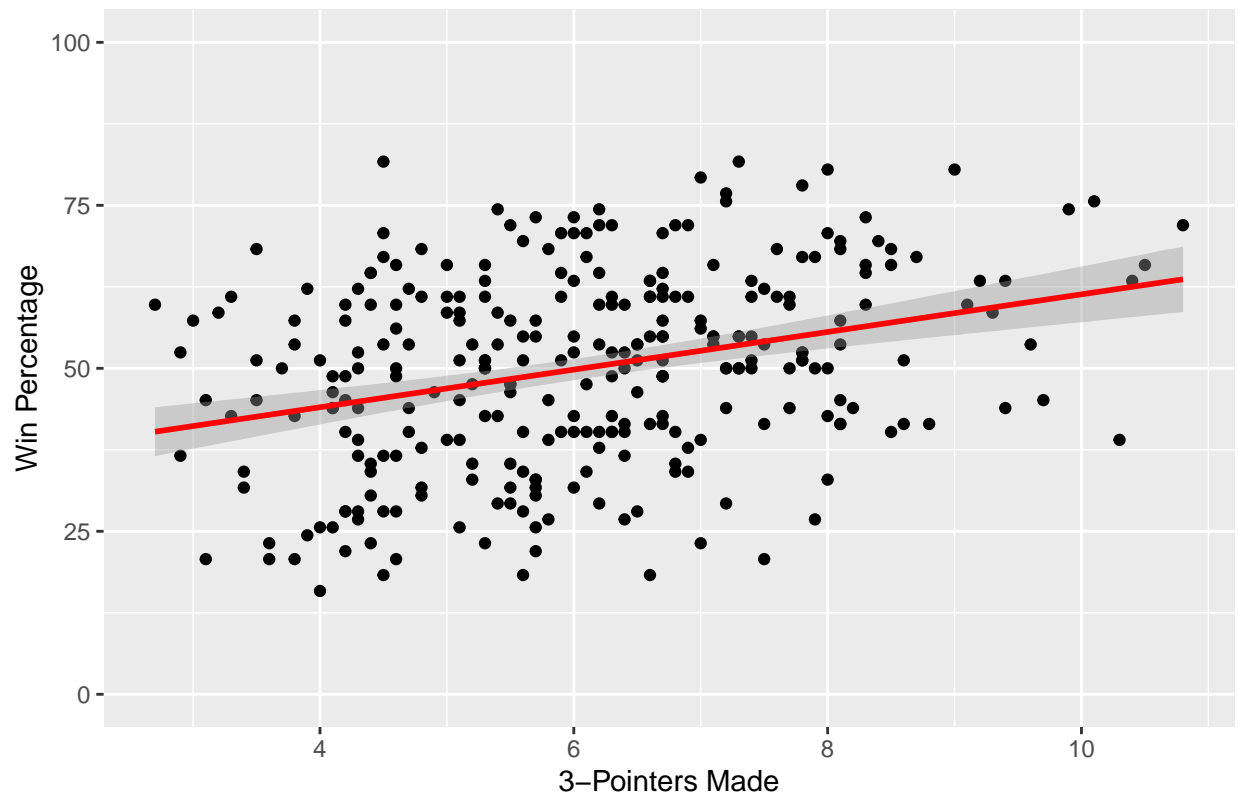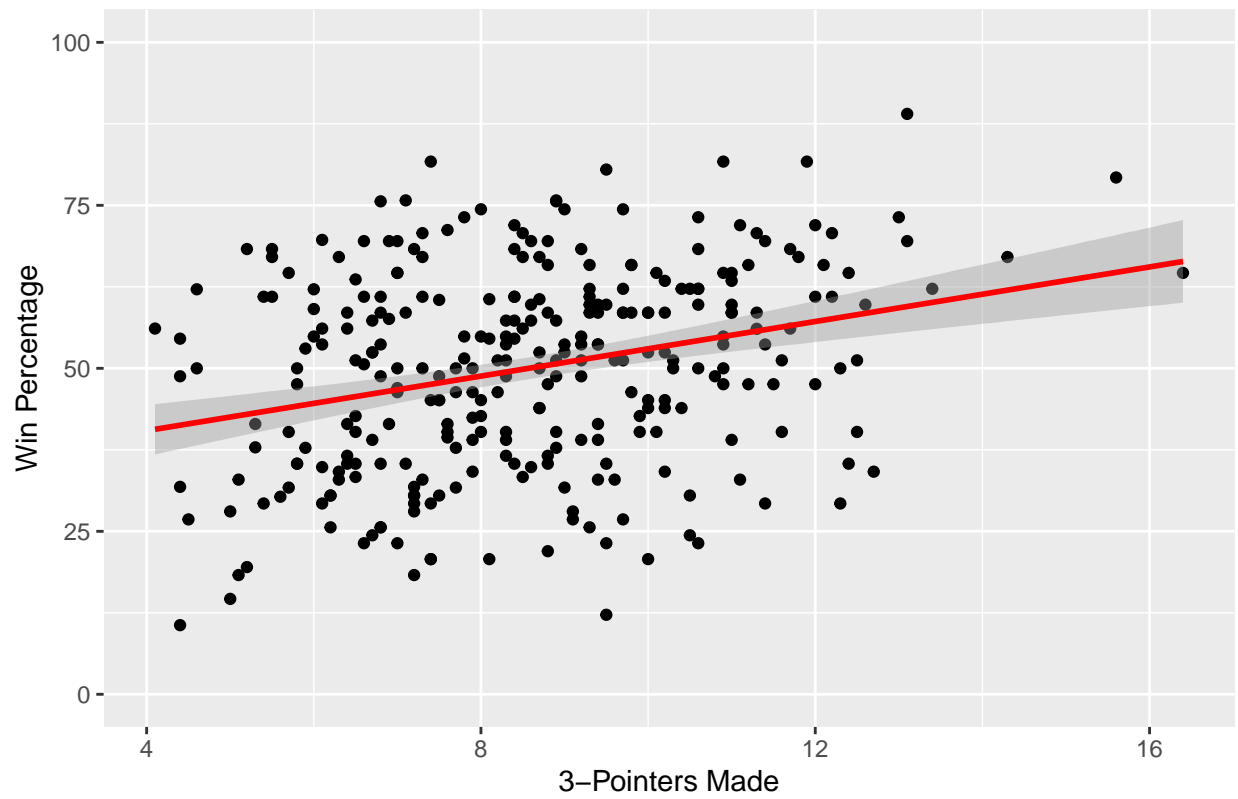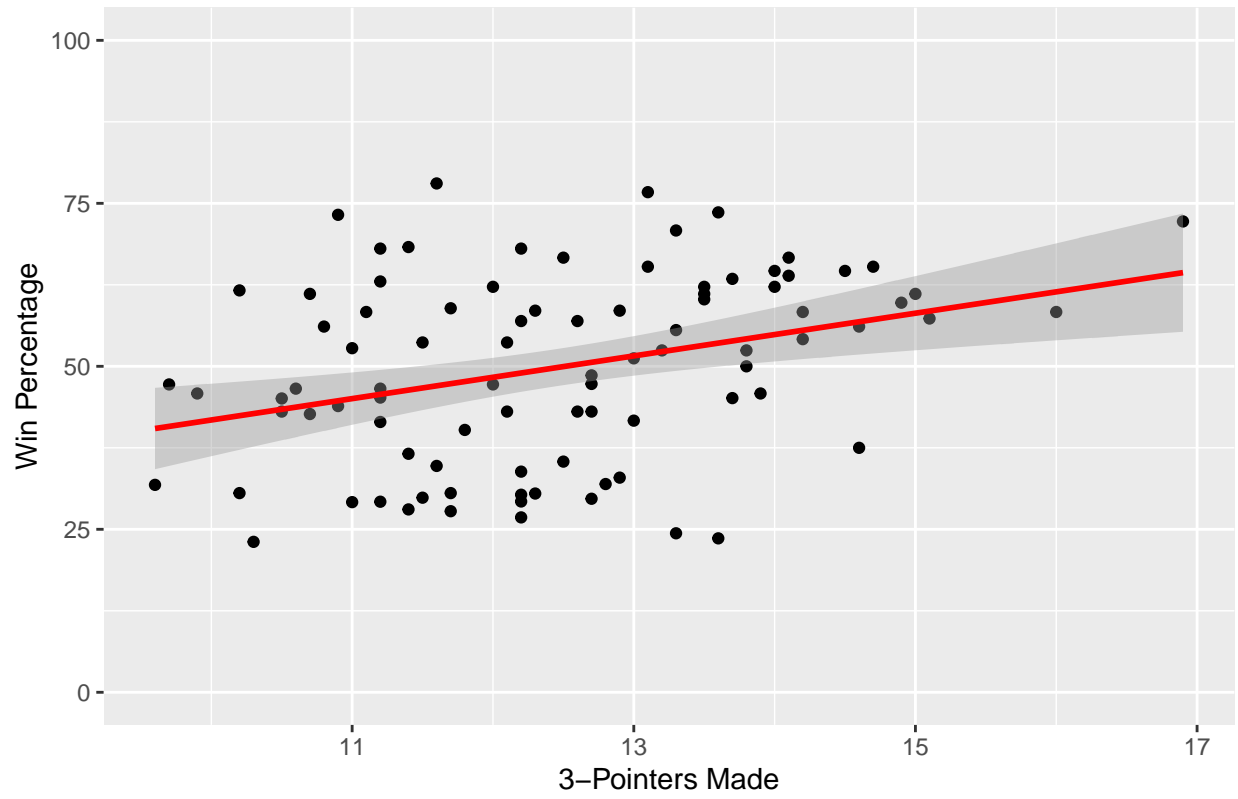## 3-Pointers Made and Win % During the 2000's


```
## `geom_smooth()` using formula = 'y ~ x'
```

3−Pointers Made and Win % During the 2010's


```
## 'geom_smooth()' using formula = 'y ~ x'
```

3−Pointers Made and Win % During the 2020's

	Seventies Regression
(Intercept)	-1040.27 ***
	(269.39)
x2p_per_100_poss	4.90 ***
	(0.93)
x2pa_per_100_poss	6.42 *
	(2.59)
ft_per_100_poss	0.94
	(1.52)
fta_per_100_poss	4.03 *
	(1.52)
orb_per_100_poss	-7.83 **
	(2.79)
drb_per_100_poss	4.80 ***
	(0.69)
blk_per_100_poss	1.59
	(0.98)
tov_per_100_poss	7.30 **
	(2.73)
stl_per_100_poss	3.93 ***
	(1.02)
ast_per_100_poss	0.01
	(0.59)
N	72
R2	0.62

*** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$.

	Eighties Regression
(Intercept)	-1093.30 ***
	(144.48)
x3p_per_100_poss	13.85 ***
	(3.63)
x3pa_per_100_poss	2.76
	(1.85)
x2p_per_100_poss	5.95 ***
	(0.47)
x2pa_per_100_poss	6.35 ***
	(1.37)
ft_per_100_poss	1.65 *
	(0.72)
fta_per_100_poss	3.65 ***
	(0.91)
orb_per_100_poss	-7.20 ***
	(1.60)
drb_per_100_poss	4.80 ***
	(0.39)
blk_per_100_poss	1.79 ***
	(0.45)
tov_per_100_poss	6.31 ***
	(1.46)
stl_per_100_poss	6.05 ***
	(0.52)
ast_per_100_poss	-0.10
	(0.36)
N	231
R2	0.82

*** p < 0.001; ** p < 0.01; * p < 0.05.

	Nineties Regression
(Intercept)	-675.99 ***
	(139.17)
x3p_per_100_poss	9.55 ***
	(1.32)
x3pa_per_100_poss	1.33
	(1.37)
x2p_per_100_poss	5.44 ***
	(0.34)
x2pa_per_100_poss	2.22
	(1.31)
ft_per_100_poss	0.95
	(0.50)
fta_per_100_poss	2.51 ***
	(0.71)
orb_per_100_poss	-3.05 *
	(1.48)
drb_per_100_poss	5.67 ***
	(0.25)
blk_per_100_poss	-0.48
	(0.37)
tov_per_100_poss	1.79
	(1.38)
stl_per_100_poss	5.38 ***
	(0.36)
ast_per_100_poss	0.21
	(0.24)
N	278
R2	0.88

*** p < 0.001; ** p < 0.01; * p < 0.05.

	Oughts Regression
(Intercept)	-470.81 **
	(150.77)
x3p_per_100_poss	9.54 ***
	(1.28)
x3pa_per_100_poss	-0.82
	(1.48)
x2p_per_100_poss	4.25 ***
	(0.39)
x2pa_per_100_poss	0.27
	(1.44)
ft_per_100_poss	1.10 *
	(0.52)
fta_per_100_poss	1.28
	(0.85)
orb_per_100_poss	-0.76
	(1.72)
drb_per_100_poss	5.80 ***
	(0.29)
blk_per_100_poss	0.98 *
	(0.42)
tov_per_100_poss	-0.16
	(1.43)
stl_per_100_poss	6.58 ***
	(0.45)
ast_per_100_poss	0.92 ***
	(0.23)
N	295
R2	0.85

*** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$.

	Tens Regression
(Intercept)	-443.96 *
	(173.06)
x3p_per_100_poss	12.23 ***
	(1.09)
x3pa_per_100_poss	-2.46
	(1.60)
x2p_per_100_poss	3.72 ***
	(0.46)
x2pa_per_100_poss	0.21
	(1.66)
ft_per_100_poss	2.35 ***
	(0.58)
fta_per_100_poss	0.64
	(0.92)
orb_per_100_poss	0.64
	(1.99)
drb_per_100_poss	5.11 ***
	(0.33)
blk_per_100_poss	1.01
	(0.56)
tov_per_100_poss	0.01
	(1.71)
stl_per_100_poss	6.58 ***
	(0.52)
ast_per_100_poss	0.85 **
	(0.29)
N	300
R2	0.82

*** p < 0.001; ** p < 0.01; * p < 0.05.

	Twenties Regression
(Intercept)	-95.25
	(339.91)
x3p_per_100_poss	8.25 ***
	(1.44)
x3pa_per_100_poss	-3.86
	(3.29)
x2p_per_100_poss	5.85 ***
	(0.91)
x2pa_per_100_poss	-3.64
	(3.33)
ft_per_100_poss	3.79 **
	(1.40)
fta_per_100_poss	-2.23
	(1.83)
orb_per_100_poss	2.01
	(3.92)
drb_per_100_poss	4.62 ***
	(0.60)
blk_per_100_poss	0.16
	(1.21)
tov_per_100_poss	-1.90
	(3.24)
stl_per_100_poss	6.75 ***
	(1.11)
ast_per_100_poss	-0.63
	(0.55)
N	90
R2	0.83

*** p < 0.001; ** p < 0.01; * p < 0.05.