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Better Than Second-round Picks?**

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Jeffrey S. Everson
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MIDDLEBURY COLLEGE
MIDDLEBURY, VERMONT 05753

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Jeffrey S. Everson
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Department of Economics
Middlebury College
Middlebury, Vermont
psommers@middlebury.edu

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It's like dominoes – once the guys around your pick start to sign, things tend to start happening.

— Jim Schwartz
Coach, Detroit Lions

Reverse-order drafts, in theory, allocate the best new players to the weakest teams. In the National Football League (NFL) Annual Selection, better known as the NFL Draft, all thirty-two NFL teams pick the players they value the highest. First-round picks are regarded as the jewels of a draft class and they are expected to contribute the most and develop faster than second-round picks.¹ In the 2009 NFL draft, for example, the New York Jets traded their first-round pick (No. 17 overall) and their second-round pick to the Cleveland Browns for the No. 5 overall pick (used to select quarterback Mark Sanchez). The logic behind this trade was that first-round picks are more valuable than second-round picks and higher first-round picks, in turn, are more valuable than lower first-round picks. Yet, in practice, every draft has high-profile busts and unexpected successes. There is no guarantee that any of the teams with a first-round draft pick will find a full-time starter (or that a team with a poor draft pick will fail to find a future Hall of Famer).²

How well do NFL teams identify new talent? Are first-round picks necessarily better than second-round picks in either their rookie or second year in the NFL? (After all, if the talent pool is sufficiently deep, there might be no discernible difference between first- and second-round draft picks.) Do first-round picks develop faster than second-round picks during their first two years in the NFL? Evaluating talent in the NFL might seem especially difficult (if not impossible) since a defensive end, say, has little in common with a running back or quarterback. Yet,

Pro-Football-Reference.com uses a comprehensive metric modestly called “Approximate Value” (hereafter, AV) to assess player worth at any position in any year (for details, see www.pro-football-reference.com/blog/?page_id=518). In this brief research note, we compare the average AVs of all first- and second-round draft picks in each of their first two seasons in the NFL. The draft classes examined here are for the years 2005, 2006, 2007, and 2008.

A one-sided *t*-test on two independent samples tests whether or not Round 1 picks have higher AVs, on average, than Round 2 picks (in either their rookie or second year in the NFL). A one-sided paired *t*-test is used to test whether or not Round 1 (Round 2) picks have higher AVs, on average, in their second year than they had in their rookie year. And, finally, a one-sided *t*-test on independent samples is used to test whether or not the average incremental change in AVs among Round 1 picks (between their first and second seasons) is greater than that of Round 2 picks.

Tables 1 through 4 list all players drafted in either Round 1 or Round 2 (and their AVs their first two seasons) in the NFL drafts of 2005, 2006, 2007, and 2008, respectively. Individual player AVs are from www.pro-football-reference.com/players/. The players in each round who appear at the top of the page were selected first. For examples, in Table 2, Reggie Bush was the No. 2 overall pick of the 2006 draft; DeMeco Ryans was selected first in Round 2 (and hence was the No. 33 overall pick in that year’s draft). An asterisk (*) denotes a player who did not appear in a single game. Only one player in our four-year sample had a negative AV. Alex Smith, the San Francisco 49ers No. 1 overall draft pick quarterback in 2005, recorded an AV of -1. Smith threw just one touchdown pass and had eleven interceptions. His negative AV is a result of defensive scores on turnovers. That is, the opposing defense scored more than the 49ers’ offense when Smith was in the game.

Table 5 summarizes the results of our various *t*-tests. Round 1 picks have uniformly outperformed Round 2 picks in their rookie year. In three of the four draft classes, Round 1 picks outperformed Round 2 picks even in their second year. The one exception is the extraordinarily

deep draft class of 2006. In their rookie (second) year as a pro, Round 2 picks in 2006 were discernibly better (that is, they had higher average AVs) than their rookie (second) year Round 2 counterparts in 2005, $p = .0494$ ($p = .0266$) and in 2007, $p = .0263$ ($p = .0197$), but only marginally higher average AVs than their 2008 counterparts, $p = .1020$ ($p = .1095$). In three of the four years, Round 1 picks had, on average, significantly higher AVs in their second year than they had in their rookie year. For all four years, Round 2 picks performed better in their second year. But, the final row of results in Table 5 is perhaps most surprising: the average incremental difference in AV between one's rookie year and second year in the NFL was *not* larger for Round 1 picks than for Round 2 picks. In other words, between their first and second years as a pro, Round 1 picks do not develop any faster than Round 2 picks.

Concluding Remarks

A look at the top NFL draft picks over four years shows that the cream of the crop (Round 1 picks) more often than not outperform Round 2 picks in their rookie year as well as in their second year as a pro. But, surprisingly, the incremental change in AV, a proxy measure for how well a top draft pick develops at the professional level, shows no difference between Round 1 and Round 2 selections. That is, there is no evidence that first-round picks blossom any faster into better players than second-round picks. Finally, if Round 2 picks have smaller rookie year average AVs than their Round 1 counterparts but the contracts needed to sign Round 2 picks are not nearly as expensive as those needed to sign players picked in the first round, then the cost per point of AV may be about the same for the first sixty-four draft picks.

**Table 1. 2005 Round 1 and Round 2 NFL Draft Picks,
Approximate Values in Rookie and Second Year**

<i>Round 1</i>			<i>Round 2</i>		
	<i>Approximate Value</i>			<i>Approximate Value</i>	
<i>Player</i>	<i>Rookie Year</i>	<i>Second Year</i>	<i>Player</i>	<i>Rookie Year</i>	<i>Second Year</i>
A. Smith	-1	10	D. Baas	1	1
R. Brown	8	7	B. Pool	2	5
B. Edwards	4	6	R. Brown	4	7
C. Benson	2	5	B. Ruud	2	3
C. Williams	8	4	S. Cody	2	2
A. P. Jones	6	9	S. Routt	1	1
T. Williamson	3	3	M. Bradley	2	3
A. Rolle	2	5	J. Bullocks	5	7
C. Rogers	3	5	M. Roos	7	7
M. Williams	3	1	K. Burnett	1	2
D. Ware	8	11	C. Webster	2	4
S. Merriman	9	13	J.J. Arrington	3	2
J. Brown	5	15	L. Tatupu	12	10
T. Davis	2	7	M. Roth	2	2
D. Johnson	7	7	M. Nugent	0	0
T. Johnson	2	3	O. Thurman	7	*
D. Pollack	3	0	M. Johnson	3	3
E. James	4	1	R. Bartell	2	2
A. Barron	6	8	N. Collins	7	7
M. Spears	6	6	K. Barnes	7	9
M. Jones	5	7	D. Cody	*	0
M. Clayton	4	9	E. Shelton	*	0
F. Washington	4	5	R. Parrish	1	4
A. Rodgers	0	0	D. Williams	4	6
J. Campbell	5	9	J. Miller	4	11
C. Spencer	1	5	T. Murphy	0	*
R. White	5	5	J. Babineaux	4	2
L. Castillo	6	5	K. Hayden	1	2
M. Jackson	1	3	V. Jackson	1	7
H. Miller	8	6	B. McFadden	1	6
M. Patterson	5	9	M. McCoy	0	5
L. Mankins	7	8	A. Terry	0	2

**Table 2. 2006 Round 1 and Round 2 NFL Draft Picks,
Approximate Values in Rookie and Second Year**

<i>Round 1</i>			<i>Round 2</i>		
	<i>Approximate Value</i>			<i>Approximate Value</i>	
<i>Player</i>	<i>Rookie Year</i>	<i>Second Year</i>	<i>Player</i>	<i>Rookie Year</i>	<i>Second Year</i>
M. Williams	7	11	D. Ryans	7	11
R. Bush	12	8	D. Jackson	6	6
V. Young	9	9	R. McIntosh	2	7
D. Ferguson	8	6	C. Jackson	2	0
A.J. Hawk	8	7	J. F. Williams	3	2
V. Davis	4	5	T. Howard	6	7
M. Huff	5	7	W. Justice	1	0
D. Whitner	6	6	D. Bullocks	3	4
E. Sims	7	6	D. Lutui	4	6
M. Leinart	8	2	D. Manning	6	5
J. Cutler	3	12	R. Harper	2	7
H. Ngata	8	7	S. Moss	0	2
K. Wimbley	9	7	L. White	2	7
B. Bunkley	1	8	J. Klopfenstein	5	2
T. Hill	4	3	D. Colledge	6	7
J. Allen	1	3	C. Griffin	4	7
C. Greenway	8	8	K. Clemens	0	3
B. Carpenter	1	1	M. McNeill	13	9
A. Cromartie	1	13	R. Cook	1	5
T. Hali	9	8	G. Jennings	5	9
L. Maroney	8	10	A. Fasano	3	3
M. Lawson	6	1	B. Pollard	2	7
D. Joseph	3	6	A. Whitworth	6	8
J. Joseph	5	5	C. Chester	2	2
S. Holmes	8	11	D. Hester	14	16
J. McCargo	1	2	R. Marshall	6	4
D. Williams	5	6	J. Trueblood	4	8
M. Lewis	3	8	M. Jones-Drew	13	13
N. Mangold	7	5	T. Scheffler	4	7
J. Addai	15	14	T. Jennings	1	2
K. Jennings	2	7	D. Tapp	2	9
M. Kiwanuka	5	5	T. Jackson	1	6

**Table 3. 2007 Round 1 and Round 2 NFL Draft Picks,
Approximate Values in Rookie and Second Year**

<i>Round 1</i>			<i>Round 2</i>		
<i>Approximate Value</i>			<i>Approximate Value</i>		
<i>Player</i>	<i>Rookie Year</i>	<i>Second Year</i>	<i>Player</i>	<i>Rookie Year</i>	<i>Second Year</i>
J. Russell	1	7	A. Branch	1	0
C. Johnson	6	10	P. Posluszny	1	8
J. Thomas	10	11	A. Sears	6	5
G. Adams	6	9	K. Kolb	0	0
L. Brown	5	9	E. Weddle	1	7
L. Landry	8	9	Z. Miller	5	8
A. Peterson	11	13	J. Blalock	4	7
J. Anderson	6	7	J. Beck	2	*
T. Ginn	4	8	C. Houston	5	7
A. Okoye	5	5	T. Ugoh	7	7
P. Willis	16	12	D. Stanton	*	0
M. Lynch	8	10	S. Rice	4	1
A. Carriker	6	4	D. Jarrett	1	1
D. Revis	7	11	L. Woodley	2	12
L. Timmons	2	4	D. Harris	6	5
J. Harrell	1	1	J. Durant	4	5
J. Moss	1	1	K. Irons	*	*
L. Hall	4	7	C. Henry	1	0
M. Griffin	5	8	S. Smith	1	6
A. Ross	5	7	B. Leonard	3	0
R. Nelson	7	5	E. Wright	5	8
B. Quinn	0	1	T. McBride	2	4
D. Bowe	6	9	J. Wilson	2	5
B. Meriweather	1	6	T. Crowder	2	0
J. Beason	8	15	V. Abiamiri	1	1
A. Spencer	4	2	I. Alama-Francis	0	1
R. Meachem	3	8	R. Kalil	1	5
J. Staley	5	7	S. Satele	6	7
B. Grubbs	4	6	G. Alexander	5	0
C. Davis	2	1	D. Bazuin	*	*
G. Olsen	3	6	B. Jackson	3	3
A. Gonzalez	7	8	S. Piscitelli	0	3

**Table 4. 2008 Round 1 and Round 2 NFL Draft Picks,
Approximate Values in Rookie and Second Year**

<i>Round 1^a</i>			<i>Round 2</i>		
<i>Approximate Value</i>			<i>Approximate Value</i>		
<i>Player</i>	<i>Rookie Year</i>	<i>Second Year</i>	<i>Player</i>	<i>Rookie Year</i>	<i>Second Year</i>
J. Long	11	13	P. Merling	3	2
C. Long	6	3	D. Avery	5	4
M. Ryan	14	10	D. Thomas	1	3
D. McFadden	5	3	B. Flowers	5	6
G. Dorsey	6	7	J. Nelson	3	3
V. Gholston	1	3	C. Lofton	7	8
S. Ellis	6	5	J. Carlson	7	6
D. Harvey	4	7	C. Rachal	2	5
K. Rivers	3	7	T. Porter	2	5
J. Mayo	9	7	J. Hardy	1	0
L. McKelvin	5	1	E. Royal	9	5
R. Clady	13	13	T. Johnson	4	7
J. Stewart	7	9	M. Forte	11	9
C. Williams	1	7	J. Dizon	1	1
B. Albert	5	5	J. Simpson	0	0
D. Rodgers-Cromartie	4	10	T. Laws	2	1
G. Cherilus	5	6	F. Davis	1	6
J. Flacco	11	13	D. Jackson	9	14
J. Otah	6	6	C. Campbell	1	8
A. Talib	2	8	M. Kelly	0	3
S. Baker	3	8	Q. Groves	1	4
F. Jones	3	5	L. Sweed	1	0
R. Mendenhall	1	10	J. Jones	4	1
C. Johnson	11	19	R. Rice	6	18
M. Jenkins	2	8	B. Brohm	*	0
D. Brown	8	9	C. Henne	0	8
A. Cason	2	2	D. Jackson	0	*
L. Jackson	5	5	M. Pollak	7	4
K. Balmer	1	1	P. Lee	0	*
D. Keller	7	6	M. Bennett	4	3
K. Phillips	2	1	T. Wheatley	1	0
			T. Thomas	2	6

^aThe New England Patriots' Round 1 selection was forfeited due to the "Spygate" scandal.

**Table 5. First Round and Second Round NFL Picks,
2005 through 2008**

	<i>Draft Year</i>			
	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>
Did Round 1 picks outperform Round 2 picks in their rookie year?	YES (.0167)*	YES (.0425)	YES (.0007)	YES (.0058)
Did Round 1 picks outperform Round 2 picks in their second year?	YES (.0116)	NO (.1583)	YES (.0005)	YES (.0149)
Did Round 1 picks perform better in their second year than in their rookie year?	YES (.0027)	NO (.0846)	YES (.0001)	YES (.0078)
Did Round 2 picks perform better in their second year than in their rookie year?	YES (.0009)	YES (.0016)	YES (.0201)	YES (.0245)
Did the improvement among Round 1 picks exceed that of Round 2 picks (year over year)?	NO (.3505)	NO (.7973)	NO (.2524)	NO (.4259)

**p*-values in parentheses

Footnotes

1. The first twenty picks in each round are given to teams that do not make the playoffs, ordered from worst to best based on regular season records. Teams that make the playoffs are then ordered according to which round of the playoffs they are eliminated; the earlier their elimination, the higher their pick. The loser of the Super Bowl picks next to last and the winner picks last. The same order of selection continues through all seven rounds of the draft.
2. In 2000, for example, the New England Patriots chose future Hall of Famer quarterback Tom Brady in the sixth round of the draft.