

There Was a 3.1% Chance of an Interception

 si.com/2015/02/04/russell-wilson-super-bowl-49-interception-statistical-analysis

John Biever/SI/The MMQB

'Worst play call in NFL history'? Hardly. Looking at all plays from the 1-yard line over the past 15 seasons, and factoring in time management, the Seahawks' play-calling wasn't ideal, but it wasn't that bad either

By [ggramling](#)

February 04, 2015

By Keith Goldner

numberFire.com

Super Bowl XLIX ended with one of the most incredible plays in NFL history: Malcolm Butler jumping Russell Wilson's quick slant at the 1-yard line. After the interception, Pete Carroll and offensive coordinator Darrell Bevell were immediately crucified for the decision to pass instead of run the ball with beast of a running back Marshawn Lynch. Emmitt Smith, [Peter King](#) and [many others](#) called it some variation of "the worst play call in the history of football." But was it really? We analyzed the numbers to find out.

The Situation

A refresher: The Seahawks were down four with 26 seconds remaining. Seattle, [the most efficient rushing team in the NFL since 2000](#), faced a second-and-goal. They had one timeout remaining and New England, with three defensive backs on the field, lined up in man-to-man coverage against Seattle's three-receiver set.

The Logic

In the NFL, with man-to-man coverage, the advantage goes to the offense. After burning two timeouts earlier in the drive, and with only 26 seconds remaining, it was not really feasible for the Seahawks to run the ball three straight plays. If they ran the ball on second down and failed, they would need to call their final timeout. Without a timeout, if they ran and were stopped on third down, it is unlikely they would have time to lineup for a fourth-down attempt. There are massive pileups at the goal line and it takes a while to get unpiled and set up. Obviously, three plays to score the go-ahead touchdown are better than two.

In Defense of Darrell Bevell

They had the right look for the slant to work, the interception that clinched Super Bowl 49 was more a function of Seattle's limited personnel.

So, it appears the Seahawks would need to throw the ball on either second or third down to ensure three attempts. By throwing on second down and conserving their timeout, the Patriots would still have to play for either the pass or the run on third down. If they ran on second down, the Seahawks would almost surely pass on third down—which simplifies things for Bill Belichick's defense.



The Execution

Every time I watch the play, I'm more and more convinced it was actually the execution that could have been better, rather than the play call. Ricardo Lockette runs a quick slant behind Jermaine Kearse, who tries (and fails) to set a pick for him. Lockette is certainly open, but Butler makes a tremendous break on the ball, somehow coming up with the interception.

If Wilson throws that ball into Lockette's chest, like a quarterback is supposed to do on that throw, that's a touchdown (or, worst case, an incompleteness). If Lockette goes in stronger and anticipates the contact—which it appeared he did not—he's in position for a touchdown as well (or, worst case, an incompleteness).

It's up to the quarterback and the receiver to make sure the defender has to go through the back of the receiver in order to make a play on the slant. While this is not the exact same situation (since they are at the 11-yard line, not the goal line), look where Tom Brady puts this ball on the slant to Brandon LaFell for a touchdown earlier in the game. Also, look at how LaFell has positioned himself between the ball and the corner.

The Stats

Enough qualitative analysis—what do the numbers say? If you recall earlier this year, we wrote about goal-to-go scenarios after the Eagles chose to pass the ball instead of run it at the goal line against the 49ers. Since 2000, teams on the 1-yard line have run the ball 74.0% of the time and were successful 53.9% of the time. Teams passing succeeded 48.3% of the time.

This year, both numbers were significantly higher. Teams ran in 129 touchdowns on 226 attempts (57.1%) and threw 66 touchdowns on 115 attempts (57.4%). But keep in mind, one year of data is still a pretty small sample size. 2013's touchdown rate was just 49.5%, so there can be dramatic shifts from year to year.



A coach's call has been getting all of the attention, but three Seahawks players deserve their share of wrath for the Super Bowl-losing interception. Here's what Jermaine Kearse, Ricardo Lockette and Russell Wilson did wrong.

Many are citing the fact that this was the first interception on the goal line all year. Historically, though, interceptions occur on 3.1% of passing plays from the 1-yard line. The biggest difference between rushing and passing on the goal line is the potential for bad outcomes. Large rushing losses are not common on dive plays, only fumbles. With a pass play, there are interceptions, sacks, and fumbles. Since 2000, sacks occurred on 4.4% of pass plays from the 1. Fumbles (both lost and recovered by the offense) occurred on 3.1% of rushing plays and 1.0% of pass plays (about half of those resulted in turnovers).

Our internal efficiency metric at [numberFire.com](http://numberfire.com), [Net Expected Points](#) (NEP) tells us that rushing plays at the 1 average +0.15 NEP per attempt, while pass plays lose -0.05 per drop back. That's a one-point difference for every five plays.

These league-wide baselines are a great starting point, but unfortunately, they do not take into account the specific teams playing, score differential, time remaining, or personnel groupings.

In 2014, the Patriots faced seven plays at the goal line (six rush, one pass). They surrendered six touchdowns (five on rushes, one through the air). The Seahawks ran nine plays from the goal line, running the ball seven times (scoring just three times, 42.9%) and throwing twice (scoring once). These sample sizes are clearly far too small to draw any conclusions.

Last, let's look at the specific situation: down by four to eight points (one possession but more than a field goal) with under one minute remaining. Since 2000, there are 73 such situations with a success rate of just 42.5%—dramatically lower than the rest of the game. Passes converted 48.5% of the time and rushes a measly 37.5% on 40 attempts. This is, of course, another small sample size issue and there is a slight sample bias in that the trailing team will typically be the less-efficient team. If we look at all trailing teams, that expands the sample to 153 plays: 41.1% pass success, 43.0% run success. It's also worth noting that the pass-to-run ratio is much closer to 50-50 in these end-of-game situations.

In short-yardage situations, running the ball is generally the better option. But, teams cannot run the ball every time, as there is a huge element of game theory in play calling. Offenses try to capitalize and increase their odds with specific matchups (like man-to-man coverage).

There does appear to be a decline in conversion rates in these high-stress situations, when quick but critical judgments need to be made. We would need more data, though, to truly verify this theory.

The Seahawks probably should have run the ball—although that's much easier to say with hindsight on our side. Conversion rates are higher and thus, the Seahawks chances of winning would be higher, we estimate by about 5.6%. But, was the decision to throw the ball the worst play call in history? Not even close.

If the Seahawks score there, no one thinks twice about the decision. Instead, Belichick would be ridiculed for the blatant mistake of not taking his timeouts once the Seahawks were in a goal-to-go scenario. But the interception happened, so it's Carroll taking the heat.

Keith Goldner is the chief analyst at numberFire.com. Follow him @keithgoldner.
