After serving as Oda Nobunaga's (1534–1582) retainer from childhood, Ikeda Motosuke became the lord of Gifu Castle from 1583 to 1584. He was a skilled warrior who fought in a number of Nobunaga's battles. He fought alongside Toyotomi Hideyoshi (1537–1598) during the invasion of Awaji Island, and was fighting in the central regions of Japan when Oda Nobunaga died at Honnoji temple in 1582. Joining Hideyoshi's forces, he fought against Nobunaga's treacherous general Akechi Mitsuhide (1528–1582) at the Battle of Yamazaki (1582). During the battle over the Oda clan line of succession, the Ikeda clan supported Toyotomi Hideyoshi and the elder son, Nobukatsu (1558–1630).

In 1583, the Ikeda clan received control of a large part of Mino, and Motosuke was given Gifu Castle. During the 1584 Battle of Komaki, the Toyotomi forces realized that with the bulk of the opposing Tokugawa forces on the field, the Tokugawa's base, Okazaki Castle, would be shorthanded. Ikeda Motosuke was sent as part of a contingent to attack the castle, but the plan was discovered by the Tokugawa. The Tokugawa forces counter-attacked the Toyotomi in what became the Battle of Nagakute (1584). Motosuke was killed during the fighting and Gifu Castle went to his brother Terumasa.