In the target undershoot model, vowel duration is considered as the main determinant of vowel reduction, resulting in undershoot in formant frequencies relative to the "bull's-eye formant pattern" (Lindblom, 1963). The model predicts more schwa-like formant frequencies as vowel duration is shortened. In Hakka Chinese, vowel phonemes /i e a o u/ may be realized as long [i: e: a: o: u:] in the CV: syllables and short [i e a o u] in the CVS syllables (S = a stop consonant). Results of a formant frequency analysis of the long and short vowel sets in Hakka Chinese from 10 male and 10 female speakers show that (i) in all the short vowels there is a displacement of vowel formant frequencies away from the target frequencies associated with the long vowels; and (ii) relative to the target frequencies, F1F2 don't become more schwa-like for all the short vowels, with [u] being the only vowel that undergoes centralization in the F1F2 plane and with [i e o a] displaying a significant rise in F1, [i e] an insignificant decrease in F2, and [o] an insignificant increase in F2. It appears that the Hakka data do not support the target undershoot model.