The issue of employee retention has been momentous in recent times to the development and accomplishment of organizations' goals and objectives. A number of studies have been conducted on factors affecting employee retention, most of them found reward, job satisfaction, work environment, human resource policies among others to be major determinants of retention. There is however an inadequate study in West Africa and particularly Ghana, on factors affecting employee retention in the telecommunication industry, leaving a gap to be filled and thus necessitating this study. This research study aimed at investigating the factors that affect employee retention in the telecommunication industry. Specifically, the study sought to determine the association of reward with employee retention, assess the effects of job satisfaction on retention, examine the effects of human resource policies on retention, investigate if there is a relationship between work environment and employee retention and to find out the effects of career development opportunities on retention in Vodafone Ghana Limited. The study adopted descriptive research survey, specifically cross sectional to answer the research hypotheses. A sample size of 142 employees was used for the study, representing 10% of the target population of 1,420. Data was collected primarily through semi-structured questionnaire. The study employed descriptive statistics, factor analysis, chi-square, correlation coefficient and multiple regression analytical techniques to analyze the variables, using Statistical Program for Social Sciences (SPSS v 16). The results indicated that all the research variables had significant relationship with employee retention. However, only reward and career development opportunities were found to strongly predict employee retention in Vodafone Ghana Limited. The study recommended that management of Vodafone Ghana Limited and policy makers in the telecommunication industry should adopt strategic compensation policies that adequately reward employees and to provide adequate development opportunities for employees to increase retention.