Chapter Five

EMPIRICAL RESULTS FROM THE PROMOTION/ REENLISTMENT MODEL

This chapter presents selected results from the two-equation model of promotion and reenlistment with the main-effect specification. The model allows deployment to affect reenlistment directly and indirectly by affecting the expected time to E-5 that in turn affects reenlistment. The model is sequential in that time to E-5 can affect reenlistment, but reenlistment does not affect time to E-5. The model allows for error correlation between the promotion and reenlistment equations. A non-zero correlation indicates the presence of unobserved factors that affect both the time to promotion and the probability of reenlistment. Time to E-5 is measured by months in service, not months in E-4—that is, by *time in service*, not time in grade.

We found statistically significant but minor effects of deployment on the expected time to E-5. We also found a statistically significant but minor effect of expected time to E-5 on reenlistment. Therefore, the indirect effect of deployment on reenlistment via promotion was present but small. Moreover, accounting for this indirect pathway had little effect on the direct effect of deployment on reenlistment, as described in the previous chapter. As a result, the findings suggested that deployment influenced reenlistment mainly through the learning process by which the member experienced deployment and updated the expected utility of remaining in the military—in keeping with the approach presented in Chapter Two. The approach can be extended to include the probability of promotion in the expression for expected utility, but the small effects of deployment on promotion speed, and of promotion speed on reenlistment, provide little impetus for extending the model.

We also found evidence of a large, negative correlation between the promotion and reenlistment error terms. The negative correlation means that members promoted faster than expected, given their AFQT, education, occupational area, and other factors, are more likely to reenlist. The estimated value of the correlation implied a strong relationship between whether a member was promoted faster or slower than expected and the probability of reenlistment. We computed this relationship and depict it below.

We describe the services' promotion process to E-5 and then present estimates of the effect of nonhostile and hostile deployment on the expected time to E-5 promotion (measured in months). We then discuss the effect of expected time to promotion on the probability of reenlistment, and finally we discuss the promotion/reenlistment error correlation.

PROMOTION PROCESS

The following summary of the services' process for promotion to E-5 draws on Williamson (1999). Promotion depends on the accumulation of promotion points as well as the recommendation of a commanding officer or a board of selection. Every service considers a member's time in service, time in grade, physical fitness, awards and decorations, skills and knowledge, education and training, duty performance, and potential for advancement. Immediate superiors or the commanding officer assesses a member's duty performance. Importantly, the timing of promotion is related to the number of promotion points: Members who accumulate points more rapidly are promoted more rapidly.

Army

Promotion to E-5 (sergeant) is a semi-centralized process in which promotion depends on the sum of a member's administrative points and promotion selection board points. Administrative points reflect duty performance as judged by the soldier's commander, awards and decorations, military/civilian education and military training, assigned weapon qualification (expert, sharpshooter, marksman), and physical fitness scores (e.g., two-mile run, sit-ups, push-ups). The member must complete the primary leadership development

course prior to promotion to E-5 but does not have to complete the course prior to being considered for promotion. The promotion selection board takes into account the soldier's personal appearance; bearing and self-confidence; oral expression and conversational skills; knowledge of basic soldiering, military programs, and world affairs; and attitude, which includes leadership, potential for advancement, and trends in performance. As of April 1994, which was close to the outset of our observations on promotion and reenlistment, a maximum of 600 administrative points and 200 board points could be awarded. Among the administrative points, the maximum number of points in each category were duty performance, 200; awards and decorations, 50; military education, 150; civilian education, 100; and military training, 100.

Navy

Navy enlisted advancement is based on Navy-wide standards and occupational standards. Specifically, promotion points depend on six factors: a standardized score on a Navy-wide advancement-in-rate examination, performance factor, time in service, time in rating (i.e., paygrade), awards, and pass-not-advanced (PNA) points. The occupational standards include personnel advancement requirements (PARS) that must be met for promotion to E-4 through E-7; PARS are numerous specific occupational skills and abilities that members must demonstrate. The Navy-wide advancement examination is given in March and September for E-4 (petty officer third class), E-5 (petty officer second class), and E-6 (petty officer first class). Candidates taking the exam in March or September are promoted in July or January, respectively, if they are selected for advancement. The number of promotions depends on the number of open positions at the higher rank. If not selected, candidates are awarded (PNA) points, and the number of PNA points depends on the average of their standardized scores over recent past exams (up to five), and on the average of their current paygrade evaluations. An average score in the upper 25 percent of scores receives 1.5 PNA points, as does an average performance mark in the upper 25 percent. Being in the next 25 percent merits 1.0 PNA point, and being in the next 25 percent merits 0.5 PNA point.

Air Force

Promotion to E-5 (staff sergeant) in the Air Force is based on a centralized system that takes into account time in service, time in grade, skill level, promotion points, and the recommendation of the member's commanding officer. Air Force specialties typically have five skill levels: 1 (helper), 3 (apprentice), 5 (journeyman), 7 (craftsman), and 9 (superintendent). In moving from one skill level to the next, the airman must satisfy requirements for career knowledge, job proficiency, and job experience. On-the-job training programs satisfy the requirements for career knowledge and job proficiency, and satisfactory job performance over a minimum specified time period satisfies the job experience requirement. Most promotions to E-5 through E-7 occur under the weighted airman promotion system (WAPS), and others occur under stripes for exceptional performance (STEP). The WAPS score depends on a weighted sum of six factors. The factors and their relative weights are: specialty knowledge test (SKT) score, 0.22; promotion fitness examination (PFE), 0.22; time in service, 0.09; time in grade, 0.13; decorations, 0.05; and performance reports, 0.29. The SKT and PFE are multiple-choice tests that measure career field knowledge and knowledge of military subjects and management practices, respectively. The performance evaluation report addresses conduct, performance, knowledge of duties, communications skills, supervisory and leadership abilities, and compliance with standards and training requirements. There are at least two evaluators who are typically the airman's immediate superiors. The commander reviews all performance reports and makes a recommendation regarding promotion. The review includes all reports, up to ten, within the past five years to compute the performance report score. Reports are weighted so that more-recent reports receive more weight.

Under the STEP program, an airman may be promoted at the discretion of commanders of major commands, field operating agencies, and senior officers of organizations with large enlisted populations. However, only a limited number of STEP promotions may be made. Also, an airman must have at least three years in service and complete the Airman Leadership School for promotion to E-5.

Promotion to E-5 has historically taken longer in the Air Force than in the other services. Among members who reached E-5 and were in

service at a given point in time, airmen typically took two years longer to reach E-5 than did members of the other services.

Marine Corps

Promotions to E-5 (sergeant) are based on time in service, time in grade, composite score (CS), and the recommendation of a selection board. The composite score is a computation based on rifle marksmanship, physical fitness, average duty proficiency, average conduct, and bonus points awarded for being a drill instructor, recruiter, or Marine Security Guard; for self-education since last promotion; or for participation in the command recruiting program for referrals of new recruits. The commander determines the marine's average duty proficiency through observation, interview, and proficiency marks in the lower grades. Selection boards meet annually to consider each marine's fitness for promotion. The boards consider achievement, leadership, types and levels of experience, professional and technical knowledge, growth potential, motivation, general military proficiency, personal appearance, special qualifications (such as language skills), physical condition, moral character, and maturity. Marines selected for promotion are promoted throughout the year as openings occur at the higher grade by primary occupational specialty. Among selected marines, promotion depends on the CS, which is computed quarterly.

Table 5.1

Time in Service and Time in Grade Requirements for E-5

	Army	Navy	Air Force	Marine Corps
Time in service (TIS)	3 years	3 years	3 years	2 years
TIS waiverable[a]	18 months	n/a	n/a	18 months
Time in grade (TIG) E-4 (months)	8 months	12 months	6 months	12 months
TIG waiverable	4 months	n/a	n/a	n/a

[a]For the Marine Corps, 18 months is the minimum time in service for a "merit promotion" to E-5.

Finally, to be specific about the time in service and time in grade requirements for E-5, we again drew upon Williamson (1999) to prepare Table 5.1.

EFFECT OF DEPLOYMENT ON EXPECTED TIME TO E-5

The deployment variables in the time–to–E-5 regressions for first- and second-term reenlistment (see Tables D.7 and D.8, respectively) provide estimates of the increase or decrease in months to promotion.[1] These coefficients are from a promotion regression that controls for AFQT category, education level, speed to E-4 (by quartile, e.g., upper one-fourth), occupational area, fiscal year, and calendar quarter of entry into service. The calendar quarter of entry controls for the unevenness of accessions during the year. In quarters where accessions are high, the number of members later competing for a promotion will be high, which we hypothesize could lengthen a member's expected time to promotion.

The deployment coefficients from Table D.7 are plotted in Figure 5.1. As seen, nonhostile episodes reduced the expected time to promotion by two to six months in the Army as deployment increased from zero to three or more episodes. In the Navy and Air Force, nonhostile deployment reduced expected time to promotion by two to three months, compared with having no nonhostile deployment. However, the reduction in time to promotion did not significantly change with the number of episodes. For the Marine Corps, the reduction was present but small: less than a month for marines with one or two nonhostile deployments. With respect to hostile deployment, the effects on time to promotion are also small. In the Army, one hostile deployment barely changed the expected time to promotion, while two hostile deployments lengthened it by less than a month, and three or more lengthened it by about two months. All the effects in the Navy were small: plus or minus less than one month. In the

[1] In the first-term model, time to E-5 was treated as a censored variable if the member did not reenlist or had not reached E-5 before the end of the observation period. Otherwise, the time to E-5 was observed prior to reenlistment or, more often, in the second term after reenlistment. In the second-term model, time to E-5 was observed for most members but was censored if the member had not reached E-5 before the end of the observation period.

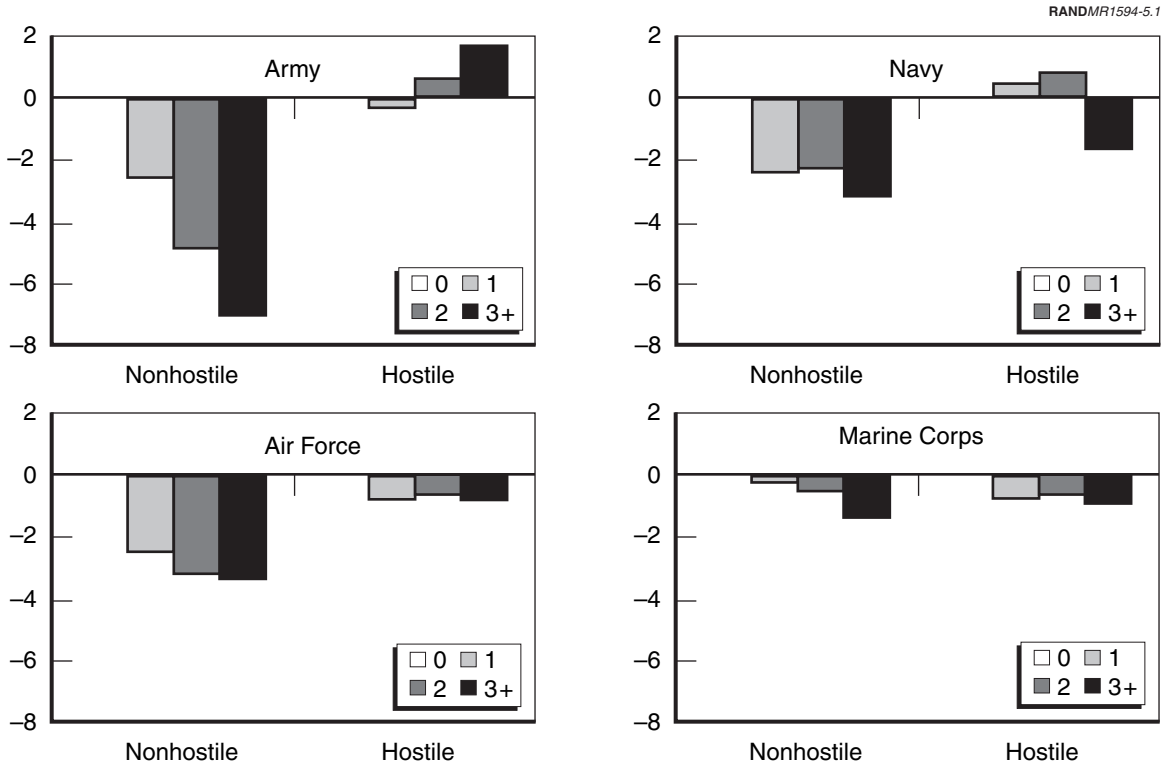

Figure 5.1—Predicted Change in Months to E-5 Promotion by Number of Deployments

Air Force and Marine Corps, the effects were uniformly negative—hostile episodes reduced time to E-5—but less than a month. Because many members in the Army, Navy, and Marine Corps do not reach E-5 until the fifth or sixth year of service, a reduction of one or two months must be considered small. This observation applies more strongly to the Air Force, where E-5 is reached in the seventh or eighth year of service.

The estimates from Table D.8 generally tell the same story, namely, that nonhostile deployment reduced expected time to E-5 but the effects were small, usually less than a month or two. Hostile episodes also had small effects, around one month but sometimes larger, and they increased time to E-5 in the Army and Air Force but reduced it in the Navy and Marine Corps. Thus, whether we examined the deployment effects on time to E-5 promotion from Tables D.7 or D.8, we found that nonhostile episodes of deployment reduced expected time to E-5, but the effect was small and probably of little policy significance. Hostile episodes tended to have even smaller effects, and although the effects were sometimes positive and sometimes negative, the small size suggests that they also were of little consequence.

EFFECT OF EXPECTED TIME TO E-5 ON REENLISTMENT

Table 5.2 presents estimates of the effect of expected time to E-5 on the first- and second-term probability of reenlistment, based on Tables D.7 and D.8. The reenlistment regressions contained the explanatory variables present in the one-equation model of reenlistment, plus a variable for the member's expected time to E-5 based on the promotion equation. The other variables controlled for the member's deployment, AFQT category, education level, occupational area, race/ethnicity, gender, dependency status, unemployment rate, and fiscal year. Thus, the estimated effect of expected time to E-5 on the probability of reenlistment indicated whether, say, a longer expected time to promotion made the member less likely to reenlist, with other factors constant. This was indicated by a negative coefficient.

The coefficients in Table 5.2 did not reveal any strong pattern of expected time to E-5 affecting the probability of first- or second-term

Table 5.2

Effect of Expected Time to E-5 Promotion on Reenlistment

	Army	Navy	Air Force	Marine Corps
First Term				
Coefficient	0.0091	–0.5374	0.1153	–0.0328
Standard error	(0.0012)	(0.0802)	(0.0265)	(0.0007)
Second Term				
Coefficient	–0.0116	–0.0380	–0.0062	0.0185
Standard error	(0.0040)	(0.0111)	(0.0036)	(0.0053)

NOTE: All coefficients are statistically significant at 0.01 except the second-term Air Force coefficient, which is significant at 0.10. Standard errors are in parentheses.

enlistment. Five of the eight coefficients were negative, as expected, but three were positive. The first-term Army and Air Force results may be compared with Buddin et al. (1992, pp. 31, 55), who found that longer expected time to E-5 promotion had a negative effect on first-term reenlistment for Army and Air Force members in the mid-1980s. In contrast, we found positive effects in these cases.

Although all the coefficients in Table 5.2 were statistically significant, many of the coefficients were small in absolute size. This implied that, given the small effect of deployment on expected time to E-5, the effect of deployment on reenlistment via promotion was small and of little policy significance. The Army first-term coefficient, 0.0091, implied that a two-month reduction in expected time to E-5 reduced the probability of reenlistment by about –0.006. Only the first-term Navy and Air Force coefficients were "large." The Navy coefficient, –0.5374, was the largest compared with the other coefficients, but time units for the Navy were six months long. (Navy promotions occur every six months in July and January.) We divided the coefficient by six to put it on a monthly basis, which yielded an estimate of –0.09. Referring back to Figure 1.1, the Navy first-term reenlistment probability was in the neighborhood of 0.30 to 0.35, so a one-month decrease in expected time to E-5 increased the probability by about 0.033, a 10-percent increase.[2] For the Air Force, a longer

[2]In the probit model $\partial P / \partial x_i = \phi(x'\beta)\beta_i$. At an initial value of P equal to 0.35 and β_i equal to –0.09, $\partial P / \partial x_i$ equals 0.033.

expected time to E-5 promotion increased the first-term reenlistment probability; the coefficient was 0.1153. Given a first-term reenlistment probability of about 0.50, a one-month increase in expected time to promotion increased probability by 0.046, a 9-percent increase.

ERROR CORRELATION

We found the error correlation between promotion and reenlistment to be negative. This indicated the presence of unobserved factors that reduced time to E-5 promotion and increased the probability of reenlistment. We could not identify the factors, but we believe they reflect ability, taste for the military, and effort. Taken singly, it is not clear any of these factors would induce a correlation between promotion and reenlistment. High-ability members are more likely to be promoted fast, even if their effort is average.[3] But ability itself may have little bearing on a member's willingness to reenlist. High-taste members are more likely to reenlist, but taste itself may have little effect on a member's performance, fitness, awards, education and training, and, hence, on promotion speed. Effort level will presumably depend on the perceived reward, which may depend on whether effort can bring better assignments and faster promotion. We speculate that effort and ability interact; high ability should reduce the effort required to complete a task and facilitate the development of abstract skills that are valued in promotion such as leadership, resource allocation, and decisionmaking under uncertainty (e.g., in a wartime environment). Effort and taste may interact. Greater taste for the military implies a higher personal value on staying and, thus, higher reward from effort. So high-taste members may exert more effort, which should reduce time to E-5, and are also more likely to reenlist. Ability complements the interaction between taste and effort; high ability reduces the effort required per task and increases the potential range of attainment.

[3]Recall that the promotion regression controls for AFQT and speed to previous promotion, E-4. So unobserved ability captures some additional aspect of ability. Furthermore, because of the possibility that time to E-4 might be correlated with unobserved ability, we estimated models that excluded the time–to–E-4 variables. However, this produced little change in the coefficient and correlation estimates, indicating that our results were not sensitive to the inclusion of time to E-4.

However, ability can also be expected to support better job prospects outside the military. Therefore, although ability can assist high-taste members who are willing to make the effort required to perform well in the military, ability alone is unlikely to be the source of the negative error correlation.

Table 5.3 shows the estimated error correlation between time to E-5 promotion and first- and second-term reenlistment.[4]

The first-term correlation for the Army, Navy, and Marine Corps was around –0.30, but the Air Force's was near zero at –0.06. The second-term estimates were just under –0.5 for the Army, Navy, and Air Force and about –0.2 for the Marine Corps. Although the second-term estimates were larger in absolute value for three of the services, this probably resulted from the second-term population being a selected subset of the first-term population. Also, the Air Force second-term estimate was about the same as that of the Army and Navy, suggest-

Table 5.3

Error Correlation Between Time to E-5 Promotion and Reenlistment

	Army	Navy	Air Force	Marine Corps
First Term				
Coefficient	–0.3460	–0.3234	–0.0661	–0.2894
Standard error	(0.0072)	(0.0084)	(0.0146)	(0.0063)
Second Term				
Coefficient	–0.4921	–0.4366	–0.4810	–0.2214
Standard error	(0.0070)	(0.0083)	(0.0049)	(0.0176)

NOTE: Each correlation is significant at 0.01.

[4]We applied the same two-equation promotion/reenlistment model to second-term reenlistment as we did to first-term reenlistment. Because the second-term population is a self-selected subset of the first-term population, this selectivity can be expected to affect the estimate of the correlation. That is, the error correlation in the second-term model is conditional on first-term reenlistment. Future work should consider a three-equation (or alternative) model that treats time to E-5, first-term reenlistment, and second-term reenlistment in a unified way.

ing a similar underlying selection process, even though the Air Force first-term correlation was small.[5]

A correlation of –0.3 implies a strong relationship between the time to E-5 and the probability of reenlistment after controlling for the observed explanatory variables. We computed the probability of reenlistment as a function of time to E-5, given an error correlation of –0.3, and show the relationship in Figure 5.2.[6]

The figure plots the probability of reenlistment conditional on the extent to which time to E-5 is faster or slower than expected, given the member's explanatory variables. The latter, on the x-axis, is measured in units of the standard deviation of time to promotion. If the member's time to E-5 equals the expected time to E-5, given the

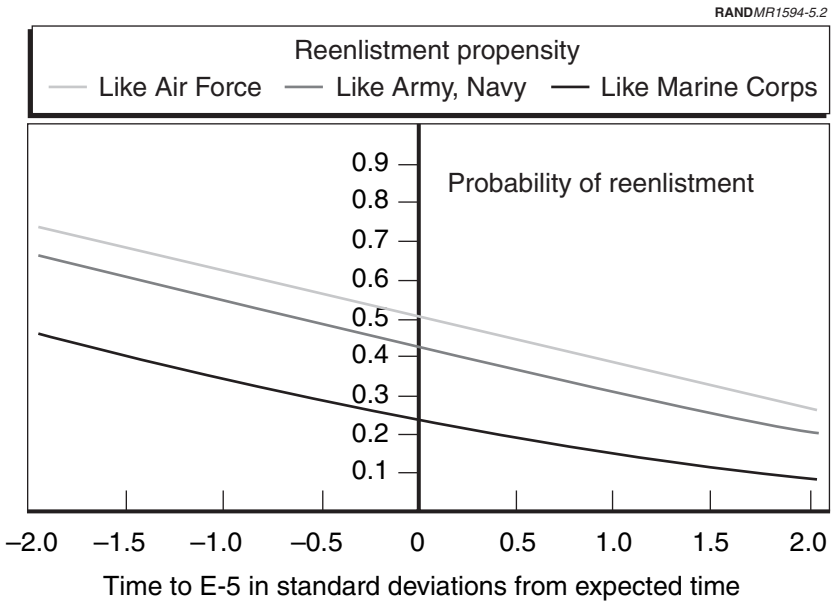

Figure 5.2—Predicted Probability of First-Term Reenlistment When E-5 Promotion Is Slower or Faster Than Expected (error correlation –0.3)

[5]Buddin et al. (1992, pp. 31, 55) found an error correlation of –0.09 for the Army and –0.29 for the Air Force in data from 1983–1989.

[6]The computation is available from the authors on request.

member's AFQT, education level, and so forth, then the member's value on the x-axis is zero. If time to E-5 is one standard deviation longer to E-5 than expected, the value on the x-axis is one. The three curves in the figure reflect different propensities to reenlist. The upper line depicts a propensity to reenlist like that of airmen, the middle line like that of soldiers and sailors, and the lower line like that of marines. We can think of the x-axis as describing the member's private knowledge about his anticipated time of promotion relative to that of observationally equivalent peers (having the same AFQT, education, occupation, etc.). We add this point because the probability of reenlistment can depend on the member's anticipated time to promotion. Although promotion has not yet occurred, the member may have a clear sense of being ahead of, or behind, the pack.

As seen, a member with a reenlistment probability of 0.5 when time to E-5 is at par (zero on the x-axis) will have a reenlistment probability above 0.6 if time to E-5 is one standard deviation faster than expected. The reenlistment probability will be below 0.4 if time to E-5 is one standard deviation slower than expected. The comparisons for the other curves are similar. To a first approximation, on any of the curves, a one-standard deviation increase or decrease in time to E-5 reduces or increases the probability of reenlistment by 0.10. These are significant changes.

Tables D.7 and D.8 indicate that the standard deviation of the error of time to E-5 is about 18 months for the Army, 19 months for the Navy, 15 months for the Air Force, and 8 months for the Marine Corps. Given a member's explanatory variables and the assumption of our model that the error terms are normally distribution, we expect about 19 percent of members to have a time to E-5 promotion between zero and one-half standard deviation faster than expected. About 15 percent have a promotion between one-half and one standard deviation faster than expected, and about 16 percent have a promotion more than one standard deviation faster than expected. From Figure 5.2, we judge that the 15 percent between one-half and one standard deviation faster have a probability of reenlistment of 0.05 to 0.10 higher than someone promoted at par. The 16 percent with even faster promotions have a probability of reenlistment at more than 0.10 higher. Given that the same sort of comparisons apply to promotions that are slower than par, it is clear that the

extent to which (anticipated) time to E-5 promotion is faster or slower than expected powerfully differentiates those who will reenlist from those who will not.

EFFECT OF OTHER VARIABLES ON PROMOTION

We found that higher AFQT and higher education reduced the time to E-5 promotion, as expected. Also, a shorter time to E-4 was associated with a shorter time to E-5 in the Army, Navy, and Marine Corps. For example, in the Army reaching E-4 in the fastest quartile was associated with reaching E-5 14 months sooner than in the slowest quartile. Similarly, reaching E-4 in the second- and third-fastest quartiles was associated with reaching E-5 8.6 and 5.6 months sooner, respectively.[7] In the Marine Corps, marines in the fastest, second-fastest, and third-fastest quartiles to E-4 could expect promotion 21, 15, and 9 months sooner to E-5 than marines in the slowest quartile. For the Navy, we found that sailors whose time to E-4 was faster than the median time could expect to be about two months faster to E-5 than those slower to the median time. Thus, in the Army and Marine Corps, and to a lesser extent in the Navy, a fast time to E-4 was associated with a fast time to E-5. In other words, the gain from reaching E-4 sooner was at least partially conserved in that E-5 was also reached sooner.

Whereas the difference in months to E-5 between time–to–E-4 quartiles was often more than several months in the Army and Marine Corps, the difference in the Air Force was much smaller (one to four months). In addition, the Air Force had an anomalous result: compared with airmen in the slowest quartile of time to E-4, airmen in any faster quartile had a slightly *longer* time to E-5 promotion. We do not know why. We constructed the time–to–E-4 quartiles from a longitudinal database of *all* enlisted members, tracking them *by cohort* from the time of accession (entry into service) to the time of promotion to E-4. We limited our tabulation of time to E-4 quartiles

[7]These Army estimates are from the time to E-5/first-term reenlistment model. The estimates from the time to E-5/second-term reenlistment model are somewhat different. The coefficients for the top, second, and third quartile of time to E-4 indicate promotion times 11.0 months, 4.5 months, and 1.3 months shorter than for the fourth (slowest) quartile to E-4, respectively. Still, the basic story is the same. This point holds for the other services as well.

to members who stayed in service long enough to reach E-4, that is, members for whom time to E-4 was realized. This was done by narrowly defined (three-digit) occupational specialty. Therefore, the Air Force result does not reflect differences in speed of promotion across occupations, as might have been the case if we had pooled data across specialties when computing time–to–E-4 quartiles. Instead, we speculate that airmen who were slow to E-4 but strove to improve and stayed in the Air Force were able to obtain large improvements in their performance relative to their peers; this led to a somewhat faster time to E-5 than their peers. Another possibility is that airmen who were fast to E-4 were somewhat slow to E-5 because they had to be in service long enough to satisfy the time-in-service requirement. However, this seems unlikely because the TIS requirement is only three years (see Table 5.1).

The range of time to E-5 across broad occupational areas was about six months in the Army and Navy, three months in the Air Force, and two months in the Marine Corps (see the occupational area coefficients in Table D.7). A two- to three-month range is small relative to the five or more years needed to reach E-5.

In most cases, the calendar quarter of accession made little difference in time to E-5. The indicator variables for the second, third, and fourth quarter were usually statistically significant for the Army and Air Force but not for the Navy and Marine Corps. But, the coefficients were nearly always small—for example, less than one month. The fiscal year effects were also minor.

SUMMARY

The analysis of promotion and reenlistment revealed a statistically significant but small negative effect of nonhostile episodes on the time to E-5 promotion. For members with one nonhostile deployment, for example, E-5 promotion occurred a month or two sooner than for members with no nonhostile deployment. For members who had two or more nonhostile deployments, promotion was a bit faster, especially in the Army. The effect of hostile deployment on time to E-5 promotion was smaller than for nonhostile deployment. Unlike nonhostile deployment, which generally shortened the time to E-5, hostile deployment sometimes shortened the time and sometimes lengthened it. Regardless, the effect on time to E-5 was typi-

cally less than one month and therefore of little practical significance.

We also found that the expected time to E-5 promotion in most cases had a small effect on the probability of first- or second-term reenlistment. As a result, the small change in expected time to E-5 resulting from nonhostile or hostile episodes had a small, perhaps negligible, effect on reenlistment. The empirical evidence pointed to the conclusion that deployments had little effect on reenlistment via their effect on the time to E-5 promotion. Furthermore, allowing for this effect did not dislodge the finding in the previous chapter that deployment had a direct effect on first- and second-term reenlistment. The direct-effect estimates in the promotion/reenlistment model were similar to the direct-effect estimates in the one-equation reenlistment model.

Our findings on the error correlation between promotion and reenlistment reflect the presence of unobserved factors that acted to reduce time to E-5 promotion and increase reenlistment. These factors involve an interaction of a member's *taste* for the military, *effort* to perform, and *ability*, which can reduce the effort needed to accomplish tasks and acquire the skills and knowledge needed for career advancement. Controlling for such observed characteristics as AFQT category, education, speed to E-4, and occupational area, we found that a member who is one standard deviation faster (slower) to E-5 has a first-term reenlistment probability 0.10 higher (lower) than a member whose promotion occurs no sooner or later than expected. The unobserved factors therefore had a large influence on who continued in service beyond the first term.

Although taste, effort, and ability are difficult to observe and measure, the promotion system can give a net indication of their effect. After taking account of members' observed characteristics, a commanding officer should expect that members accumulating promotion points more rapidly are the ones more likely to be promoted sooner *and to reenlist*. That is, promotion point accumulation may be thought of as a signal of the net effect a member's taste, effort, and ability.