9. CONCLUSIONS AND POLICY IMPLICATIONS

This chapter summarizes the principal policy implications of the research, as well as the conclusions that can be drawn from these. It begins by highlighting the key insights from the model-based analysis. The discussion then focuses on a series of findings on the personnel management processes explored in the first chapters of the dissertation—as argued below, these are intimately related to modeling outcomes. The final section leaves the reader with a series of policy prescriptions and an agenda for future work in this area.

9.1 CONCLUSIONS FROM THE MODEL-BASED POLICY ANALYSIS

The simulation results indicate that implementing the Army transition plan—and the current Army long-term manpower mix targets—is likely to lead to an unbalanced force. The principal drivers of personnel imbalances include: (1) persistent concentrations of soldiers in a small number of years of service; (2) an overly senior career force in the medium-to-long-term; (3) extended stays in terminal grades; and (4) irregular promotion tempo.

In turn, these imbalances could create personnel management difficulties as well as age/skill mismatches that could ultimately affect force readiness (see Chapters 3 and 4). These potential problems are not being recognized explicitly at the moment, in large part because the system is not displaying the full spectrum of stresses and shortfalls that are likely to emerge over time. In the absence of corrective actions, problems would become more acute for Marshals prior to 2020, while imbalances in the VSP and Sergeant force would reach their peak in the 2020s. Importantly, all the existing problems and shortfalls are greatly amplified by:

- the considerable length of military careers, and
- the Army's steady-state, which locks the system into a very senior personnel mix.
The impact of long military careers--and ways to reduce it

It is no coincidence that all the alternative strategies explored in Chapter 8 focus on shortening military careers. In fact, the model-based policy analysis has shown that career length is by far the most important policy lever. Such policy leverage is determined by the fact that the current--and significant--personnel imbalances can only be effectively tackled through exits. Changing promotion rules and timing appear to be have an impact only at the margin or when the system is in a stable equilibrium.

Chapter 8 identified Strategy 5 as the alternative that consistently proves to be most effective and cost-effective. Strategy 5 is also the least costly strategy aside from the base case. The fact that Strategies 3 and 4 are relatively close to 5 in terms of outcomes across a wide range of assumptions underscores the importance and effectiveness of gradual early separation programs. Therefore, while it is not possible to characterize Strategy 5 as the "strictly optimal" approach, the analysis shows with a great degree of confidence that any successful transition will have to rely on gradual early separation programs. These will have to be surely implemented early on for the Marshals force, and after the achievement of the steady-state mix for the Sergeant and VSP forces. VSP separations over the next decade will also be necessary if the Army wishes to place a great deal of emphasis on reducing substantial spikes in the YOS distribution.

The steady-state's career-intensive force mix acts as an analytical "straightjacket"

Strategies 3 to 5 bring about similar outcomes because they all share the same steady-state target mix. This in effect poses a structural constraint on the potential variation that can exist between

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A program that encourages early exits would obviously add to total budget costs, although one should also take into account the fact that an older force could well be less productive and therefore effective (Asch and Warner, 1994). Moreover, this analysis has adopted conservative estimates of separation costs. It is conceivable that such costs could be kept to a minimum with a series of initiatives, such as rotation programs that place a fraction of mid-career and senior Army personnel into civilian public sector organizations.
strategies, and on the ways in which imbalances can be corrected. In fact, part of the problem may lie in the steady-state goals themselves. A more junior force could be easier to manage, and possibly cheaper, in the long run.

**Choosing alternative force mixes: an initial thought experiment**

An in-depth comparison of alternative steady-states goes beyond well the scope of this dissertation. However, a last set of runs serving as a thought experiment was devised in order to consider the impact of a more junior steady-state force with:

- 50,000 VFBs;
- 30,000 VSPs;
- 12,000 Sergeants;
- 8,000 Marshals.

This is a significantly more junior force--and one that is more pyramidal than the current steady-state. It calls for a more prominent role for VFBs, and a drastic reduction in the number of Marshals from today's 25,000-level. One sample strategy was designed to explore the cost implications of the alternative mix. This strategy brings the system to the new steady-state in 2020 by aggressively separating Marshals and by lowering the VSP intake (see Appendix K for a fuller description of this strategy and its outcomes).

Figures 9.1 and 9.2 below indicate the approximate cost implications of a more junior steady-state. They show that once in equilibrium, active-duty costs of a more junior force are significantly lower than the costs associated with strategies 1 (the base case) and 5. Adding early retirement costs to the analysis (assessed with the 15% separation multiplier) makes the more junior steady-state more

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140 The VFB/VSP breakdown of this steady-state more closely approximates the 60/40% target specified by Grosso (1998).

141 The point of this experiment is not to validate a different steady-state, or a particular strategy's ability to meet a new set of requirements. Comparing strategy outcomes across steady-states would also be inappropriate, since the standards for evaluating performance would vary according to the force mix.

142 These do not include reduced retirement costs, which would make a more junior force even more attractive from a financial standpoint.
expensive in the short-to medium run, but potentially cheaper in the long run once the current humps are processed out of the system.

Figure 9.1 Hypothetical vs. current steady-state: active-duty costs

![Hypothetical vs. current steady-state: active-duty costs](image)

Figure 9.2 Hypothetical vs. current steady-state: total costs
(15% separation multiplier)

![Hypothetical vs. current steady-state: total costs](image)

A more junior force could also be more productive, to the extent that it better matches its experience mix with the tasks to be performed. Eventual long-run cost savings could also be reinvested to increase productivity---either by hiring higher-quality soldiers (and compensating them accordingly) or by acquiring more modern capital equipment and allocating more resources to training. Preliminary runs also point to the fact that a more junior force would also be flexible---
changes in overall force size could be managed relatively easily by relying primarily on changes in the VFB force. Given the limited length of service for junior personnel, the system could "digest" most changes within five years by altering VFB intakes--instead of the more than thirty years that would be required for a natural turnover in the career personnel categories.\footnote{To be sure, increases and decreases in overall force size would have to be distributed proportionately across ranks (Grissmer et al., 1995). However, a force with relatively more VFB personnel could amortize changes more easily and quickly than ones with greater numbers of career soldiers.}

Given the potential advantages of a more youthful force, why has the Army opted for the current steady-state? It appears that the factors constraining the Army's choices are overwhelmingly supply-side, and possibly short term. One is the lack of success on the hiring front: to shield force management from the vicissitudes of the recruitment environment, planners have chosen to rely more heavily on career volunteers. The other rationale stems from the assumption that prospective recruits seek lifetime employment--and a greater share for non-VFB soldiers signals greater career opportunities.

These factors are serve as powerful constraints on Army manpower planning, and certainly deserve to be addressed. That being said, the current solution to the recruitment problem could well be the least cost-effective in the long run. As mentioned in the next section, the Army could remedy this and other supply-side shortfalls by improving a series of personnel management processes.

\section*{9.2 LIMITATIONS OF CURRENT PERSONNEL MANAGEMENT PROCESSES}

The discussion in chapter 2, 3 and 4 identifies limitations in three critical personnel management areas which, if addressed, could enable the Army to relax current supply-side constraints and base its long-term plans on actual manpower requirements:

- the Army is taking a passive attitude toward recruitment, and its efforts are hampered by a series of bureaucratic problems;
personnel policy is rendered less effective by lack of differentiation among prospective recruits and active-duty personnel—this trend is especially evident in the Army’s compensation and promotion systems;

in turn, such lack of differentiation is directly related to the paucity of systematic and reliable data on how soldiers respond to different incentives at the point of recruitment and beyond.

**Passive attitude and bureaucratic problems**

The inefficacy of current recruitment problems is in large part due to the system’s bureaucratic inflexibility and unfriendliness. As mentioned in Chapter 2, the support given by the Army to potential and actual VFB candidates is minimal. Indeed, current recruitment procedures inhibit the Army’s ability to reach out to potential recruits since there is little direct interaction between the service and the prospective applicant. To compound the problem, a large fraction (roughly 50%) of the relatively few individuals who signal their interest in joining the military leave the selection process in its early stages. This implies that for each recruitment cycle the Army faces the stark choice of either (1) meeting its quantitative quotas by adopting laxer standards, or (2) maintaining higher standards only to subsequently face manpower shortfalls.

Recruiting effectiveness has also been hampered by lack of coordination between the Ministry of Defense (MoD) and other institutions, as well as between different MoD bureaucracies. For instance, the police forces are not receptive to the notion that their recruiting processes need to explicitly consider Army personnel requirements, and have been reluctant to abide by the yearly recruitment quotas assigned to them. It is also becoming apparent that other public sector agencies and municipalities, which by law are required to give preferential access to individuals who have finished their first term, are also ignoring such regulations. In addition, there seem to be bureaucratic obstacles to better coordination within the Army recruiting establishment itself. For instance, sources within the recruitment promotion agency (APR) have indicated that the Ministry of Defense
committee responsible for implementing the thrice-yearly contests as uncooperative and unwilling to promptly share information.

**Little differentiation among different types of personnel**

It is impossible to ascertain the degree to which the Army is currently compromising on quality in order to meet quantitative goals, since there are no formal methods for differentiating among personnel with varying abilities and/or skill sets. Indeed, the Army is adopting a "brute force" approach during the selection process by administering a general culture exam designed to winnow the applicant pool before aptitude and medical tests. Some Army officers have expressed concern that the screening exam may not be successful in identifying the most suitable candidates. And since a standard quality scale is not used for planning purposes, it becomes impossible to set recruitment goals for different quality categories. In fact, the Army does not appear to be systematically and proactively attempting to attract with targeted incentives individuals who are (1) of a higher quality or (2) are considering committing themselves to particular skill areas with. The undifferentiated way in which the Army distributes its end-of-term exit bonus is a case in point.

The same lack of differentiation also affects career force management. The Army is making personnel management decisions today which, given the considerable length of military careers, can reverberate for decades. The high rates of promotion to the VSP force over the last six years, as first discussed in Chapter 3, is one cause for concern. Given that upstream recruitment standards have been viewed by several Army officers as being lax at times, there is no guarantee that the nearly 20,000 VSPs currently in service have all the necessary characteristics (in terms of motivation and quality) to perform at high levels for the remainder of their relatively long career. This potential problem could become especially pressing in the face of slowing promotion tempo and long permanence in terminal grades. Moreover, the absence of performance-related pay, along with the excessive bureaucratization and grade inflation current affecting the personnel evaluation systems (Malfe’, 1998), is likely to provide
another disincentive to increased effort supply and productivity. Taken together, these repercussions could be substantial, since as mentioned in Chapters 2 to 4 personnel characteristics such as quality and occupational specialty play a large role in determining overall productivity--and cost.

**Insufficient understanding of behavioral responses to various incentives**

The absence of a differentiated approach to personnel management is related to the paucity of systematic and reliable data on how soldiers respond to different incentives at the point of recruitment and beyond. There do not seem to be any econometric estimates of enlistment supply as a function of individual characteristics and recruitment incentives. Testing and evaluation of some promotional activities has occurred, but not with the necessary rigor to guarantee the validity of such tests. Without a fuller understanding of these phenomena, it will be impossible to identify an optimal, cost-effective policy mix.

Lack of standardized data on the quality of prospective recruits also limits the conclusions that can be reached regarding the adequacy of compensation (pecuniary and otherwise) and human capital incentives. As shown in Table 2.3, pay for VFBs does not to appear to be grossly inadequate compared to the civilian income distribution of military-age youth--especially if one factors in the end-of-term bonus and the increase in pay as a result of out-of-area deployments. But it also does not appear to be obviously sufficient to attract a large number of high-quality individuals, who are in theory more responsive to wage increases (especially in the underrepresented North, where youth wages are significantly higher).

A sizeable portion of the incentive structure relies on non-pecuniary benefits. In fact, the guarantee of a secure job is believed by virtually all Army planners to be a critical policy lever. However, there is no way of knowing what the precise effect of this strategy is

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144 VFBs have a high probability of receiving deployment pay, since such deployments have been frequent in past years.

145 Compounding this is the fact that military life is in several respects more rigorous than civilian life, and that the compensation system has to take this into account.
on high-quality youth recruitment.\textsuperscript{146} It is also impossible at this stage to gauge the extent to which human capital development prospects offered by initiatives such as Euroformazione are having an effect on enlistment decisions. Nor can the impact of greatly expanding these incentives on recruitment be ascertained analytically.

It is equally difficult to measure the adequacy of the promotion and compensation systems used to manage the career force. The difficulties lie in the lack of data and on the fact that the transition context renders all currently available information less reliable for predicting the behavioral responses of the force in the medium and long term. Short of conducting experiments or more detailed analytical exercises, it is impossible to rigorously ascertain whether the inter-category pay differentials are sufficient to encourage highly able workers to produce enough effort and to seek promotions over the course of their careers. There is also no way of knowing to what extent the automatic nature of promotion within grades of the same category, and the absence of up or out rules, is hindering effort supply.

That being said, the sample of data gathered for this research indicates that the personnel system is coming under increased stress—primarily because it is ill-suited to cope with a growing number of individuals serving as enlisted personnel for the entire duration of their long careers. For instance, Army officials have cited examples of VSPs eligible for promotion to the Sergeant category who have declined this opportunity because the associated costs (e.g. relocation, risk of spouse unemployment if he/she is working) are not sufficiently offset by the higher level of pay or in-kind benefits. Given that the share of career soldiers will surely increase during the transition, it is very likely that current deficiencies will become even more apparent in the years ahead.

\textsuperscript{146} Moreover, the stable employment value proposition is probably more effective in areas of high structural unemployment and, since youth unemployment rates are much higher in the south of Italy, it may also help to exacerbate regional disparities among enlisted personnel.
Putting current limitations into perspective: lessons from the U.S. AVF experience

If not addressed, the shortfalls mentioned above could seriously undermine the chances of a successful transition to an all-volunteer force. At the same time, however, it is equally clear that some complications are almost inevitable in the early phases of such a large-scale endeavor. Even the United States military experienced a host of problems in the first decade of its transformation into an AVF. In fact, in the 1970s U.S. military personnel management was hampered by missed recruitment goals, high attrition, low troop morale, worsened public perceptions, disciplinary problems, and inaccurate (mismnormed) enlistment tests (Eitelberg, 1996).

Over time, the U.S. military establishment was able to address these problems through a specific set of policy interventions and by building the institutional capacity to implement such interventions effectively. Policy improvements included establishing quality goals, developing a more comprehensive manpower research program, building a sophisticated job assignment system, re-engineering the recruitment process, investing in quality-of-life improvements, and increasing compensation and educational benefits (Thurman, 1996). Perhaps the most fundamental lesson from the U.S. experience is that given adequate resources and the institutional capacity to allocate them effectively, all manpower problems are manageable (Eitelberg, 1996). Italian Army planners should actively consider these lessons when seeking to improve the functioning of their personnel system, as mentioned below.

9.3 POLICY RECOMMENDATIONS

This research points to a number of recommendations that Italian Army planners should consider as they plan the transformation to an All-Volunteer Force. Some are directly related to the modeling results, while others are essentially suggestions for improving the current personnel management processes (based on data reported in Chapters 2-4).
Modeling-related recommendations

The Italian Army faces a fundamental choice: it could either (1) seek the best solution under the current target steady-state mix, or (2) contemplate other potential steady-states.

- If the Army wishes to continue with the current set of long-term force targets, then it will have to rely on an early separation program to reduce effective career lengths.

Such program needs to be implemented gradually in order to reduce the swings in personnel demand caused by the eventual exits of large concentrations of soldiers currently in the force, especially in the career enlisted and Sergeant grades. This is by far the policy measure with the greatest amount of leverage. Policy interventions that leave the system's basic properties unchanged—such as variations in promotion timing and percentages quotas between personnel categories—cannot by themselves prevent the significant imbalances that would occur without early separations.

- The relatively narrow range of feasible outcomes arising from the model-based analysis indicates that the Army should explore the possibility of moving toward more junior steady-state force mixes.

This dissertation does not seek to offer guidance on how the Army should decide between steady states; indeed, answering the question of what long-term force mix the Army should pursue is a full-fledged research endeavor in its own right. On the other hand, the findings reported here suggest that greater “out of the box” thinking is warranted, especially since more junior steady-states could well be cheaper, more flexible and more effective in the long run.

Personnel management recommendations

Long-term manpower planning decisions can be greatly facilitated by improving the current personnel management processes, and making them more attuned to the post-conscription era. Specifically, the data and
insights presented in Chapters 2 through 4 highlights the need to address some of the shortfalls in the way the Army manages its people through two broad initiatives:

- **First, make the recruitment process more proactive and applicant-friendly.**

Many of the problems that hinder Italy’s transition to an sustainable AVF are directly related to the fact that potential supply of enlistments is not being successfully converted into actual supply. Given the cost-effectiveness of military recruiters in the U.S. context, the Army should explore how this tool might work in Italy.¹⁴⁷ One of the options to be considered would entail the establishment of a dedicated group of individuals who are responsible (and rewarded) for encouraging enlistments. In addition, the high attrition rates hampering the effectiveness of the current screening process could be reversed with an "applicant-friendly" approach, whereby tests and examinations are administered more frequently and closer to the homes of prospective recruits. More broadly, the Army needs to undertake a comprehensive policy review of the recruiting process, including analyses of such areas as propensity to enlist and how it varies by demographic characteristics.¹⁴⁸

Increasing the number of applicants should enable the Army to better discriminate among the pool of prospective recruits, and therefore to increase soldier quality. The importance of relying on high-quality soldiers has been demonstrated by past research, and could

¹⁴⁷ See Oken and Asch (1997) for a comprehensive review of the lessons learned on the topic of recruiter management in the U.S. context.

¹⁴⁸ Other areas to explore could include the recruitment of women, the measurement of recruit quality, the role of key "influencers" such as family and friends, and the feasibility of using educational benefits as incentives. Consideration should also be given to other non-economic factors that affect recruiting, such as public attitudes toward military service, support for military spending, and social factors affecting youth choices. In the U.S., the military provides for many service members a sense of community that is lacking in many civilian communities; it would be appropriate to find out whether this also applies in Italy.
even grow in the future as deployments emphasize speed and the ability to maneuver rather than raw--and static--combat power. Since military organizations will in part meet these requirements by delegating responsibility and decision-making authority to the lower ranks, the returns to having soldiers who can effectively handle complex and fast-moving situations could well increase (Warner and Asch, 2000).

- Second, adopt a more sophisticated approach to personnel management.

All modern military forces have witnessed ever-greater skill specialization within their workforces over the last few decades. Since developments in future technology are unlikely to stop this trend, compensation and promotion systems will have to be upgraded to better manage such an increase in heterogeneity (Warner and Asch, 2000). In the case of the Italian military, this is hardly a future challenge. In fact, it seems that the Service is not operating with a full institutional understanding of current military labor supply, and of the impact that individual characteristics such as quality and occupational skills affect it. More research in these areas is warranted. Econometric analyses and experiments like the ones performed in the United States over the last three decades should be implemented in the Italian context in order to gauge individual responses to such policy levers as pay, promotion tempo, and occupational assignment. These studies should also produce estimates of how individual behavior (including retention) and productivity vary according individual characteristics such as quality and experience. The potential impact of eventual early exits on the morale and motivation of those who stay will also need to be explored.

With this information in hand, the Italian Army will be able to adopt a more comprehensive approach to personnel management. For instance, special bonuses could be given to those willing to sign up for a hard-to-fill occupational specialty; recruitment goals could be based on quality-focused quotas; and compensation for individuals in terminal grades could at least in part be performance-related. A differentiated approach would also require a greater bureaucratic capacity to collect
and interpret a richer set of data on soldiers, their skills, and their behavior. Such data would also have to be used to construct equally detailed manpower plans by quality, experience mixes, and occupational groups. Finally, this approach would need to be extended to evaluation systems as well as the management of eventual early separations. Personnel in certain occupations or functional areas (e.g., teachers, physicians) could have long careers without causing skill/experience mismatches--the optimal time to leave will not be the same for all personnel.

9.4 RESEARCH AND POLICY CHALLENGES FOR THE FUTURE

This dissertation serves as a preliminary study of the issues and dilemmas that will confront the Italian Army as it transitions to a smaller, all-volunteer force. To be sure, much needs to be better understood before being able to make increasingly specific recommendations. Two principal tracks for further investigation appear most relevant: (1) studies on alternative steady-state force mixes, and (2) experimental/econometric analyses of soldier behavior and its determinants (especially recruitment). These two avenues are tightly related--for instance, finding ways to solve recruitment problems by means other than relying on a very senior steady-state force mix will make any consideration of alternative force mixes more plausible.

Perhaps the most fundamental finding from this research is that the Army cannot be successful in managing the transition with the policies and processes it currently has in place. It is equally clear that the system has to be changed in substantial ways in order to bring performance to acceptable level. Identifying additional areas for improvement, as well as the policy interventions that can bring an effective transformation, will remain a critical research need for years to come.