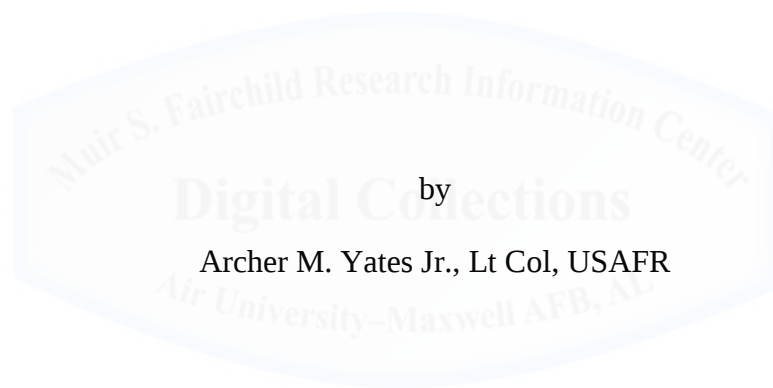


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IMPACTS OF NATIONAL ECONOMIC CONDITIONS ON AIR
FORCE RESERVE RECRUITMENT, RETENTION, AND
PARTICIPATION



by
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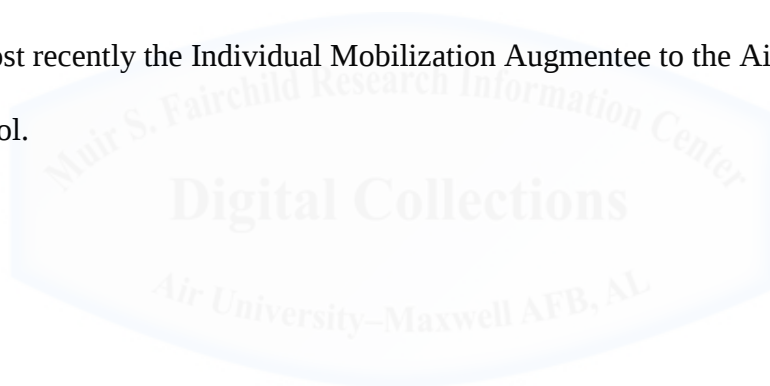
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Biography

Lieutenant Colonel Archer Yates is a U.S. Air Force aviator assigned to the Air War College, Air University, Maxwell AFB, AL. He graduated from the United States Air Force Academy with a Bachelor of Science degree in 1996 and Embry Riddle Aeronautical University in 2011 with a Masters of Aeronautical Science. Lieutenant Colonel Yates graduated from pilot training in 1997 and has over 3,000 hours in the T-37, T-1, C-27, MC-130H and the C-17 with combat experience in Operations ENDURING FREEDOM and IRAQI FREEDOM. Lieutenant Colonel Yates was on active duty for 12 years primarily supporting special operations prior to transferring to the reserves in 2008. As a reservist he has completed assignments as a mobility pilot and was most recently the Individual Mobilization Augmentee to the Air Force Special Operations School.



Abstract

Since the terrorist attacks of September 11, 2001, the unprecedented participation levels contributed by guard and reserve forces enabled the military to simultaneously fight in two wars and sustain increased global force projections while supporting homeland security initiatives. This busy period also signified the transition from the strategic to the operational reserve force construct, a paradigm change in employment of part-time reservists expanding their traditional role of reliance on in case of a national emergency to routine operational support throughout the continuum of operations. Essential to the success of this employment model is sustained contributions from Air Force Reserve (AFR) members. Concurrently with the high participation levels of 2007-2012 was a severe economic recession characterized by high unemployment that increased the availability of reservists to support military operations. Therefore, it is prudent to juxtapose national economic conditions and AFR manpower availability to illuminate potential impacts that threaten the future vitality of the operational reserve construct. A statistical analysis was performed to evaluate the relationships of an increasing Gross Domestic Product and decreasing unemployment rate on AFR recruiting, retention, and participation by performing a bivariate correlation. A regression was conducted on some salient results to highlight potential future impacts. The analysis overwhelmingly reflected that a growing national economy has the potential to negatively impact recruitment, retention, and participation. This has the potential to threaten the operational reserve construct. Potential solutions and specific recommendations to ameliorate this potential threat are made for further analysis.

Introduction

Following the terrorist attacks of September 11, 2001, unprecedented participation levels by guard and reserve forces enabled the United States military to simultaneously fight in two wars and sustain increased global force projections while maintaining homeland security. Maximum participation from the Air Force Reserve (AFR) and Air National Guard (ANG) components were invaluable in the simultaneous persistent support for Operations ENDURING FREEDOM (OEF), IRAQI FREEDOM (OIF), and NOBLE EAGLE (ONE).¹ An analysis of the first six months of OIF emphasizes this criticality. During this time period, AFR forces provided 45 percent of the C-17 missions, 50 percent of the C-5 missions, 25 percent of the air refueling sorties, and approximately 50 percent of aeromedical evacuations.²

The period since 2001 represented a transition in reserve employment models. This paradigm change reflected the shift from a strategic force, only relied on in times of national emergency, to an operational force readily available for enduring military operations. The continuous reliance on part-time military forces is a critical attribute in the continuum of service stipulated in the Total Force Initiative (TFI) concept, a necessary manpower aspect articulated in *Joint Vision 2020*.³

Concurrent with the high operations tempo from 2007 to 2012 was a significant economic downturn marked by high-unemployment rates that facilitated increased service by AFR members. An analysis juxtaposing national economic conditions and AFR manpower availability illuminates potential impacts that threaten the vitality of the operational reserve construct. Comprehensive solution formulation is beyond the scope of this essay; however, salient linkages between economic indicators and AFR manpower considerations inform future solution development and therefore baseline measures are proposed. This paper concludes a

growing national economy and the associated competitive job market has the potential to negatively impact Air Force Reserve recruitment, retention, and participation. The resulting decrease in available personnel will increase the risks of manpower deficiencies necessary to sustain the commitments as envisioned in the operational reserve construct.

Background

The operational reserve model encompasses the increased involvement of reservists in routine operations spanning the continuum of missions from home-station support to combat operations.⁴ The regular participation of reservists allows a smaller active duty force and facilitates expertise resident in the reserves to be retained and leveraged on a routine basis. Although this concept has been adopted in the past decade, the transformation began with increased reliance on reservists in the 1990s as the AFR increased participation to counterbalance the downsizing active duty component (reference Figure 1 in Appendix A).⁵

It is important to identify two salient aspects of the operational reserve construct. First, the regular use of reserve forces for routine missions augments, but does not supplant, the traditional strategic reserve mission.⁶ Secondly, the vitality of the operational reserve dictates an enduring high level of participation relying on deployments on a consistent basis.

Predictable participation is the governing factor when analyzing the balance of forces between the active and reserve components. The AFR provides a disproportionate 17 percent of the fighting force with only 4 percent of the Air Force's budget.⁷ Approximately 70,000 of the 71,500 Airmen in the AFR are trained to the same standards as their active duty counterparts and maintain a "called-up as needed but ready now" status.⁸

Future budgetary constraints will put pressure on the AFR force as the active component downsizes and the cost advantages presented by the reserves are maximized. Air Force

personnel costs account for 37.5 percent of the 2013 Air Force budget.⁹ This represents a 3.7 percent or \$1.1 billion decrease from the 2012 budget.¹⁰ The active duty component absorbs 82 percent of the reductions and the ANG the remaining 18 percent.¹¹ The AFR manpower budget remains constant. These reductions in manpower costs indicate a potential future increase in demand on AFR members, similar to the increase in the 1990s. This possibility was emphasized by the *January 2013 Reserve Forces Policy Board Report* that calculated the non-mobilized costs per reservist as less than one-third of an active duty member.¹² However, the AFR may not be able to fulfill the expanding requirements if potential reductions in recruitment, retention, and participation associated with a growing economy are realized..

Recessions are not rare, as there were 10 between 1948 and 2010.¹³ However, the recession from 2007 to 2009 was significantly worse than the majority of previous recessions because of its broad reaching effect throughout the population. One of the most recognized symptoms of a recession is a higher unemployment rate.¹⁴ This characteristic was notable in the 2007 to 2009 recession due to its severity, duration, and speed of onset.¹⁵ In this case, unemployment increased from 5 percent in December 2007 to 9.5 percent in June 2009 and peaked at 10 percent in October 2009.¹⁶ Not until September 2012 did unemployment rates fall below eight percent, a figure they had been above since January 2009.¹⁷ The severity of unemployment indicators in this recession is unique and has only been experienced once in the last 60 years for several months during the early 1980s.¹⁸

The timing of this analysis is relevant because the economy is starting to shows signs of recovery. In 2010 and 2011 the Gross Domestic Product (GDP), the total goods and services produced by an economy, increased by 3.8 and 4.0 percent respectively over the previous years.¹⁹ This is in comparison with an average of 6.6 percent, which is the historical average

since 1945.²⁰ Therefore, the economy is growing albeit at a slower than average pace. The United States Department of Labor reported unemployment rates of 7.8 and 7.9 percent for September and October of 2012.²¹ The economic recovery, whether it continues or is delayed, will happen and unemployment rates will drop back toward historical averages.

Eighty-five percent of AFR members' economic sustainment is generated from civilian employment.²² A growing economy corresponding with an improved job market presents increased opportunities for AFR members from their primary employer. These benefits include wage or salary increases, promotions, and new opportunities in emerging and growing fields. The Uniformed Services Employment and Reemployment Rights Act (USERRA) provides reservists legal protection when balancing their civilian and military commitments. Essentially, workers cannot be fired because of their military requirements. However, USERRA does not offset the opportunity costs lost when reservists are not available during a period of expansion.

The confluence of factors interlinking reservists disposition towards military service and their civilian employment introduces the possibility that the high AFR retention, recruitment, and participation rates experienced over the past decade may be significantly influenced by the health of the national economy. To further explore this possibility it is necessary to compare each aspect of the manpower equation with leading economic indicators to identify relationships and highlight potential future impacts.

Methodology

A statistical analysis was performed to calculate correlations identifying potential relationships between recruitment, retention, and participation and GDP growth and the unemployment rate as reported by the US Bureau of Labor Statistics (reference Appendix B for complete statistical Methodology). These two factors were compared with AFR recruitment

goals (1990-2012), propensity of young adults to join the reserves (1990-2012), retention rates (1990-2012), percentage that indicated they were likely to stay in the reserves (2000-2011), days spent in compensated status not including drill periods (2002-2011), drill periods performed (2000-2011), and active duty for training days completed (2000-2011).

The correlations presented for consideration were those that produced a statistically significant correlation that were either moderate or strong (reference Table 1). A correlation is statistically significant if the group that is studied with the limited data available is representative of the larger group. Statistical significance is indicated by “ p ” and is documented either “ $p < .05$ ” or “ $p < .01$.” This indicates that there is either less than a five percent or one percent chance the calculated correlation resulted from chance and there is no relationship. All the evaluations used a one-tailed analysis because the evaluation was limited to the potential affects of a growing economy (increasing GDP and decreasing unemployment).

Table 1. Correlation Strength²³

Value of r (positive or negative)	Strength of Relationship
.5 to 1	Strong
.3 to .5	Moderate
.1 to .3	Weak
0 to .1	None

Results and Considerations

Recruitment

An evaluation of the recruitment rates in percentages of goals accomplished from 1990 to 2012 was compared with GDP growth and unemployment. The data available for this analysis included three economic recessions of 1991, 2001, and 2009.²⁴ The analysis yielded a moderate

negative correlation ($r = -.395, p < .05$) between GDP growth and recruitment goals as depicted in Table 2. Therefore, GDP growth does have a significant relationship with recruitment goals and it can be expected that as GDP growth increases it will be harder to meet recruitment goals.

Table 2. Calculated correlations. ** is significant at the .01 level and * is significant at the .05 level.

	GDP Growth	Unemployment	Recruitment
GDP Growth	$r=1$	$r=-.515^{**} p=.007$ $n=22$	$r=-.395^{*} p=.035$ $n=22$
Unemployment		$r=1$	$r=.244, p=.131$ $n=22$

Thirty-six percent of AFR members are direct accessions with no previous military experience.²⁵ The pool of youth eligible for military service is shrinking, with only 27 percent of the population between the ages of 17 and 24 qualified for military service.²⁶ A 2009 report, *Ready, Willing, and Unable to Serve*, cites increased obesity, lack of education, and increased criminal activity as the drivers for the reduced eligibility base.²⁷ This shrinking eligibility pool problem is compounded by a decrease in the propensity of youth to join the reserves. A September 2012 youth poll indicated that the propensity for 16-21 year olds to join the reserves is near an all time low of 11 percent.²⁸ This percentage is significantly lower than it was 20 years ago and has been decreasing for the last 6 years. The less people want to join out of a smaller qualified pool in a more competitive market will impact the quality of the force.

One argument suggests that this potential recruiting shortfall will be supplanted by increased accessions from the active component. This logic-based argument identifies that a growing economy will seemingly be associated with more Airman leaving active duty to pursue civilian opportunities. However, this argument will be limited by the fact that active duty retention is at a 16-year high.²⁹ This limits the pool of experienced personnel to be accessed into the reserves. The decrease in active-duty separations was reflected in recent decisions for the Air

Force to delay upcoming promotion boards to captain and major.³⁰ Another factor is the increased active duty service commitment from eight to ten years for completing pilot training that went into affect in 2000.³¹ Pilots make up a significant portion of the AFR operational force and are a key component in being able to maintain the higher tempo associated with the operational reserve construct. As individuals stay on active duty longer, they are more vested in the benefits of an active-duty retirement and therefore are less likely to transition to the reserve component despite increased civilian opportunities in a growing economy. Therefore, as the economy improves, the flow of experience from the active duty may be less than expected.

Retention

An evaluation of the retention rates in percentages of goals accomplished and likeliness to stay in the reserves compared to GDP growth and unemployment rates was performed as depicted in Table 3. An analysis of this data revealed a strong negative correlation ($r = -.668$, $p < .05$) between GDP growth and the AFR members' responses indicating their likelihood to stay in the reserves as reported in the *2011 Status of Forces of Reserve Component Members Survey*.³² The analysis supports the conclusion that as GDP growth increases, the AFR member likelihood to continue service decreases.

Table 3. Calculated correlations. * is significant at the .05 level..

	Likelihood to Stay	Retention Overall
GDP Growth	$r = -.668^* p = .025$ $n = 9$	$r = -.046 p = .421$ $n = 21$
Unemployment	$r = .520 p = .075$ $n = 9$	$r = .228 p = .154$ $n = 22$
Likelihood to stay	$r = 1$	$r = -.410 p = .136$ $n = 22$

An analysis of the number of reservists that transferred from the Selected Reserve (participating on a regular basis) to the Individual Ready Reserve (non-participating), retired, or

separated also illuminates the importance of economic conditions on retention. The data analyzed was limited to 2008-2012 based on availability.³³ However, it is clear that as the unemployment rate increased in 2009, there was a dramatic decrease in reservists that transitioned to the ready reserve because they were not fulfilling participation requirements, retired, or separated (reference Table 4).

Table 4. AFR Retention Rate 2008-2012.³⁴

	Un-employment	Retention Rate	PIRR	NPIRR	Retired (Gray)	Separated or Paid Retired	Total leaving SelRes
2008	5.8%	85.04%	471	3,281	3,397	4,375	11,565
2009	9.3%	87.95%	303	2,427	2,491	3,623	8,863
2010	9.6%	89.09%	56	2,450	2,401	3,266	8,186
2011	9.0%	88.49%	56	2,493	2,524	3,675	8,754
2012	8.1%	88.37%	38	2,667	2,551	3,706	8,979

Another consideration in the impact of the economy on retention is the experience level of the average reservist. The AFR force is significantly older than the active duty component. The average officer has 18 years of experience and the average enlisted Airman has 13 years.³⁵ A large portion of the force is retirement eligible and can be more responsive to emerging opportunities consistent with an improving economy.

Participation

The salient characteristic necessary to the vitality of the operational reserve construct is an enduring high level of participation. To evaluate the historic participation levels compared to economic indicators two different data sets were analyzed as presented in Table 5. The first data

set included the total number of days spent in compensated status from 2002 to 2011 as reported in the *2011 Status of Force Survey*.³⁶ The next was military pay data for drill periods and active duty for training days performed from 2000 to 2011.³⁷ The days in compensated status does not include drill periods, therefore the combination of data analyzed accurately portrayed the operations tempo of AFR members.

Table 5. Correlations. ** is significant at the .01 level and * is significant at the .05 level.

	Days Compensated	Unemployment	Regular Drill Period per Reservist	Active Duty Training Day per Reservist
GDP	Not significant	$r = -.494^{**}$ $p = .001$ $n = 36$	$r = -.378^{*}$ $p = .012$ $n = 36$	$r = -.239$ $p = .08$ $n = 36$
Unemployment	$r = .665^{*}$, $p = .025$ $n = 9$	$r = 1$	$r = .451^{**}$ $p = .003$ $n = 36$	$r = .469^{**}$ $p = .002$ $n = 36$

The relationship between days in compensation status and the unemployment rate produced a strong positive correlation ($r = .665$, $p < .05$).³⁸ As unemployment increased, AFR members spent more time working for their unit. This trend was also reflected in the comparison of drill periods and active duty training days. The average drill periods completed per reservist produced a moderate positive correlation with unemployment ($r = .451$, $p < .01$) and a moderate negative correlation with GDP growth ($r = -.378$, $p < .05$). There was also a moderate positive correlation between unemployment and active duty training days accomplished ($r = .469$, $p < .01$). Overall, these results show a significant connection between the conditions of the national economy and how active reservists were in their military service.

The salient attribute of the AFR manpower equation also reflects the most significant relationship with leading economic factors. Therefore a regression was calculated to identify future potential impacts of decreased unemployment on AFR member participation.

Unemployment indicated the strongest correlation and therefore was our independent variable

for analysis. The standard regression equation was used to identify potential operational support limitations as compared to 2012 requirements (reference Appendix B for equation).

The *2012 Air Force Reserve Snapshot* reported that 3,279 members were activated in support of OEF and ONE in October 2012.³⁹ If these members are performing a six-month mobilization, this equates to 590,220 days. Using the regression equation, if the 2012 unemployment rate had been at its historic average of 5.8 percent versus the 8.1 percent actually experienced, then there potentially would have been 239,700 less days served. This was 40 percent of the days required for six months of support for OEF and ONE in 2012.

The potential decrease in drill periods and active duty for training days could impact readiness. Approximately 70,000 AFR members maintain the same mission ready status as their active duty counter parts and are capable of deploying with 72 hours notification.⁴⁰ This called-up-as needed, but ready-now status is an essential part of the operational reserve construct. A reduction in annual time served gives reservist less time to complete annual requirements. Reservists reportedly already spend 8.1 hours a month doing military related work including ancillary training and administrative duties not in a compensatory status.⁴¹ Essentially, the current requirements exceed the allotted time and AFR members are forced to complete duties on their own time. The possibility exists for increased civilian employment pressures to decrease the time allotted for reserve service, potentially impacting readiness and making the current AFR member requirements untenable. These external pressures could result in greater numbers transferring to the Individual Ready Reserve, separating, or retiring.

Solutions and Recommendations

The future economic impacts throughout the continuum of participation combined with the potential for impacts in recruitment and retention demand that solutions be explored to

ameliorate future manpower constraints that threaten the viability of the operational reserve model. Skeptics will discount this argument and will argue that the reduction in forces in Afghanistan will coincide with an improving economy and the participation levels will be mitigated by a shrinking requirement.

A review of empirical evidence does not support this hypothesis. In August 2010, 5,974 AFR members were serving in support of OEF, ONE, and OIF.⁴² This time period reflected an increase in AFR contingency requirements vis-à-vis October 2012 when 3,279 AF Reservists were supporting ONE and OEF.⁴³ These reduced numbers are consistent with the ending of contingency operations in Iraq. However, despite this decrease in major contingency operations, the days in compensation data peaked in 2011. This trend indicates that even though required AFR contingency support decreased, the overall participation level increased. This trend highlights the continued reliance on the reserves for routine operations consistent with the operational reserve concept.

Recruitment

The AFR has met or exceeded its recruitment goals since 2000.⁴⁴ However, this analysis concluded that it will be harder to reach recruiting goals in a growing economy. The decreasing qualified pool of applicants as well as today's youth historically low preference to serve in the military will compound this problem. To counter this perception, AFR recruiters must emphasize how reserve service can be an attribute in a growing economy. These career-benefitting experiences include job skills, leadership opportunities, and education benefits.

Additionally, recruiters should counter the perception by some that the military does not offer a good paying job. A 2011 survey provides data on the link between pay perception and desire to join. Of the youth surveyed, 90 percent of those that wanted to join the military

considered it a good paying job.⁴⁵ This is compared to 73 percent who indicated they probably would not serve and 56 percent who said they would definitely not serve.⁴⁶ A 2010 Government Accountability Office report cited that combining the totality of benefits available for military members yielded an annual advantage of \$13,360 for enlisted and \$24,870 for officers compared to their civilian counterparts.⁴⁷ For AFR members, compensation is variable depending on participation. Illuminating the financial advantages of increased military participation compared to civilian employment will aid in recruiting and encourage higher levels of participation.

Bonuses are a valuable tool to attract recruits in low-density and high-demand career fields.⁴⁸ Former CMSgt of the Air Force James Roy reported the AFR bonus program is “positively benefitting recruiting and retention.”⁴⁹ Bonuses accounted for \$630 million of 2011 AF budget representing an attractive target to cut.⁵⁰ However, this temptation should be reduced to stave off the confluence of negative recruitment factors inherent in a growing economy. As unemployment goes down, wages will increase and therefore it is necessary for recruiters to articulate the benefits and financial competitiveness of military service.

The AFR must also be cognizant on the potential impacts the operational reserve concept will have on accessions from active duty. As recruiting non-prior service candidates becomes more difficult, leveraging the experience and human capital of the active duty veterans will increase in importance. However, the high operations tempo consistent of the last decade may be a detractor for those choosing to separate from active duty. Therefore, the AFR needs to continue to accommodate these preferences by relying on volunteerism as the primary engine driving routine support.

Retention and Participation

Retention rates are negatively correlated with a growing economy. This is consistent with the ideology of balancing the consistently espoused “reserve triad” of family, civilian employment, and AFR participation. As the economy grows and presents more opportunities, it can be expected that will tilt the balance more towards civilian employment. To counter this shift, the AFR needs to exploit unique advantages inherent to military service. Current reserve component members’ valued education, training, medical, and retirement benefits the most compared to their civilian employment.⁵¹ These benefits should be maintained, a potentially difficult task as cost saving budgetary measures are implemented.

The most salient recommendations necessary for retention and participation focus on ensuring a balance of service can be maintained and the reserve cornerstone value of flexibility is preserved. The analysis concluded that economic conditions are correlated to all types of participation. This finding has significant implications on future roles and missions of the AFR and represents the greatest threat to the sustainability of the operational reserve paradigm.

There are three potential solutions to the impending participation gap. The first option is for the AFR to add more members. This would increase the pool of available personnel to meet the increased requirements of the operational reserve, minimizing the requirements per reservist. This solution presents the option of having two types of reservists. Members of the first category would complete the minimum readiness requirements and are available to surge in an emergency. The next type of reservist would regularly participate and routinely volunteer for deployments as envisioned in the operational reserve model. A 2008 article by Colonel David Smith, USAFR retired, and Col Randy Pullen, USAR retired, suggested this concept but argued that a formal division between the two types of reservists was required.⁵² The problem with a formal division is that it does not allow members to flow back and forth as rapidly as their

priorities and availabilities change throughout their careers and introduces increased bureaucratic complexities. An alternative is for eligible reservists to self-identify that they are willing to serve in a greater capacity during a specific time period. The reward for volunteering for additional duty would be increased minimum guarantees and preferential treatment for duty selection.

A larger force will facilitate AFR members maintaining flexibility and still fulfill the increased requirements of the operational reserve. This option may be plausible if the AFRs can recruit transfers from the active component as they decrease in size and cost advantages of AFR members are exploited. The primary problem with this option is an increase in manpower positions is not consistent with a constricting defense budget.

The second solution is to reduce the expectations and operations tempo. This would ameliorate the participation woes, but reduce the contribution of AFR members to national defense and transition more requirements back to the active component. This solution sacrifices the operational reserve advantages in order to preserve strategic reserve surge capabilities; a potential outcome of an expanding economy if recruitment, retention, and participation are not balanced.

This solution is in contrast with the Air Force's next generation air and space expeditionary force (AEF) model. This model is founded on increased support from the reserve component and is scheduled to begin implementation in 2013.⁵³ Termed AEF Next, the new deployment model aims to link AFR unit deployments with their active duty counterparts.⁵⁴ AEF Next maintains the operational reserve one-to-five dwell ratio and specifies an 18-month cycle consisting of a 3-month mobilization followed by a 15-month dwell.⁵⁵

This concept is good in theory, but implementing it will be difficult. The logic behind AEF Next was limited to aligning the mobilization phase with regular Air Force deployments

based on an active duty one-to-two deployment to dwell ratio.⁵⁶ The problem with this logic is predicted future participation rates, especially in a more robust economic market, do not support this high of a sustained operations tempo.

The third and most viable solution is to reduce the minimum statutory requirements of reservists or the one weekend a month and two weeks a year concept. This would save money as well as reduce the burden on AFR members. However, it is incongruent with the current part-time service framework.

Current legislation requires reservists to perform a certain amount of duty per year, acquiring a minimum amount of points to maintain their status in the Selected Reserve and to achieve credit for retirement. These years, commonly termed “good years” are based on achieving 50 points by the retirement and retention (R/R) date, the annual date the reservist joined the reserves.⁵⁷ Service during one period does not count for service in another, even if the minimums are exceeded. For example, an Airman completes a 90-day deployment to Afghanistan one year and then returns to his or her civilian employment near the end of his or her R/R date. The next year the AFR member is required to complete the minimum statutory commitments in order preserve his or her status and receive credit for retirement. Based on the current published one-to-five mobilization to dwell ratio necessary to meet operational reserve requirements, the reservist in this scenario would be expected to deploy again the following year after his or her R/R date.

Changing the law to facilitate greater variability in service during different time periods will dramatically support being able to maintain the operational reserve construct during a time of economic growth. The requirement of 50 points a year should be expanded to incorporate a

longer window of service. An example of this would be a three-year look back assessment for a total of 150 points would be more advantageous.

The major challenge with implementing this option is maintaining readiness. As stated previously, the average reservist requirements already exceed the allotted time trying to maintain readiness.⁵⁸ Reducing participation requirements will not alleviate this problem. Therefore, inherent with this option is the necessity to sacrifice operational reserve levels of readiness, the ability to deploy in 72 hours, during extended dwell periods to focus on deliberate deployments. Despite these disadvantages, this solution's advantages will help maintain the necessary manpower foundation required to sustain the operational reserve model of employment.

Conclusion

In summary, the potential impact of increasing economic growth and corresponding decreasing unemployment levels on AFR recruitment, retention, and participation levels illuminates the need for further analysis. The economic advantages presented by the decreased personnel costs of part-time members will drive demand to continually leverage the forces available under the operational reserve construct. However, this increases the risk exposure of AFR total strength and participation levels not meeting the requirements originally envisioned in the total force design.

It is prudent, where appropriate and feasible, to implement measures that will limit economic impacts and maintain a balanced and ready force. Active duty retention rates will decrease from historic highs. When that happens, the AFR should be sheltered from manpower cuts and allotted comparatively smaller budget increases to ensure there are positions available to capitalize on newly available experienced recruits. This allows the total force to continue to leverage the training and experience of valuable Airman that our country has made.

Critics will argue that although the correlation between the economy and levels of service is valid, the primary driver for service is patriotism and not economics. This is certainly true and patriotism is the greatest motivator for recruitment or retention. An August 2009 Everett Group survey of Air Force Reservists identified patriotism and retirement as the top reasons Airman signed up or decide to stay.⁵⁹ However, as this analysis demonstrates there will be an impact on manpower and participation as economic conditions vary and therefore these variances should be factored into future force requirements.

Many reservists are immersed in their primary civilian jobs and regularly balance competing requirements. The majority of AFR members that are veterans of the active component switched from full-time to part-time status for a reason. Increased military expectations negate the more control and less requirements advantages consistent with being a reservist. These individuals are still motivated by patriotism, but the demands of the operational reserve construct will still need to be balanced within the reserve triad paradigm.

The operational reserve is a key component of the Total Force Initiative specified in *Joint Vision 2020*, identifying future reliance on the guard and reserve.⁶⁰ The high participation levels by AFR members during the last decade may not be feasible for the next 10 years. New strategic guidance from the Secretary of Defense reflects this concern as he recently directed a review of the balance of active and reserve components and necessary readiness levels of the reserves.⁶¹ In this analysis, the potential economic impacts on AFR availability must be a variable in the future force structure requirements calculations.

The research presented in this paper overwhelmingly suggests there will be economic impacts on AFR recruitment, retention, and participation and therefore it is incumbent on the Department of Defense to further refine those ramifications. Future research should expand the

aperture of data considered in attempt to better gauge the potential impacts. Extensive evaluation of potential solutions and their associated impacts was beyond the scope of this research. However, future research should thoroughly evaluate solution development and implementation considering the totality of factors necessary for the vitality of an enduring operational reserve construct.



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Appendix A

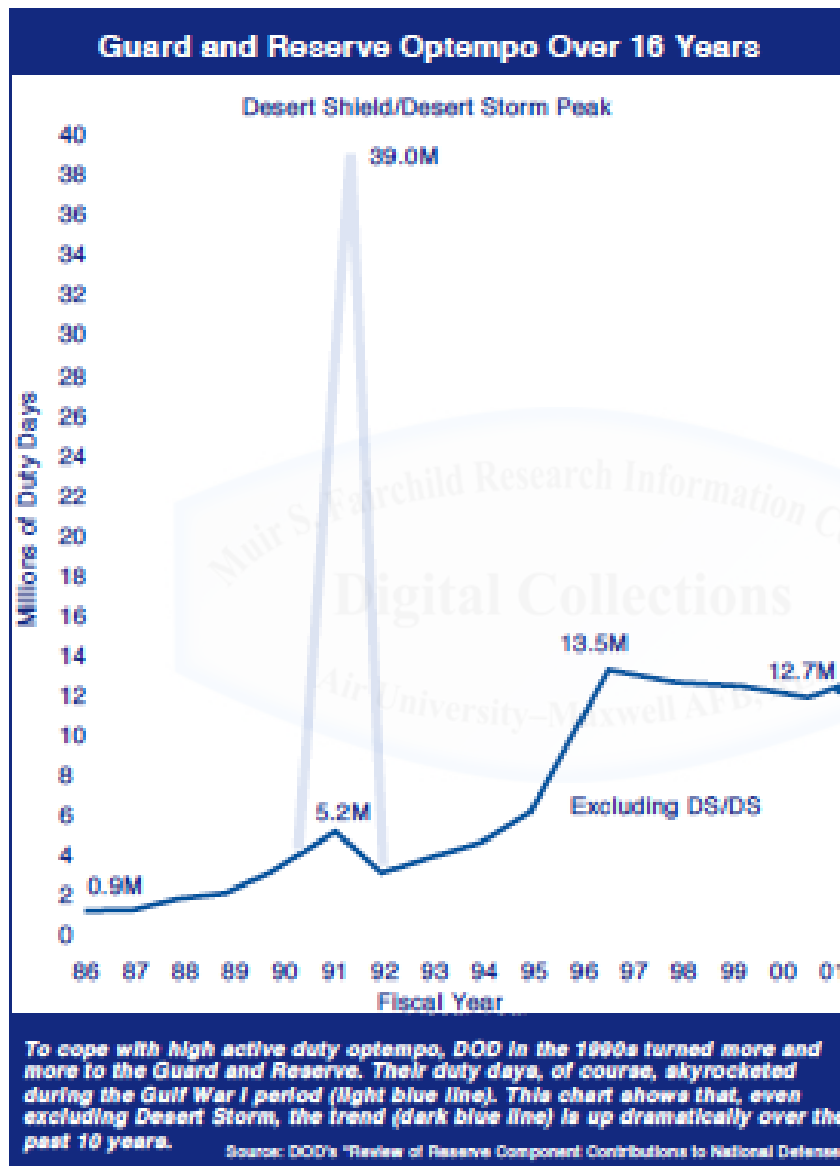


Figure 1. Source: Adam Herbert, "Total Force In a Search for Balance," *Air Force Magazine*, September 2003, 34.

Appendix B

The statistical analyses were done with SPSS statistical analysis software by performing a bivariate correlation to determine if there was a statistically significant relationship between the variables. The descriptive statistical analyses drew conclusions by summarizing and describing the available data. The inferential statistical analyses used the data to draw conclusions and where appropriate make predictions on potential outcomes in the future.

A correlation indicates a relationship between two variables and is indicated by a correlation coefficient (r) that varies from negative one to positive one. The closer the coefficient is to one (from zero) the greater the two variables are related and indicates the strength of the linear relationship. The positive or negative symbol indicates the direction of the relationship. A positive coefficient exists when one variable increases the other variable also increases. A negative coefficient exists when one variable increases the other variable decreases. Squaring each correlation facilitates a comparison between two different correlations. For example a correlation of $r = .5$ ($r^2 = .25$) is more than seven times stronger than $r = .25$ ($r^2 = .03$).

Participation data reflected the strongest correlations and therefore was evaluated by utilizing the prediction model to identify potential future impacts. The prediction model facilitates predicting a value of a variable (participation) based on a predictor variable (unemployment). The equation used was $\text{Predicted } Y = (SD_Y)(\text{Predicted } Z_Y) + M_Y$. The variables reflected are the standard deviation, the predicted Z score of the variable, and the mean of the variable. The predicted Z score was calculated using the equation: $\text{Predicted } Z_Y = (\beta \text{ or } r)$

regression coefficient)(Z_x). Z_x is the Z score of the independent variable, which in this case was unemployment.



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