Chapter 1:

The Economic Implications of Installation Growth at Fort Riley

Regional Economic Models, Inc.

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• Associates, Inc.

Purpose of this Study:

The State of Kansas and communities adjacent to Fort Riley will confront a number of unique challenges and planning obstacles due to the Base Realignment and Clouse (BRAC) process as well as the return of the Big Red One to Fort Riley. RKG Associates, Inc. and REMI Consulting, Inc. were retained by the State of Kansas Department of Commerce and local communities to evaluate the economic implications, as well as other impacts of expansion at Fort Riley. To complete this task REMI built a custom Policy Insight Model encompassing Riley County, Geary County, Pottawatomie County as separate regions. In addition the surrounding Counties of Clay, Dickinson, Morris, and Wabaunsee were aggregated to capture the spill-over effects to the neighboring communities. Close communication with the Kansas Department of Commerce, City of Manhattan, City of Junction City, JCGC Economic Development, Fort Riley Administration, Junction City-Geary County Military Affairs Council, and the Governor's Strategic Military Planning Commission aided in the collection of input data. This draft report represents Task 1 of the "Economic and Employment Strategic Plan Relating to Installation Growth at Fort Riley".

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Executive Summary

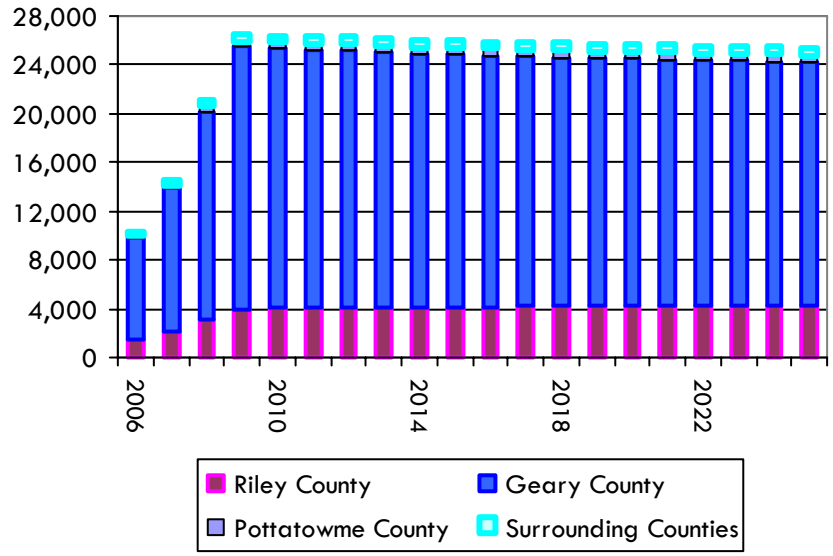
This technical report details the economic and demographic implications of Installation Growth at Fort Riley, Kansas. Fort Riley, "America's Warfighting Center", was established in 1853 and is located on the Kansas River between Junction City and Manhattan, Kansas. Currently Fort Riley is home to the 24th Infantry Division, totaling 10,060 federal military jobs and approximately 5,642 Civilian jobs. As of 2005, the combined civilian and military payroll at Fort Riley contributes approximately $706 million to the regional economy. The expansion of the Fort Riley installation is due to the 2005 Base Realignment and Closure (BRAC) process and the return of the 1st Infantry Division, the "Big Red One" to Fort Riley from Wurzburg, Germany. In order to determine the core elements of this strategic plan, this study evaluates two scenarios to identify a possible range of impacts. For the primary scenario REMI evaluated the influx of 14,041 troops, while the secondary scenario assumed an increase in 9,700 troops.

Each scenario followed the same timeline for consistency. The distinguishing characteristics of each scenario were the total number of troops and dependents moving to the area. Subsequent assumptions on wages, housing allowances, housing demand, and demographic shifts coincide with the initial troop assumptions. By mid-2006 the first third of the expected troops will begin arriving at the installation. It is estimated by 2009 one hundred percent of the new troops will be stationed at Fort Riley. On-post housing demolition and construction will begin in 2006 and complete by 2009 with a total capital investment of $800 million. During the remodeling phase 10% of barrack capacity will be reduced. It is expected that additional housing demand will be met by the private sector, as on-post housing will not be further expanded.

Each scenario demonstrated positive economic growth for all counties. The most pronounced economic benefits were in Riley and Geary counties, whereas Pottawatomie and the surrounding Counties' growth were influenced solely by the spill-over effects and therefore represent only secondary impacts. Figure 1 shows the aggregate employment changes by county. Once the BRAC process is complete in 2010, the direct injection of 14,041 military personnel and dependents create a total of 26,430 jobs for scenario 1. These 26,430 jobs represent the total direct, intermediate, and induced[1] net new jobs for the region, calculated as a change or difference from baseline employment projections.

[1] See text on p(?) defining intermediate & induced.

Figure 1 Change in Jobs by County, High Scenario



Between 2006 and 2010 the spike in job growth occurs due to the construction and demolition of barrack facilities, infrastructure investment, and the phase-in of the alignment process at Fort Riley. For scenario 1 the retail and wholesale sectors benefit the most from the increased consumer spending creating a total of 2,263 new jobs. The additional secondary jobs can be attributed to intermediate good production and to some extent induced spending. The major growth is found in the Transportation Equipment Manufacturing sector with 667 jobs, followed by construction with 748 jobs, and finally professional technical services with 525 new jobs.

The new employment opportunities and higher real wage rates contribute to the overall attractiveness of the region, resulting in an in-migration causing marginal changes to population and labor force for both scenarios. Additionally, employment opportunities reduces the unemployment and/or underemployment within the region during the expansion. The population responds to increased employment opportunities as the installation grows, increasing local participation rates as there is an increase in demand for labor to support local industry. The new migrants contribute to the natural growth rate, creating the total increase in population. In both scenarios, population growth remains positive (see table 1).

Table 1 Total Economic Impact all Counties High and Low Scenario (all dollar concepts in Mil$)

2010	Baseline (w/o Project)	High Scenario 1	Differences Scenario 1	Low Scenario 2	Differences Scenario 2
Employment	99,383	125,815	26,430	118,406	19,020
Total Output	$ 4,553	$ 5,171	$ 618	$ 5,064	$ 511
Total GRP	$ 3,854	$ 4,630	$ 776	$ 4,441	$ 587
Population	156,018	193,456	37,440	182,243	26,220
Disp Income	$ 3,720	$ 4,544	$ 825	$ 4,309	$ 589

Total sales are projected to increase between $719 and $900 million by the end of 2025, which represents the total output of an economy in terms of production in dollars, including all intermediate goods purchased as well as value added (labor, capital, fuel, investments, and profit). Output can be considered as sales for both final goods and intermediate goods. Whereas, GRP is a value-added concept based on Gross Domestic Product (GDP), and is equal to output, minus intermediate inputs, therefore representing profits and labor income. As Table 1 indicates, GRP is greater than Output for all years, which is an uncommon result. GRP tends to be less as it does not include intermediate good production, and therefore represents the economic activity within an area. In the case of Fort Riley the difference is the labor income of the new soldiers stationed at Fort Riley. The increase in military operations result in a significant increase in Military Wage and Salary Distributions to the local economy, which in turn generate a great deal of local consumption. These economic indicators suggest that the entire region resembles a tourist community, as the production processes are geared specifically at meeting local consumer demand of the military personnel and the students at Kansas State University.

REMI Policy Insight®

Regional Economic Models, Inc. (REMI) developed a custom Policy Insight model to evaluate the economic impacts associated with installation expansion at Fort Riley. This Policy Insight model encompasses Riley County, Geary County, Pottawatomie County as separate regions. In addition the surrounding Counties of Clay, Dickinson, Morris, and Wabaunsee were aggregated to capture the spill-over effects to the neighboring communities. This configuration allows REMI Consulting Inc. to estimate the economic impacts for each county individually and for the entire seven-county region. The Policy Insight system was assembled at the county-level using data from the Bureau of Economic Analysis, the Bureau of Labor Statistics, the Department of Energy, Department of Defense, the Bureau of Census, and other public sources. At the core of Policy Insight is the Economic and Demographic Forecasting and Simulation model for 70 Industrial Sectors (EDFS-70). EDFS-70 includes the REMI economic and demographic baseline forecast, or no-build scenario, and produces multi-year forecasts, comparing them to the baseline forecast. REMI used the same baseline forecast, which included updated demographic[2] information, for both scenarios. The Industrial Sectors in Policy Insight are based on the North American Industry Classification System (NAICS). NAICS replaced the old Standard Industrial Classification (SIC) System in 1997, and was developed jointly by the US, Canada, and Mexico to allow business statistics comparability across North America[3].

REMI Policy Insight is a structural model, meaning that it clearly includes cause-and-effect relationships. The model is based on two key underlying assumptions from mainstream economic theory: households maximize utility and producers maximize profits. Since these assumptions make sense to most people, lay people as well as trained economists can understand the model. In the model, businesses produce goods to sell to other firms, consumers, investors, governments, and purchasers outside the region. The output is produced using labor, capital, fuel, and intermediate inputs from other industries. The demand for labor, capital, and fuel per unit of output depends on their relative costs, since an increase in the price of any one of these inputs leads to substitution away from that input to other inputs. The supply of labor in the model depends on the number of people in the region and the proportion of those people who participate in the labor force. Economic migration also affects the population size. People will move into an area if the real after-tax wage rates are relatively high or if the likelihood of being employed increases in a region.

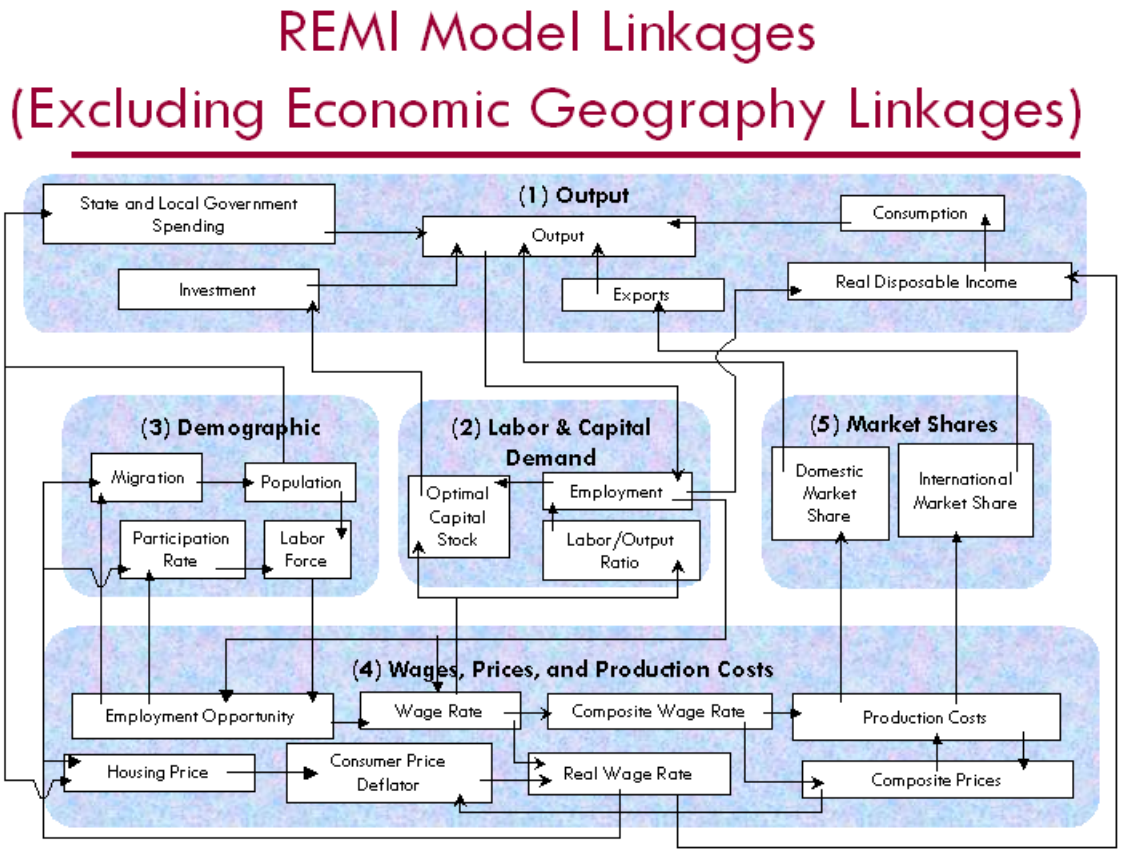
Supply and demand for labor in the model determine the wage rates. These wage rates, along with other prices and productivity, determine the cost of doing business for every industry in the model. An increase in costs would decrease the share of markets supplied by local firms. This market share combined with the demand described above determines the amount of local output. The model has several other feedback mechanisms. For example, changes in wages and employment impact income and consumption, while economic expansion changes investment and population growth impacts government spending.

[2] WSU Woods and Pool Study

[3] www.census.gov/epcd/www/naics.html

Figure 2 is a pictorial representation of REMI Policy Insight. The Output block shows a business that sells to all the sectors of final demand as well as to other industries. The Labor and Capital Demand block shows how labor and capital requirements depend both on output and their relative costs. The Demographic block includes Population and Labor Supply, contributing to demand and wage determination. Economic migrants in turn respond to wages and other labor market conditions. Supply and demand interact in the Wage, Price, and Profit block. Production costs determine market shares. Output depends on market shares and the components of demand.

Figure 2 REMI Policy Insight overview



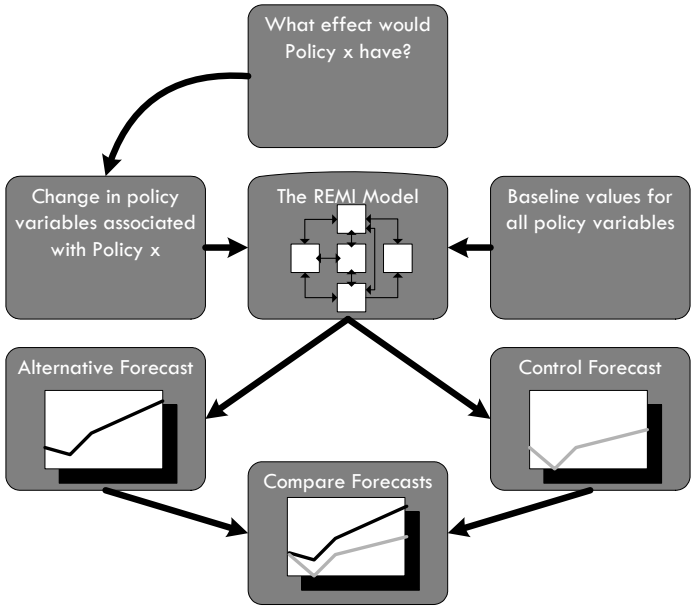
The REMI model brings together all of the above elements to determine the value of each of the variables in the model for each year in the baseline forecast as well as for simulation purposes. The model includes all the inter-industry interactions that are included in input-output models in the Output block, but goes well beyond an input-output model by including the linkages among all of the other blocks shown in Figure 2.

In order to broaden the model in this way, it is necessary to estimate key relationships. This is accomplished by using extensive data sets covering all counties in the United States. These large data sets and two decades of research effort enable REMI to simultaneously maintain a theoretically sound model structure and build a model based on all the relevant data available.

The model has strong dynamic properties, which means that it forecasts not only what *will* happen but also *when* it will happen. This results in long-term predictions that have year-by-year change. This means that the long-term properties of general equilibrium models are preserved while maintaining accurate annual predictions and using estimates of key equations from primary data sources.

Figure 3 shows the policy simulation process for a scenario called Policy X. The effects of a scenario are determined by comparing the baseline REMI forecast with an alternative forecast that incorporates the assumptions for the scenario. The baseline REMI forecast uses recent data and thousands of equations to generate projected economic activity for a particular region. The policy variables in the model are set equal to their baseline value (typically zero for additive variables and one for multiplicative variables) when solving for the baseline forecast. To show the effects of a given scenario, these policy variables are given values that represent the direct effects of the scenario. The alternative forecast is generated using these policy variable inputs. Figure 3 shows how this process would work for a policy change called Policy X.

Figure 3 Policy X scenario



The model structure has been developed to include "new economic geography" assumptions. Economic geography theory explains regional and urban economies in terms of competing factors of dispersion and agglomeration. Producers and consumers are assumed to benefit from access to variety, which tends to concentrate production and the location of households. However, land is a finite resource, and high land prices and congestion tend to disperse economic activity. The inclusion of the "new economic geography" allows for the integration of multi-regional models with inter-active regional trade and commuter flows. Therefore, the "new economic geography" enables REMI to create the multi-region model for this analysis.

County Profiles – Baseline Forecast

This forecast represents the no-build or no expansion scenario for the Fort Riley region over the next twenty years based on the economic and demographic forecast prepared with REMI.

Employment

The Employment variable in the REMI baseline forecast uses historical data from the Bureau of Economic Analysis (BEA). This variable is based on place of work and includes part-time employees, full-time employees, and the self-employed. The model counts full-time and part-time jobs at equal weight. The county employment estimates are a count of the number of jobs, so that, as with the earnings estimates, a worker's activity in each industry and location of employment is reflected in the measure.

Figure 4 Total Employment in All Counties

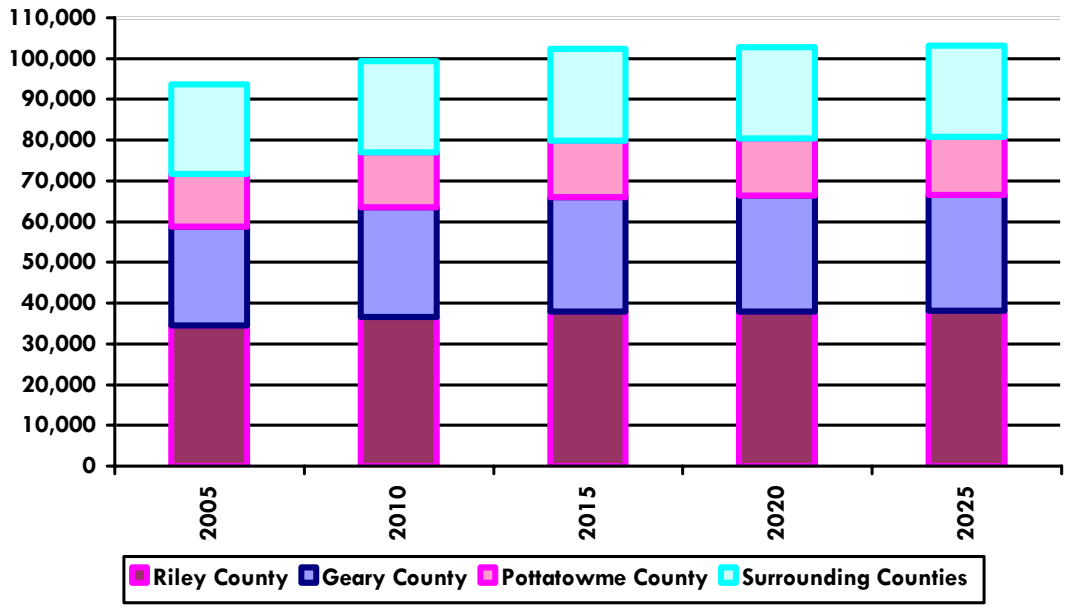


Table 2 Employment by Industry Sector for All Countiesis a disaggregated look at employment by industry sector. The data in Table 2 is based on BEA estimates. The time series shows the number of employees by the North American Industrial Classification System (NAICS) sectors in annual intervals over the 20-year forecast period, as indicated in Table 2. Table 2 Employment by Industry Sector for All Counties

The forecast suggests a shift in employment in retail trade, whole sale trade, and manufacturing to more service based industries. This shift is consistent with national trends. Key employment growth sectors include: Construction, Transportation Warehousing, Professional Tech Services, Health Care/Social Assistance, and Public Administration.

Table 2 Employment by Industry Sector for All Counties

Industry	2005	2010	2015	2020	2025
Forestry, Fishing, Other	440	424	407	386	363
Mining	301	278	257	234	214
Utilities	287	274	265	252	238
Construction	4,102	4,206	4,479	4,609	4,663
Manufacturing	4,330	4,339	4,279	4,277	4,282
Wholesale Trade	1,933	1,905	1,814	1,702	1,603
Retail Trade	9,795	10,253	10,026	9,384	8,730
Transp, Warehousing	2,849	3,047	3,210	3,351	3,504
Information	1,177	1,122	1,093	1,084	1,095
Finance, Insurance	3,235	3,338	3,394	3,392	3,401
Real Estate, Rental, Leasing	2,332	2,476	2,540	2,521	2,489
Profess, Tech Services	2,501	2,599	2,685	2,720	2,774
Mngmt of Co, Enter	460	464	454	443	434
Admin, Waste Services	2,632	2,828	3,003	3,075	3,140
Educational Services	1,121	1,242	1,359	1,442	1,512
Health Care, Social Asst	7,478	8,515	9,689	10,956	12,317
Arts, Enter, Rec	1,144	1,240	1,286	1,278	1,262
Accom, Food Services	5,388	5,732	5,764	5,495	5,183
Other Services (excl Gov)	5,362	5,690	5,767	5,562	5,322
State And Local Gov	18,980	20,395	21,369	21,654	21,808
Federal Civilian	2,912	2,937	2,939	2,862	2,775
Federal Military	10,233	11,710	12,270	12,493	12,599

Output

The output of an economy is the amount of production in dollars, including all intermediate goods purchased as well as value added (labor, capital, fuel investments, and profits). We can also think of output as sales for both final goods and intermediate goods. Output depends on consumption in the area of government spending, investment, and exports of the industries in the region.

In 2005 the combined region produces $3.795 billion worth of goods and services. Over the twenty-year forecast period, output shows a steady growth rate similar to GRP due to the fact that the two variables are directly linked through productivity. By 2025, the region is projected to produce $5.975 billion worth of goods as seen in Figure 5.

Figure 5. Total Output by County Millions of Dollars $

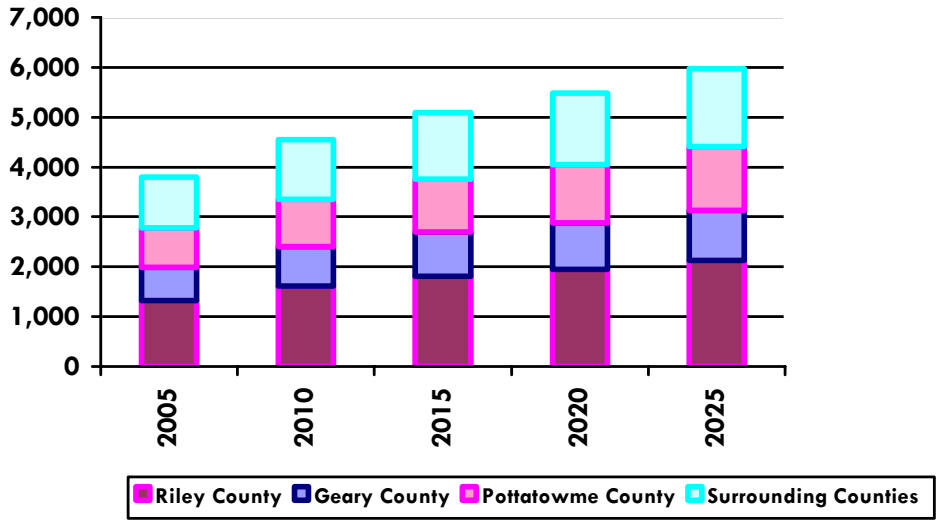
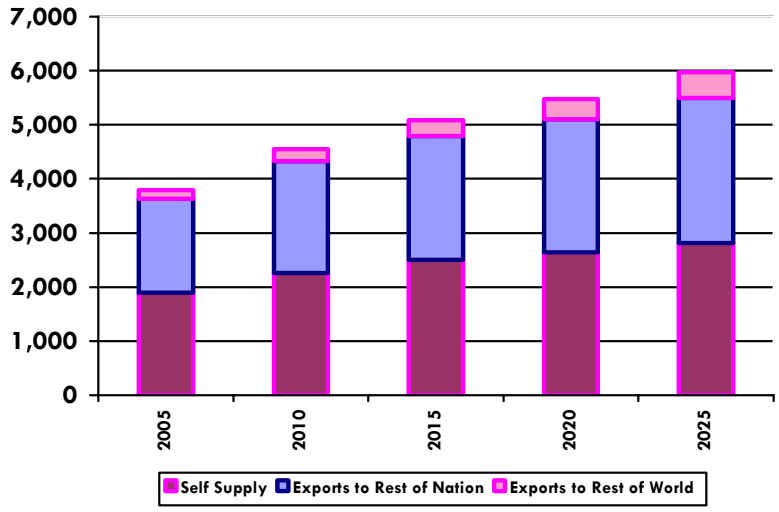


Figure 6 is a breakdown of output by demand source, and helps us to understand the economic drivers. More than half of the output produced in the region is exported to satisfy demand from the rest of the nation, or put another way, half of the output produced in the local region is exported to the rest of the United States. The other half of total output is sold locally with a small amount of output being exported to the rest of the world.

Figure 6 Output by Demand Source in All Counties (Millions$)



Gross Regional Product

Gross Regional Product (GRP) as a value-added concept is analogous to the national concept of gross domestic product. The components of GRP are spending by government, investment within the region by firms and individuals, consumption by individuals, the combined effects of trade, and the change in business inventories (CBI). GRP is equal to output excluding intermediate input; as a result, GRP is most often a lower figure than output. The value-added concept is equal to compensation and profits. Shown in Figure 7, GRP has a growth rate similar to output, albeit at a smaller magnitude.

Figure 7 Total GRP in by County (Millions $)

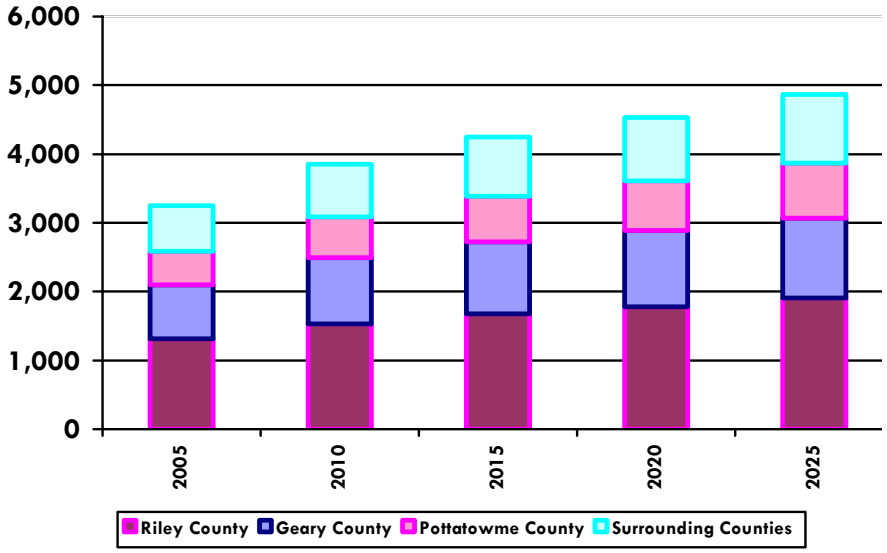
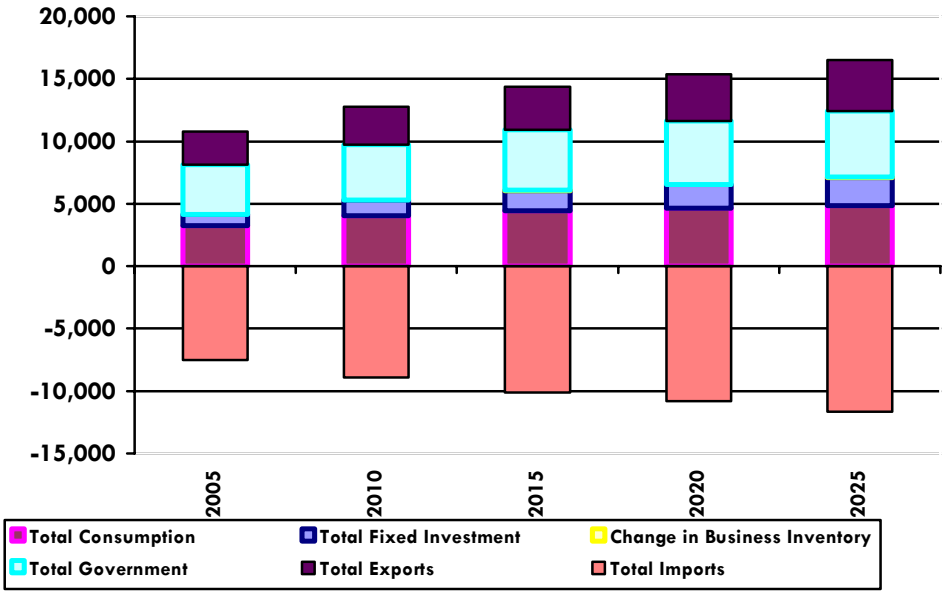


Figure 8 is a breakdown of GRP by final demand. It specifies how much GRP was generated by government spending, investment by firms and individuals in the regions, consumption by individuals in the region, change in business inventories, and trade. Figure 8 implies that there is a significant trade deficit for the region as imports significantly outweigh exports. Imports themselves are not negative, but they represent a leakage of economic activity and therefore are considered negative. However, you will notice that total government and total consumption make-up the difference, resulting in an overall positive GRP.

Figure 8 GRP by Final Demand (Millions $)

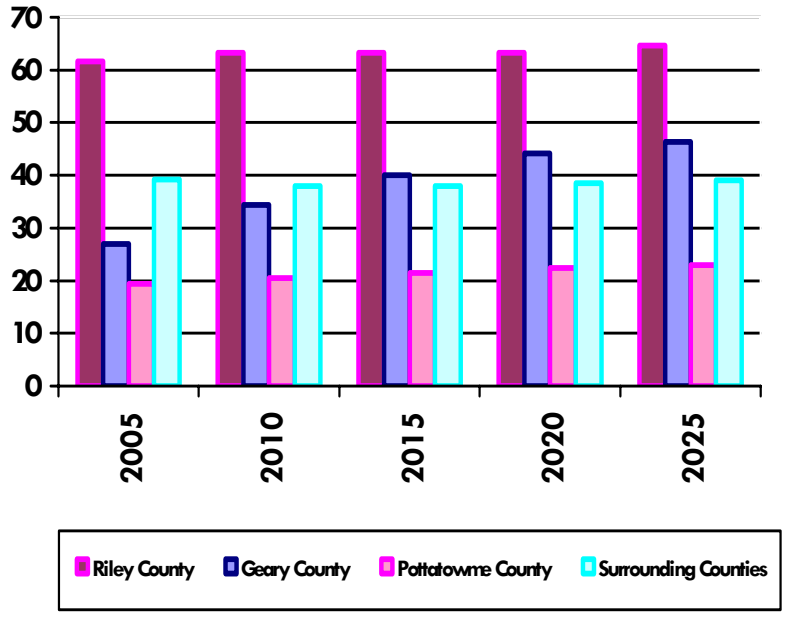


Population

Population is a key variable in REMI Policy Insight that affects the potential labor force, government spending, consumption spending, and housing prices. The population and labor-force estimates in the REMI model include detailed demographic information about the region. The changes in population are due to changes in migration, birth rates, international migration, and retired migration which is the result of economic growth. The size and labor-force participation rate of each group determines the labor supply. These participation rates respond to changes in employment relative to the potential labor force and to changes in the real after-tax wage rate. Migration includes retirement, military, international, and economic migration. Economic migration is determined by the relative real after-tax wage rate, relative employment opportunities, and greater access to a wide variety of consumer goods. Population then affects the potential labor force, government spending, consumption spending, and housing prices. Changes in population are due to changes in migration, which is the result of economic growth.

Since Policy Insight uses the Census Bureau as a primary source for demographic history, the population forecast required some adjustment and calibration. The 2000 Census projections indicated a decreasing population for the City of Manhattan, as well as Riley County. Using a demographic dataset[4] obtained from Wichita State University Center for Economic Development and Business Research, REMI was able to calibrate the total population estimates correcting for the Census Bureau's declining population forecast[5]. This population growth is consistent with the state of Kansas' demographic growth patterns.

Figure 9 Population by County (in Thousands)

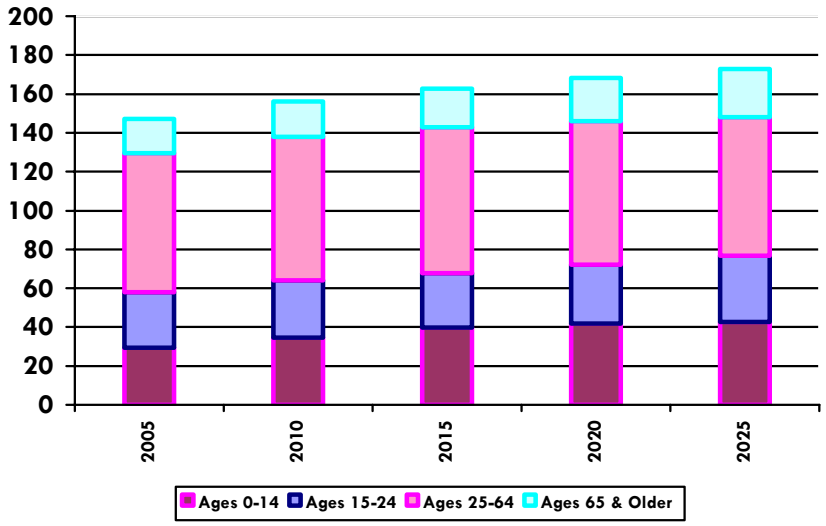


[4] Woods and Pool Economics, Inc.

[5] See "Baseline Assumptions" for population forecast calibration

Figure 10 shows that the 25 to 64 age cohort makes up 49% of the total population. Ages 0 – 14 remain fairly consistent through out the forecast; the consistent birth rate contributes to the cohort's slow growth. The average rate of growth from 2005 to 2025 is 0.88%. The 15 to 24 cohort also remains fairly consistent over the twenty-year period. The retired population, ages 65 and older, remains the smallest cohort through all years of the forecast, which reflects the area's young labor force.

Figure 10 Population by age distribution (Thousands)

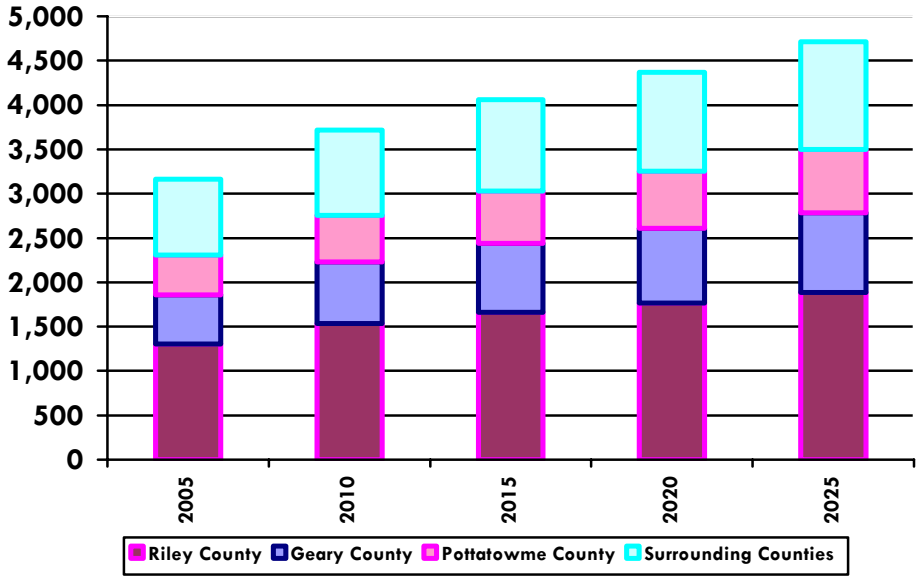


Disposable Income

Real disposable income is the inflation-adjusted income that is available for consumers to spend. It equals personal income, minus taxes and social security contributions, plus dividends, rents, and transfer payments. The numbers of employees in the area, their wage rate, and the consumer prices all affect real disposable income. An increase in employment or wages or a decrease in consumers' prices increase a region's real disposable income. Consequently, decreasing employment or increasing consumer prices has the opposite effect, decreasing real disposable income.

As indicated in Figure 11, disposable income increases as the economic base of the region expands. Total job growth and demand for output sales result in an increase in personal income. In 2005 disposable income totals $3.165 billion and increases to $4.709 billion by 2025.

Figure 11 Disposable Income County (Millions $)



Background

Currently Fort Riley is home to 10,060 troops of the 24th Infantry Division: Mechanized; US Army Garrison (USAG): Fort Riley; 1st Brigade, 1st Infantry Division Mechanized; 3rd Brigade 1st Armored Division; 3rd Brigade, 75th Division: training support; Irwin Army Community Hospital; and US Army Dental Activity. Military dependents total 12,518. Physically, Fort Riley overlaps county lines between Riley and Geary County. Although the majority of Fort Riley's land-mass is located in Riley County, the majority of the operations and significant portion of housing is within Geary County. By facility Geary County includes Camp Forsyth, Forsyth Family Housing, Main Post, MUSAAF, and Camp Whitside. Riley County contains the Custer Hill Troop Area, Custer Hill Family Housing, and Camp Funston.

Including retirees, family members, and civilian employees Fort Riley currently has 47,972 individuals in the area related to military operations. In terms of payroll Fort Riley contributes over $706 million in military pay, civilian pay, and transfer-payments to retirees. On post military housing currently has 7,639 units of which there are 398 officer quarters, 2,654 enlisted housing units, 47 bachelor officer and senior enlisted quarters, and barracks rated adequate for 4,540. It is estimated that approximately 7,236 military personnel and dependents are living within the local communities off-post. It is also estimated that 40% of the military personnel that are living off-post reside in Junction City, while another 25% reside in Manhattan, and the rest are distributed between Pottawatomie and surrounding counties.

The seven county region in this study is not only home to Fort Riley, but also Kansas State University. Located in Manhattan, Kansas KSU has an estimated enrollment of 23,000 students for the 2005-2006 school year. This adds to the uniqueness of the region, as there are fewer than 17 other communities in the United States that have both a military installation and a university.

Assumptions

For this project, REMI and RKG Associates not only examined the economic implications of installation expansion at Fort Riley, but also calibrated the baseline forecast to better reflect current conditions within the seven-county area. To focus on sensitivity and the range of possible impacts two direct military personnel assumptions were made: 14,041 personnel for the high-scenario 1, and 9,700 personnel for the low-scenario 2 . For this analysis the following assumptions were made for the REMI model:

Baseline

The first component of the REMI baseline forecast that required calibration was the population for Riley County. The 2000 Census projections indicated a decreasing population for the City of Manhattan, as well as Riley County. The factors contributing to the miscount were the college population counts, annexation of adjacent land and housing developments, and an undercount of group quarters. Using a demographic Woods and Pool Economics dataset obtained from Wichita State University Center for Economic Development and Business Research, REMI was able to calibrate the total population estimates, adjusting for the Census Bureau's declining population projections. Following the population forecast REMI re-estimated the military dependent ratios for both Riley and Geary Counties, as the existing ratios were based off of 2000 Census information and the "Selected Manpower Statistics" published by the United States Department of Defense. The Fort Riley Administration provided the "Fort Riley, Kansas: Economic Impact Summary" studies dated 1-Oct 2002 to 30-Sep 2003, 1-Oct 2003 to 30-Sep 2004, and a draft copy of the 1-Oct 2004 to 30-Sep 2005. These publications allowed REMI to re-estimate the average annual wage-rate and total military wage and salary disbursements for the history years, as the projections in the REMI model were significantly higher.

Scenario Impact Analysis and Timeline

The timeline for both scenarios were identical in order to maintain consistency between results. The first third of the expected troops will begin arriving at Fort Riley in Mid-2006. By 2007 one-half of expected troops will have arrived. By 2008 75% of the new troops will be on base, and the total BRAC and "Big Red One" realignments to Fort Riley will be complete by 2009. Federal data sources split all operations and the majority of on-post housing into Geary County. All operations and employment were modeled in Geary County for consistency, adjustments for wages and housing allowance were made as Fort Riley overlaps the county lines of Geary and Riley counties[6].

Civilian contractors follow the same phase-in schedule as the military personnel. The total number of jobs were supplied by the Fort Riley Administration. A breakdown of civilian contractor job-types by NAICS[7] category was not available. To estimate the civilian contractors by NAICS category REMI used the Input-Output table developed by Bureau of Labor Statistics. For both scenarios the expected number of civilian contractor jobs is 1,988. On-post renovation of existing barracks began in 2005, reducing the residential capital stock by $200 million and therefore reducing

[6] See Background, Fort Riley

[7] North American Industrial Classification System, See REMI Policy Insight

on-post housing by 10%. By 2009 the $800 Million barrack renovation will be complete. However, as these new barracks are constructed incorporating a living adjustment, the overall on-post housing will be reduced by 200 units.

The total number of troops for the high scenario 1 is 14,041, whereas the low scenario 2 expects 9,700 troops. Each of the subsequent assumptions on housing allowances, wages, and dependents will represent these implicit differences carrying over into the secondary-effects. The Fort Riley Administration supplied information on Rank Distribution for all troops moving into the area for the 14,041 scenario. Since previous estimates indicated a total of 9,700 new military to the area, REMI created these as the high and low scenarios. Therefore we determined rank distribution of the 9,700 new military jobs based on the dataset supplied for the 14,041 scenario military personnel. Finally, all new military to the region are expected to live off-post.

Using the Rank Distribution and the Military Basic Allowance for Housing (BAH) Publication[8] from the Department of Defense, REMI calculated the aggregate off –post military housing allowances. This allowance was factored in as an increase to the military wage bill. In REMI Policy Insight the wage bill takes into account total wage and salary disbursements by industry type. This variable also takes into account that employees and personnel may have different wage rates than in the REMI calculated average wages, allowing the user to adjust wages appropriately. This increase in the wage-bill was then re-allocated into consumer spending for housing, overriding the model's default consumer spending assumption. The BAH was then allocated by county based on current off-post Armed Forces information supplied by the City of Manhattan Community Development, Junction City Manager's Office, and the Census Bureau.

A number of sources were available for comparing and refining military wage rate assumptions. First the new military personnel distribution was applied to the "Monthly Basic Pay Table"[9] publication from the Department of Defense. The comparison of these estimates with existing military payroll at Fort Riley indicated that Fort Riley's personnel have a higher wage rate. The wage time series from the "Fort Riley, Kansas: Economic Impact Summary" studies were then used as a base, and wage growth rates were based on the military wage growth rates incorporated in the REMI Model. Military wages were redistributed by place of residence using the same method as the BAH. Table 3 indicates different inputs for each scenario.

Table 3 Direct Inputs, 2009 – First year after complete phase in

Assumptions Table / Direct Inputs	Scenario 1	Scenario 2
Total Troops	14,041	9,700
Civilian Workforce	1,988	1,988
Housing allowances (Mil$)	$ 13.168	$ 9.097
Total Military Wage & Salary Disbursements (Mil$)	$ 587.227	$ 405.676

[8] Department of Defense "Per Diem, Travel, and Transportation Allowance Committee"; https://secureapp2.hqda.pentagon.mil/perdiem/bah.html

[9] Effective January 1, 2006; http://www.defenselink.mil/militarypay/pay/bp/paytables/Jan2006_Basic_Pay.html

Results and Key Implications

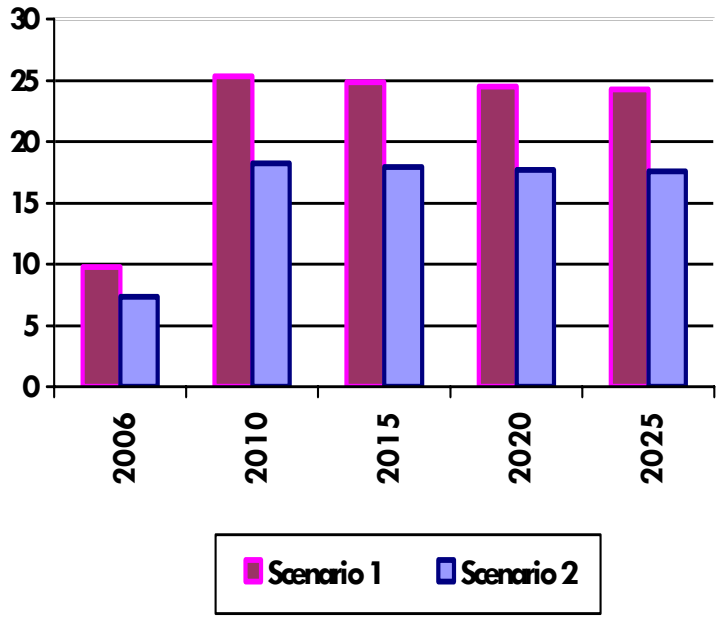
The purpose of this analysis is to present a range of impacts associated with expansion at Fort Riley in order to assist the local governments in the planning process. The influx of 9,700 to 14,041 military personnel and the addition of civilian contractors to the seven county region will affect local housing, consumer demand, the labor force, and employment. The impacts described in this section includes the total economic impacts is defined as direct, intermediate, and induced.

	Type	Direct Military Employment
Scenario 1	High	14,041
Scenario 2	Low	9,700

The direct impacts include the military and civilian jobs along with their wages, and represent basically the primary impact to the region. The secondary effects or spill-over effects are split into two categories: the intermediate and induced. The intermediate impacts represent the jobs necessary to satisfy the additional demand for goods and services that are used in final good production. For example, if an auto-manufacturer were to increase production to build more cars, the intermediate demand would represent additional demand for automotive parts from suppliers such as transmissions and tires. Whereas the induced impacts represent the new consumer expenditures from increased income within the region. As indicated earlier, the major portions of the secondary impacts under both scenarios are induced related impacts.

The total direct jobs for 2010, military personnel and civilian contractors, will range between 11,688 and 16,029. Figure 12 shows the total job change for Riley and Geary Counties combined. This represents the increase over the baseline, or delta.

Figure 12 Total Employment in thousands, difference from baseline



The remaining 6,542 to 9,301 jobs represent the intermediate and induced jobs within the region. The induced jobs represent the largest portion as they range between 3,152 and 4,449. The key industries experiencing this growth are the retail and wholesale trade sectors, followed by the food services and accommodation industries.

Figure 13 Scenario 1: % Change in Employment for Riley and Geary Counties, 2010

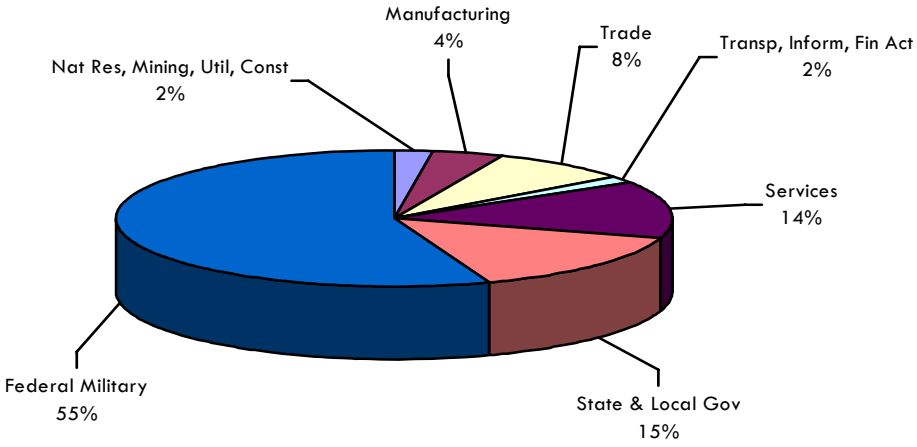


Figure 13 above represents the increase in employment by industry sector. Federal military employment is the largest share, as it is the direct impact, followed by state and local government employment which is a result of in migration to the area. The trade and service sectors are the next largest shares to the area, and are driven by an increase in personal income expenditures. When scenario 1 was compared to scenario 2, the percentage difference for the manufacturing sector and government was about 2%. This percentage difference for government services between scenarios is due to the range in population estimates. The manufacturing sector growth is based on the magnitude of exogenous military demand for manufacturing services, which is the same between both scenarios, therefore augmenting the portions.

For this analysis the major intermediate industries estimated supplying Fort Riley are the transportation equipment manufacturing, professional technical services, and computer electronic product manufacturing. Although these intermediate industries create economic activity, they only represent between 2,369 and 2,457 new jobs in 2010. As consumer spending increases between $578 and $782 million due to the increased personal income in the region, increased consumption will create well over 3,152 to 4,449 jobs within the local region.

The population and labor force expand through-out the phase-in period due to the in-migration of military personnel, civilian contractors, and their dependents. The secondary demographic impacts are a result of the increased employment opportunities and therefore stimulates in-migration to the area. The direct military population contribution is the net new military personnel, which ranges

between 9,700 and 14,041. The projected military dependents moving to the regions are between 16,400 and 23,730.

Figure 14 Population Change in thousands

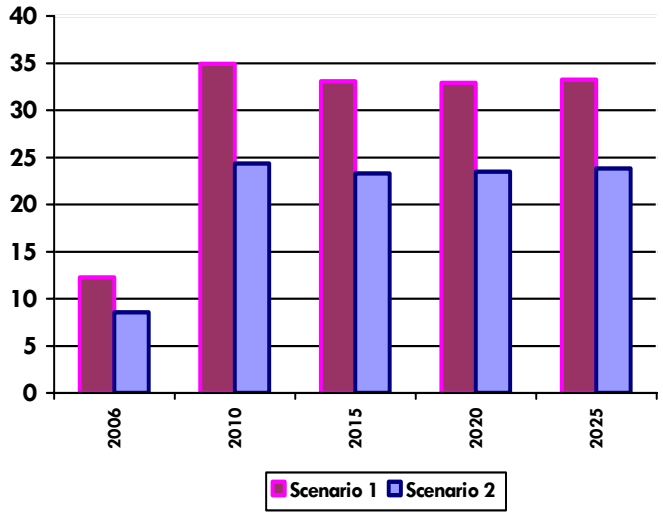
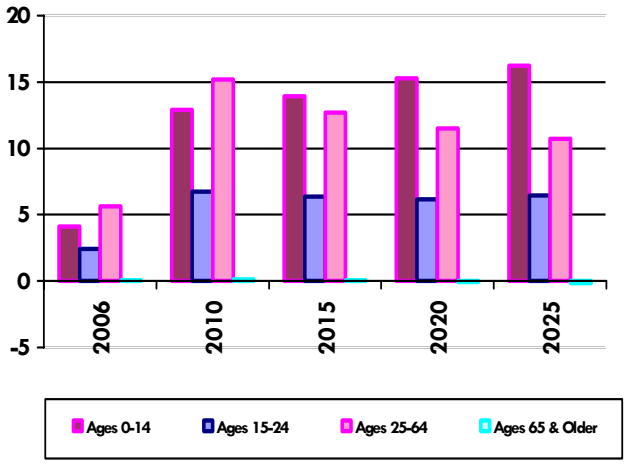


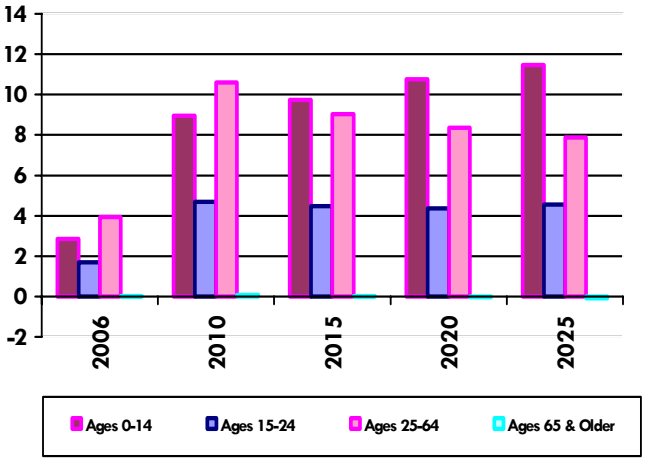
Figure 15 Scenario 1 Population Distribution Change, In thousands



As indicated in the age distribution analysis of the population moving in, the most prominent group are school age children followed by the workforce ages. Therefore the region would expect a significant increase in school enrollment and the labor supply. As the age distribution illustrates (Figure 15 and 16) the change in school age children will increase by approximately 8,960 to 12,880 in 2010. The local school capacity must therefore must be able to accommodate the influx of additional school enrollment. The analysis in this current form does not include additional local expenditures for school expansion or investment. Additionally, if other forms of capital investment are necessary and taxes were raised, the region would experience a lesser degree of economic

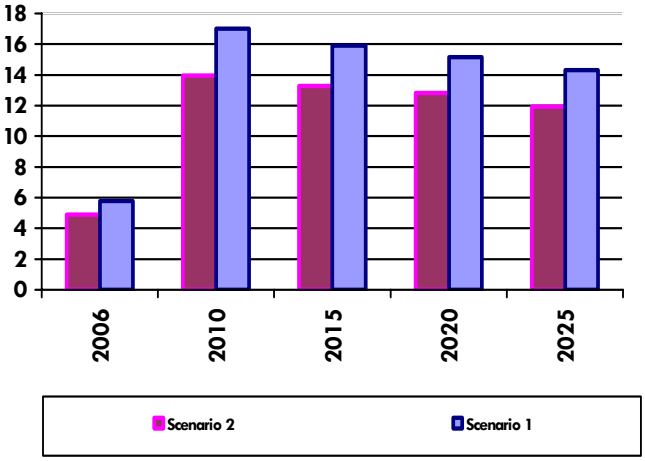
migration. Following the end of the exogenous economic stimulus in 2010 we see the population begin to decline into equilibrium because of out-migration and other economic indicators.

Figure 16 Scenario 2 Population Distribution Change, In thousands



As the population phase-in occurs between 2006 and 2009 the demand for housing will increase significantly as the new military personnel and civilian contractors move into the local communities. The burden for housing demand will primarily rely on the local communities, which will stimulate both the construction industries and possibly increase housing costs in the region. Based upon the expected population growth the REMI model estimates the necessary capital requirements for the region. For these scenarios the necessary capital requirements are estimated to be between $14 and $17 million in residential investment in order to house new military personnel, civilian contractors, dependents, and economic migrants to the area (see Figure 17). These estimates fit well within the construction and investment tolerances the Fort Riley Administration estimated, which was that local firms would not be able to absorb more that $375 million in investment per- year.

Figure 17 Residential Investment (Millions of $)



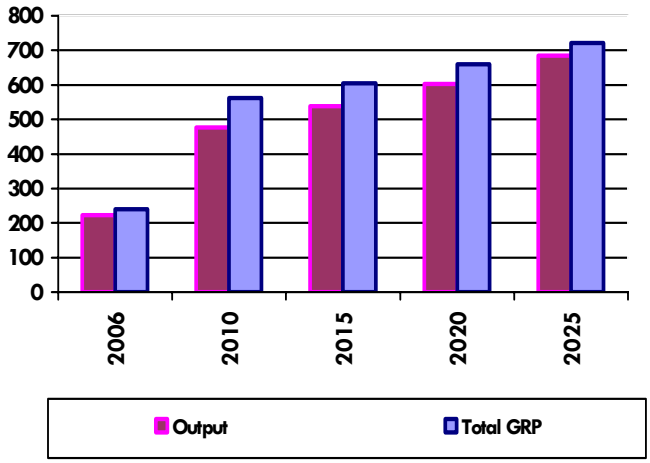
Through the increased investment in residential and non-residential structures the total demand for construction sales will increase between $54.9 and $86.4 million by 2010. The REMI model estimates local construction firms will capture between $21.4 and $32.4 million, or roughly 37%[10] of the total construction demand.

The most comprehensive measure of economic activity for this analysis is the Gross Regional Product (GRP) as it captures the total value added to the region. GRP equals output, minus intermediate inputs, and therefore represents profits and labor income. This is a crucial measurement since GRP represents the economic growth and inherently includes the impacts of new business, income, and consumption reported in dollar terms. The uniqueness of the seven county region is represented in the baseline GRP totals since the total GRP exceeds the total industrial output. The consumer spending from both military personnel and college students have created economic conditions within the region that are often associated with a strong tourism industry. The expansion of Fort Riley will add to this strong economic base and by 2010 Riley and Geary counties can expect between $560 and $741 million dollars in additional economic activity to the region, bringing the total GRP for the region to over $3 Billion.

Table 4 Results Riley and Geary counties (all dollar concepts in Millions of $)

2010	Baseline (w/o Project)	High Scenario 1	Differences Scenario 1	Low Scenario 2	Differences Scenario 2
Employment	63,554	88,886	25,330	81,781	18,230
Output	$ 2,411	$ 2,981	$ 571	$ 2,887	$ 477
GRP	$ 2,496	$ 3,238	$ 741	$ 3,058	$ 562
Population	97,633	132,547	34,910	121,990	24,360
Disposable Income	$ 2,231	$ 2,961	$ 730	$ 2,751	$ 520

Figure 18 GRP and Output Comparison Riley and Geary counties Scenario 2, Millions of $



The key implications identified in this analysis should provide a framework for the planning process and the identification of major impacts. Dealing with the in migration of up to 34,910 people into the

[10] These construction estimates include barrack renovation, local residential, and local non-residential construction demand

region by 2010 will potentially create a burden on local schools as the school age cohorts entering the region is the largest by far, followed by the work age cohorts. It is anticipated that this growth will increases expenditures on local infrastructure by local governments to handle additional housing development, infrastructure, and possible school expansions. The major requirements on private industry will be the construction labor force and the retail industries to meet new demand.