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The Economic Impact of Fort Bliss and William Beaumont Army Medical Center in El Paso County, Texas: 2013

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THE GREATER EL PASO CHAMBER OF COMMERCE SINCE 1899

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The Economic Impact of Fort Bliss

and

William Beaumont Army Medical Center (WBAMC)

in

El Paso County, Texas

Summary Sheet

(All dollar figures are in 2013 $)

Fort Bliss

- Output $ 5,086 mil.
- Employment 55,113
- Compensation $ 3,680 mil.

WBAMC

- Output $ 912 mil.
- Employment 6,844
- Compensation $ 489 mil.

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Fort Bliss and WBAMC Combined

- Output $ 5,998 mil.
- Employment 61,957
- Compensation $ 4,168 mil.

Average Construction Impacts, 2011-2013

- Output $ 112 mil.
- Employment 833
- Compensation $ 33 mil

Notes:

The impact figures include Direct + Multiplier (Indirect and Induced) effects.

The Output effects are also termed Business Volume impacts.

The Output and Compensation impacts cannot be summed. Compensation is a component of the Output figure.

Introduction

The Institute for Policy and Economic Development (IPED) at the University of Texas at El Paso (UTEP) has undertaken an economic impact study on behalf of the Greater El Paso Chamber of Commerce. The purpose of this study is to quantify the economic impacts of Fort Bliss and the William Beaumont Army Medical Center (WBAMC) in the County of El Paso, Texas. Specifically, this report estimates the effects that Fort Bliss and WBAMC operations have on output, employment, and labor income within the county as of 2013. In addition, the economic impact of construction activities over the 2011-2013 period is calculated.

Fort Bliss has a rich history and tradition in El Paso and has been a significant contributor to the local economy for over 160 years. Fort Bliss is the second-largest installation in the U.S. Army and, since 2005, has been undergoing a significant transformation based on the recommendations made by the Base Closure and Realignment Commission (BRAC). Essentially, this transformation re-stations several brigade combat teams, the 1st Armored Division headquarters, as well as numerous supporting units, into the Fort Bliss post. Accordingly, the Army has been investing a significant amount of money in construction for new facilities to accommodate incoming soldiers and their families. Therefore, it is important to regularly examine the effects that both Fort Bliss and the William Beaumont Army Medical Center have on the local economy.

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Methodology

To estimate the economic impact of Fort Bliss and William Beaumont Army Medical Center activities on El Paso County, a modeling technique known as Input-Output (I-O) analysis is utilized. I-O analysis illustrates how industries and institutions are linked by the intermediate inputs they provide one another to produce the final output in a given economy. For example, in order to produce a good or provide a service, an industry or institution requires materials, products and services from other supplier industries or institutions. Similarly, these supplier industries require materials, products and services to produce the intermediate inputs that will be used for the provision of the final product or service. Essentially, an I-O model captures all rounds of inter-industry/institutional relationships that make up the production

processes of industries in a given economy. Therefore, an I-O model can be used to estimate the regional effects of a particular change or shock to that region's economy.

Inter-industry/institutional relationships and their overall economic effects on a region are measured using ***multipliers***. ***Multipliers*** estimate the total change in an economy resulting from a one unit change in production, employment, income, or some other component of value added. For example, an employment multiplier of 2.1 suggests that for every one job created by a given industry, an additional 1.1 jobs will be generated within the region. However, it is important to note that different industries or sectors will vary in multiplier size. For instance, industries exhibiting higher levels of interdependence with other industries within a given economy will typically be characterized by larger multipliers. Thus, industries relying less heavily on imports will generally have larger multipliers relative to those requiring commodities and services produced outside the given economy.[1] Consequently, larger regions will often have larger multipliers than smaller regions.

There are several I-O commercial software packages available, each of which provides its own unique regionalized multipliers. The model chosen for this study is the ***IMPLAN*** or ***IM***pact analysis for ***PLAN***ing system.[2] Similar to traditional regional economic modeling techniques, IMPLAN employs a top-down approach, using national data as a control total for state data, and state data, in turn is used as a control total for county data. In addition of being flexible and relatively easy to modify, IMPLAN explicitly breaks out impacts into three types of effects measured by its multipliers, making this an attractive I-O software package.[3] The three types of effects measured by the IMPLAN multipliers used in this report include the ***direct***, the ***indirect***, and the ***induced*** effects.

The ***direct*** effect refers to the initial change in demand resulting from new or current expenditures or current employment levels. This effect is the impact that is actually applied to the predictive model for analysis. I-O multipliers are then used to generate changes in other regional economic sectors given the expenditure or employment value of interest. Examples of a direct effect include decreases in operational expenditures due to budget cuts, increases in hospital employment levels, and the amount of future construction expenditures.

Indirect effects represent all changes in regional industry activity, such as increases or decreases in production and employment that result from the direct effect. For example, increases in construction expenditures for non-residential structures will result in increased sales of steel, concrete, windows, and

[1] Miernyk, W. H. (1965). *Elements of Input-Output Analysis.* New York: Random House.

[2] IMPLAN Professional©, Version 3.0. (1993). *Minnesota IMPLAN Group, Inc.*

[3] Rickman, D. S., & Schwer, K. (Fall 1993). A Systematic Comparison of the REMI and IMPLAN Models: The Case of Southern Nevada. *The Review of Regional Studies* , 148-149.

other necessary materials and equipment from supplier industries within the region. This increased supplier industry activity is captured by the indirect economic impact.

Finally, the ***induced*** effect measures the impact of household spending within a region due to changes in labor income, or compensation received by business proprietors and workers for both the directly and indirectly impacted regional industries. Continuing with our previous example, increases in construction expenditures and supplier industry output generate increases in labor income to support this additional construction and supplier industry activity. Households then spend a portion of this income on various goods and services produced within the economy, further increasing regional sales, employment, and income for other local economic sectors. The sum of these three effects represents the total impact of the new or current expenditure value or employment level of interest.

IMPLAN provides information and impact results for three key regional economic variables: ***output, employment, and labor income***. Accordingly, economic impact values in these three categories are estimated for Fort Bliss and WBAMC operations as of 2013. In addition the impacts of construction projects at Fort Bliss and WBAMC are determined for the 2011, 2012 and projected 2013 periods. Three years are presented, along with three-year averages, given the volatile nature of construction expenditures on a year by year basis. Each of the impact categories is defined below:

1. ***Output –*** represents the total value of industry production or the value of all goods and services produced within the local economy.[4] Output is an overall measure of economic activity and it is the sum of income paid to all factors of production as well as all inter-industry purchases. The Output impact is sometimes termed the Business Volume effect.

2. ***Employment –*** represents the average annual jobs within a sector. Data provided by Fort Bliss and WBAMC and consequent multiplier impacts are calculated on a full-time employment equivalent basis.

3. ***Labor Income –*** represents the sum of compensation paid to workers as well as business proprietors. This value includes employer paid benefits and payroll taxes, in addition to wages and salaries.[5] Note that when interpreting the results of this study, labor income and output should not be summed, as labor income is a component of output.

[4] Minnesota IMPLAN Group, Inc. *Glossary.* Retrieved April 17, 2010, from IMPLAN.com Economic Impact Modeling Solutions: http://implan.com/v3/index.php?option=com_glossary&Itemid=164

[5] Minnesota IMPLAN Group, Inc. *Glossary.* Retrieved April 17, 2010, from IMPLAN.com Economic Impact Modeling Solutions: http://implan.com/v3/index.php?option=com_glossary&Itemid=164.

The subsequent section reviews the data provided by the many units at Fort Bliss and WBAMC. These data detail the estimated expenditures and employment projections along with IPED calculations. All data are used to adjust the IMPLAN sectors corresponding to Fort Bliss and WBAMC activities.

Data

The IMPLAN model requires some basic information in order to estimate the total (direct + indirect + induced) impacts of military installations on output, employment, and labor income in El Paso County. Thus three types of data were employed: ***1) operational expenditures***, ***2) total employment*** (military and civilian employees), and ***3) total payroll*** (wages and salaries plus employer paid benefits). Data was provided for the following units and related activities at Fort Bliss and WBAMC:

1. First Armored Division
   a. 1 AD HHBN
   b. 1/1 Brigade Combat Team
   c. 2/1 Brigade Combat Team
   d. 3/1 Brigade Combat Team
   e. 4/1 Brigade Combat Team
   f. 212 Fires Brigade
   g. 15th Sustainment Brigade
   h. 1 AD Combat Aviation Brigade
2. Garrison Command
3. Brigade Modernization Command
4. William Beaumont Army Medical Center
5. US Sergeants Major Academy
6. Join Task Force - North
7. Directorate of Mobilization and Deployment
8. 402 Field Artillery Brigade
9. 5 Armored Brigade
10. 204 Military Intelligence Battalion
11. 31 Combat Support Hospital
12. 32 Army Air Missile Defense Command
13. 11 Air Missile Defense Brigade
14. 86 Expeditionary Signal Battalion
15. 96 Military Police Battalion
16. Network Enterprise Center
17. US Army Test and Evaluation Command (ATEC)
18. Temporary Duty/Reserve Personnel

Over 90 percent of operating expenditures originate from the First Armored Division (all assigned units), WBAMC, Garrison Command, and the 11th Air Defense Artillery Brigade. Approximately 90 percent of the installation's personnel are assigned to the First Armored Division (all assigned units), WBAMC, 11th Air Defense Artillery Brigade, 96 military Police Battalion, and the US Army Sergeants Major Academy. Values are for FY 2012 and, where appropriate, budgeted FY 2013. ATEC and Temporary Duty/Reserve Personnel data and consequent analysis generates Output and Compensation total (that is, Direct + Indirect + Induced) impacts. The Employment impact was based upon only Indirect + Induced effects given the transitory nature of the 32,083 individuals passing through the base annually. The structure and detail of the data provided by the installation allows impact estimates for Fort Bliss and WBAMC separately. A further breakdown into specific Fort Bliss units was not feasible given the accounting systems in place and time constraints.

Construction data was provided for FY 2011, 2012 and projected 2013.

Currently, Fort Bliss directly employs 37,028 individuals of which 28,679 are soldiers and 8,349 are civilian employees. Data provided indicates that soldiers receive annual average compensation of approximately $78,500 while civilians receive annual average compensation of $56,100; both figures including employer provided benefits. While **local** (that is, total less dollars expended outside of El Paso County) Operating expenditures are $88.8 million, total local expenditures including compensation are $3.098 billion. The local expenditure ratios are based upon Fort Bliss/WBAMC analysis along with IMPLAN expenditure coefficients. WBAMC directly employs 3,347 individuals of which 1,123 are military and 2,224 are civilians. Annual compensation to military and civilian employees is $176,300 and $77,200 respectively. Local operating budget expenditures are $526.7 million.

Overall, Fort Bliss and WBAMC employ 40,375 individuals and have a combined annual, local Operating Budget of over $3.625 billion. Table 1 presents the key dollar and employment figures.

Table 1. Summary Data

	Ft. Bliss	*WBAMC*	*TOTAL*
Expenditures	$88.8	$157.0	**$245.8**
Employment	37,028	3,347	**40,375**
Compensation	$3,009.6	$369.7	**$3,379.3**
Total Operating Budget	**$3,098.4**	**$526.7**	**$3,625.1**

Source: Department of the ARMY and UTEP - IPED Estimates.
Notes: All dollar amounts are reported in millions of 2012 dollars.
Employment includes Military and Civilian.

Construction activity in recent years has fallen relative to the extraordinary levels over the 2005 – 2009 period. Nevertheless, construction impacts on the local economy are strong. Table 2 reveals that local construction expenditures have ranged from $31.1 to over $121.4million annually.

Table 2. Construction Schedule

	2011	*2012*	*2013*
Golf Course Well	$0.1		
Family Housing	$31.0	$31.0	$55.0
Other Projects		$90.4	
Total Construction	**$31.1**	**$121.4**	**$55.0**

Source: Department of the ARMY.
Notes: All dollar amounts are reported in millions of 2012 dollars.

Economic Impacts

Impact of Fort Bliss Operations

The economic impact results of Fort Bliss operations are presented in Table 3. As noted, all dollar impact values, based upon FY 2012 in most cases, are adjusted to 2013 dollars. The $3.161 billion direct impact of local expenditures is multiplied into over $5.085 billion in Output or Business Volume in El Paso County. And Fort Bliss' local expenditures plus compensation to military and civilian employees generate 55,113 total jobs in the region and $3.680 billion in compensation to area residents.

Table 3. Fort Bliss Impacts on El Paso County

	Output	*Employment*	*Labor Income*
Direct Effects	$3,161,614,135	37,028	$3,070,776,360
Indirect Effects	$28,394,017	257	$10,954,338
Induced Effects	$1,895,698,267	17,828	$597,882,079
Total Effect	**$5,085,706,419**	**55,113**	**$3,679,612,777**

Source: UTEP Institute for Policy and Economic Development
Notes: All dollar amounts are reported in 2013 dollars.
Employment includes Military and Civilian.

Impact of WBAMC Operations

Table 4 provides the economic impact values on the local economy resulting from the WBAMC presence. The $537.8 million (the 2012 figure in Table 1 adjusted to 2013 dollars) is multiplied into $912.5 million per year in local Business Volume. And a total of 6,844 jobs with $488.6 million in compensation are generated in El Paso.

Table 4. WBAMC Impacts on El Paso County

	Output	*Employment*	*Labor Income*
Direct Effects	$537,834,977	3,347	$377,212,302
Indirect Effects	$122,045,096	1,121	$31,753,892
Induced Effects	$252,618,551	2,376	$79,676,692
Total Effect	**$912,498,624**	**6,844**	**$488,642,886**

Source: UTEP Institute for Policy and Economic Development
Note: All dollar amounts are reported in 2013 dollars.

Combined Impact of Fort Bliss and WBAMC

Table 5 combines the previous two tables and presents the overall economic impacts of Fort Bliss and WBAMC presence in El Paso. The results are very significant to the regional economy. **Business Volume or Output totals $5.998 billion annually. The total Employment impact is 61,957 jobs annually with $4.168 billion in Compensation or Labor Income to area households.**

Table 5. Fort Bliss & WBAMC Impacts on El Paso County

	Output	*Employment*	*Labor Income*
Direct Effects	$3,699,449,112	40,375	$3,447,988,662
Indirect Effects	$150,439,113	1,378	$42,708,230
Induced Effects	$2,148,316,818	20,204	$677,558,771
Total Effect	**$5,998,205,043**	**61,957**	**$4,168,255,663**

Source: UTEP Institute for Policy and Economic Development
Notes: All dollar amounts are reported in 2013 dollars.
Employment includes Military and Civilian.

Average Construction Impacts in El Paso County (2011-2013)

Table 2 presented Fort Bliss and WBAMC construction expenditures in the local economy for 2011, 2012, and that budgeted for 2013. Table 6 presents the three-year average impacts on Output, Employment, and Labor Income in the county. **Specifically, an average of $111.7 million in Output, $32.6 million in Labor or Household Income, and an incremental 833 Jobs have been generated in El Paso over each of the three years.**

Table 6. Average Construction Impacts on El Paso County (2011-2013)

	Output	*Employment*	*Labor Income*
Direct Effects	$72,126,611	466	$19,284,373
Indirect Effects	$21,969,336	201	$7,785,233
Induced Effects	$17,568,339	166	$5,544,028
Total Effect	**$111,664,285**	**833**	**$32,613,634**

Source: UTEP Institute for Policy and Economic Development
Note: All dollar amounts are reported in 2013 dollars.

The results presented above reveal the significant economic impacts of Fort Bliss, WBAMC and related Construction activities in El Paso County. Additional insights are presented below:[6]

- The Output or Business Volume generated (Direct + Multiplier impacts) by Fort Bliss, WBAMC, and Average Construction represents 12 percent of the estimated annual Output of Business Volume for El Paso County.

- The Civilian Employment generated by Fort Bliss et al represents 11 percent of Civilian Employment or Jobs in El Paso. Plus, there are an additional 29,802 military personnel earning income and spending a portion of it in the local economy.

- Compensation (recall: wages, salaries + benefits) generated by Fort Bliss et al represents 16 percent of regional compensation. The higher percentage (compared to above) results from the fact that military and civilian compensation levels at the installation are higher than that for overall El Paso. Specifically, average worker compensation in El Paso = $50,500 while the weighted average compensation (military + civilian) is $73,450 and $110,450 at Fort Bliss and WBAMC, respectively. That is, Fort Bliss compensation levels are 1.45 times or 45 percent higher than the county average. At WBAMC, average compensation is 2.18 times or 118 percent higher. In addition to this, the 32,000-plus individuals passing through the installation each year for TDY/Reserve/ATEC duties or training generate $490 in Business Volume and $349 million in Compensation.

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[6] Figures based upon the Bureau of Economic Analysis, Bureau of Labor Statistics, IMPLAN, Fort Bliss/WBAMC data and IPED calculations.