6-1-2006

Enrollment Forecasts for the El Paso Community College System and Component Campuses

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Enrollment Forecasts for the El Paso Community College System and Component Campuses

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Methodology

- Ordinary Least Squares (OLS) Regression
  - In addition to OLS, log variants, time series, and linear transfer function models were specified, but none produced the model fit or predictive accuracy of the OLS equations.
- All equations containing population and employment data were estimated during the forecast period using the most recent BRAC estimates.

BRAC Population and Employment

Population and Employment Baseline and BRAC Shock
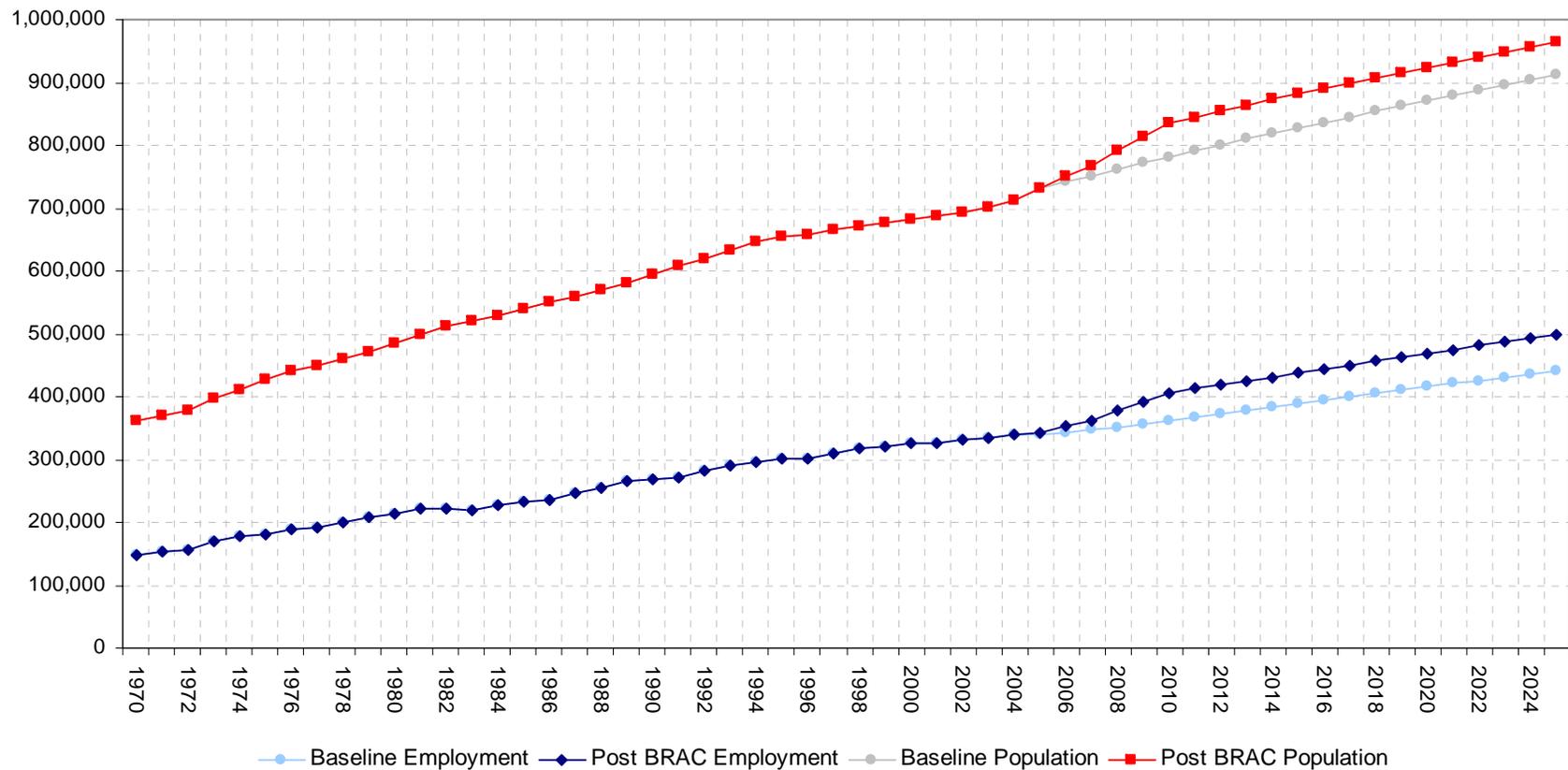
Legend: Baseline Employment · Post BRAC Employment · Baseline Population · Post BRAC Population

All Campuses Actual and Forecast Fall Headcount

| Year	Fall HC	Fall Est HC	Difference	Forecast	Growth Rate
1976	3,900	3,368	532	3,368	
1977	4,168	4,837	-669	4,837	43.64%
1978	4,912	5,129	-217	5,129	6.03%
1979	6,282	6,040	242	6,040	17.78%
1980	6,812	6,200	612	6,200	2.64%
1981	6,865	7,672	-807	7,672	23.73%
1982	7,879	8,584	-705	8,584	11.89%
1983	9,730	9,741	-11	9,741	13.49%
1984	10,766	10,646	120	10,646	9.29%
1985	11,221	11,309	-88	11,309	6.23%
1986	12,265	13,239	-974	13,239	17.07%
1987	15,216	14,534	682	14,534	9.78%
1988	15,523	15,554	-31	15,554	7.02%
1989	16,780	16,077	703	16,077	3.37%
1990	17,347	16,574	773	16,574	3.09%
1991	17,192	17,507	-315	17,507	5.63%
1992	18,690	17,936	754	17,936	2.45%
1993	19,074	18,268	806	18,268	1.85%
1994	20,625	18,389	2,236	18,389	0.66%
1995	20,162	19,897	265	19,897	8.20%
1996	19,710	21,022	-1,312	21,022	5.66%
1997	19,873	22,214	-2,341	22,214	5.67%
1998	19,184	18,744	440	18,744	-15.62%
1999	18,897	19,817	-920	19,817	5.73%
2000	18,001	19,873	-1,872	19,873	0.28%
2001	18,561	19,236	-675	19,236	-3.20%
2002	19,860	20,043	-183	20,043	4.19%
2003	23,016	20,639	2,377	20,639	2.98%
2004	24,740	24,162	578	24,162	17.07%
2005				24,914	3.11%
2006				25,809	3.59%
2007				27,354	5.99%
2008				29,284	7.06%
2009				31,237	6.67%
2010				33,613	7.61%
2011				35,096	4.41%
2012				36,569	4.20%
2013				37,308	2.02%
2014				40,220	7.80%
2015				43,501	8.16%
2016				46,945	7.92%
2017				50,249	7.04%
2018				53,717	6.90%
2019				55,899	4.06%
2020				57,854	3.50%
2021				59,668	3.13%
2022				61,125	2.44%

EPCC Fall Headcount (Actual and Forecast)
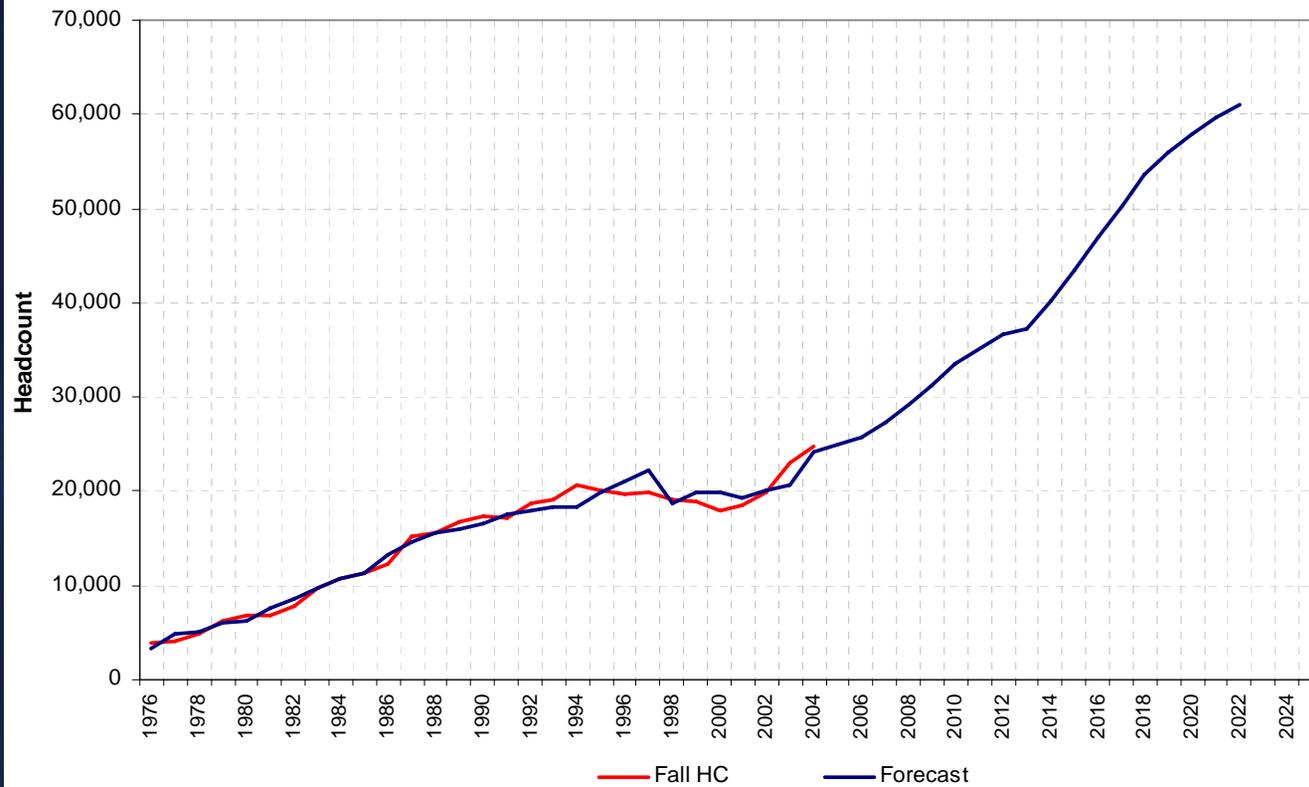
| Dependent Variable: FALLHC |
| Method: Least Squares |
| Date: 06/12/06   Time: 14:17 |
| Sample (adjusted): 1976 2002 |
| Included observations: 27 after adjustments |

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-50646.3	3504.179	-14.45311	0
A15TO19(2)	651.0313	70.49529	9.235103	0
A20TO24(-6)	600.9115	53.26543	11.28145	0
UTEPPRICE	5.213723	2.05475	2.537401	0.0188
EPCCPRICE	-12.72398	7.112734	-1.788902	0.0874
R-squared	0.976655	Mean dependent var		14055.37
Adjusted R-squared	0.972411	S.D. dependent var		5790.719
S.E. of regression	961.8391	Akaike info criterion		16.74115
Sum squared resid	20352958	Schwarz criterion		16.98112
Log likelihood	-221.0055	F-statistic		230.099
Durbin-Watson stat	1.720731	Prob(F-statistic)		0.0000

All Campuses Actual and Forecast Total Headcount

| Year	Total HC	Total Est HC	Difference	Forecast	Growth Rate
1976	5,375	5,417	-42	5,417	
1977	5,922	7,110	-1,188	7,110	31.26%
1978	7,525	6,960	565	6,960	-2.11%
1979	9,980	8,557	1,423	8,557	22.95%
1980	10,393	8,531	1,862	8,531	-0.31%
1981	10,570	10,993	-423	10,993	28.86%
1982	12,105	13,134	-1,029	13,134	19.48%
1983	14,197	15,934	-1,737	15,934	21.31%
1984	15,410	16,866	-1,456	16,866	5.85%
1985	16,102	17,465	-1,363	17,465	3.55%
1986	18,285	19,885	-1,600	19,885	13.85%
1987	23,079	21,783	1,296	21,783	9.54%
1988	25,289	22,798	2,491	22,798	4.66%
1989	25,556	24,206	1,350	24,206	6.17%
1990	26,153	25,749	404	25,749	6.38%
1991	25,892	26,888	-996	26,888	4.42%
1992	28,077	27,441	636	27,441	2.06%
1993	28,777	27,779	998	27,779	1.23%
1994	29,824	28,250	1,574	28,250	1.70%
1995	29,391	30,266	-875	30,266	7.14%
1996	28,996	31,145	-2,149	31,145	2.91%
1997	29,242	26,630	2,612	26,630	-14.50%
1998	27,682	27,433	249	27,433	3.02%
1999	27,148	28,271	-1,123	28,271	3.06%
2000	26,085	28,207	-2,122	28,207	-0.23%
2001	26,944	27,701	-757	27,701	-1.79%
2002	29,177	29,378	-201	29,378	6.05%
2003	32,898	30,810	2,088	30,810	4.88%
2004	34,635	35,123	-488	35,123	14.00%
2005				37,501	6.77%
2006				37,964	1.24%
2007				39,896	5.09%
2008				41,104	3.03%
2009				43,285	5.31%
2010				46,192	6.72%
2011				48,433	4.85%
2012				50,221	3.69%
2013				53,585	6.70%
2014				58,294	8.79%
2015				63,248	8.50%
2016				68,275	7.95%
2017				73,031	6.96%
2018				75,610	3.53%
2019				78,385	3.67%
2020				80,788	3.07%
2021				82,965	2.70%
2022				84,556	1.92%

EPCC Total Headcount (Actual and Forecast)
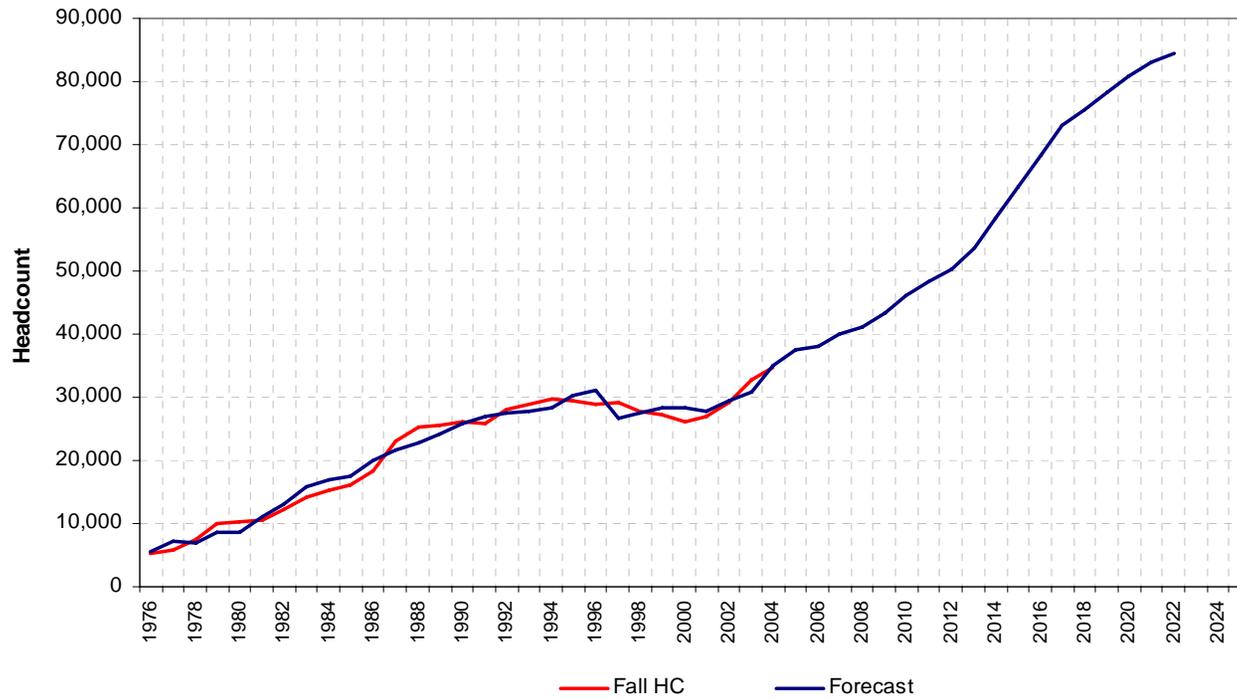
Dependent Variable: TOTHC
Method: Least Squares
Date: 06/07/06   Time: 10:07
Sample (adjusted): 1976 2002
Included observations: 27 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-72598.42	5222.924	-13.89996	0
A15TO19(3)	942.2841	108.5092	8.683911	0
A20TO24(-6)	867.9024	88.29325	9.82977	0
EPCCPRICE	-22.3241	11.20113	-1.993022	0.0588
UTEPPRICE	9.048937	3.166904	2.857344	0.0092

R-squared	0.973019	Mean dependent var	20858.37
Adjusted R-squared	0.968113	S.D. dependent var	8499.839
S.E. of regression	1517.813	Akaike info criterion	17.6535
Sum squared resid	50682619	Schwarz criterion	17.89347
Log likelihood	-233.3223	F-statistic	198.3442
Durbin-Watson stat	1.400678	Prob(F-statistic)	0.0000

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Valle Verde Actual and Forecast Fall Headcount

Year	Fall HC	Fall Est HC	Difference	Forecast	Growth Rate
1976					
1977					
1978					
1979					
1980					
1981					
1982	5,279	5,124	155	5,124	
1983	6,458	6,676	-218	6,676	30.30%
1984	6,800	7,183	-383	7,183	7.59%
1985	7,067	7,318	-251	7,318	1.88%
1986	7,908	8,532	-624	8,532	16.59%
1987	9,696	9,552	144	9,552	11.95%
1988	10,262	10,091	171	10,091	5.65%
1989	11,091	10,867	224	10,867	7.69%
1990	11,768	11,782	-14	11,782	8.42%
1991	11,832	12,439	-607	12,439	5.58%
1992	13,103	12,610	493	12,610	1.37%
1993	13,303	12,778	525	12,778	1.34%
1994	14,079	13,048	1,031	13,048	2.11%
1995	13,860	14,120	-260	14,120	8.21%
1996	13,239	14,461	-1,222	14,461	2.42%
1997	13,337	11,741	1,596	11,741	-18.81%
1998	12,260	12,138	122	12,138	3.38%
1999	12,278	12,439	-161	12,439	2.48%
2000	11,903	12,366	-463	12,366	-0.59%
2001	12,237	12,067	170	12,067	-2.42%
2002	12,704	12,896	-192	12,896	6.86%
2003	13,970	13,639	331	13,639	5.77%
2004	15,079	15,643	-564	15,643	14.69%
2005				16,925	8.19%
2006				17,185	1.53%
2007				18,139	5.55%
2008				18,631	2.71%
2009				19,594	5.17%
2010				20,911	6.72%
2011				21,902	4.74%
2012				22,651	3.42%
2013				24,347	7.49%
2014				26,758	9.90%
2015				29,302	9.51%
2016				31,879	8.80%
2017				34,309	7.62%
2018				35,477	3.40%
2019				36,730	3.53%
2020				37,775	2.84%
2021				38,687	2.41%
2022				39,276	1.52%

EPCC Valle Verde Campus Fall Headcount (Actual and Forecast)
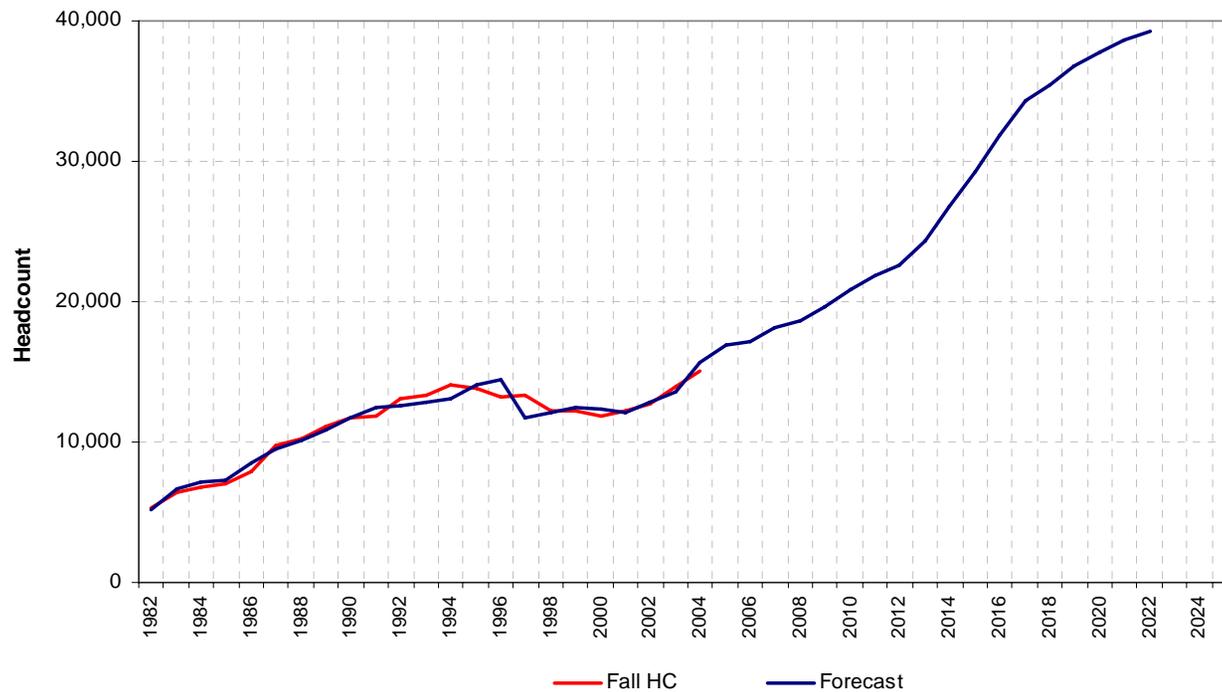
Dependent Variable: VVFALLHC			
Method: Least Squares			
Date: 06/08/06 Time: 11:03			
Sample (adjusted): 1982 2002			
Included observations: 21 after adjustments			

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-40268.03	5572.241	-7.22654	0
A15TO19(3)	525.4969	50.32775	10.44149	0
A20TO24(-6)	439.4835	106.6553	4.120598	0.0008
EPCCPRICE	-13.33605	5.208397	-2.56049	0.021
UTEPPRICE	4.667545	1.447692	3.224129	0.0053

R-squared	0.952381	Mean dependent var	10974.48
Adjusted R-squared	0.940477	S.D. dependent var	2700.753
S.E. of regression	658.9124	Akaike info criterion	16.02332
Sum squared resid	6946649	Schwarz criterion	16.27201
Log likelihood	-163.2448	F-statistic	80.00095
Durbin-Watson stat	2.323804	Prob(F-statistic)	0.0000

Rio Grande Actual and Forecast Fall Headcount

Year	Fall HC	Fall Est HC	Difference	Forecast	Growth Rate
1976					
1977					
1978					
1979					
1980					
1981					
1982	1,397	1,351	46	1,351	
1983	1,729	1,804	-75	1,804	33.54%
1984	1,809	1,918	-109	1,918	6.37%
1985	1,869	1,862	7	1,862	-2.95%
1986	2,130	2,265	-135	2,265	21.65%
1987	2,726	2,563	163	2,563	13.16%
1988	2,663	2,728	-65	2,728	6.45%
1989	3,097	2,982	115	2,982	9.33%
1990	3,390	3,269	121	3,269	9.62%
1991	3,290	3,501	-211	3,501	7.08%
1992	3,670	3,586	84	3,586	2.44%
1993	3,794	3,671	123	3,671	2.36%
1994	4,070	3,765	305	3,765	2.57%
1995	3,960	4,119	-159	4,119	9.39%
1996	3,828	4,187	-359	4,187	1.65%
1997	3,797	3,377	420	3,377	-19.34%
1998	3,672	3,505	167	3,505	3.80%
1999	3,604	3,559	45	3,559	1.54%
2000	3,112	3,576	-464	3,576	0.47%
2001	3,209	3,424	-215	3,424	-4.26%
2002	3,564	3,767	-203	3,767	10.04%
2003	4,355	3,965	390	3,965	5.26%
2004	4,747	4,738	9	4,738	19.48%
2005				5,114	7.95%
2006				5,338	4.37%
2007				5,662	6.08%
2008				5,828	2.93%
2009				6,106	4.76%
2010				6,470	5.97%
2011				6,769	4.62%
2012				7,010	3.56%
2013				7,573	8.04%
2014				8,341	10.14%
2015				9,156	9.77%
2016				9,989	9.09%
2017				10,792	8.04%
2018				11,211	3.89%
2019				11,657	3.98%
2020				12,056	3.42%
2021				12,427	3.08%
2022				12,721	2.37%

**EPCC Rio Grande Campus Fall Headcount (Actual and Forecast)**
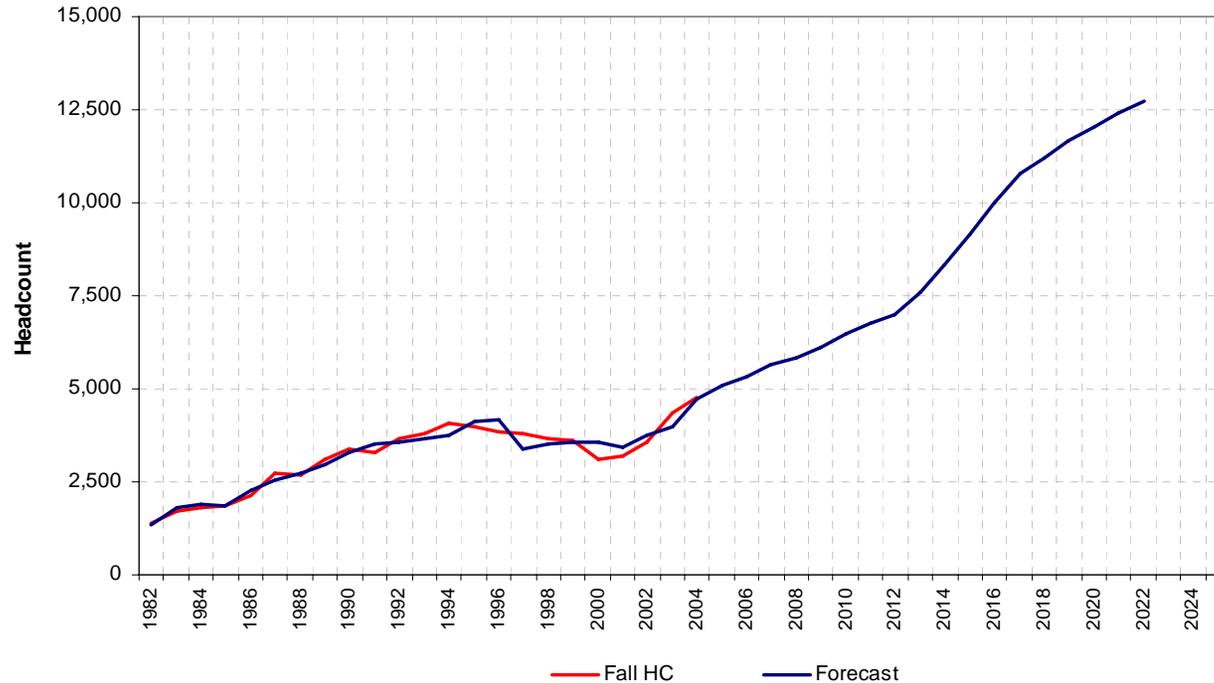
Dependent Variable: RGFALLHC
Method: Least Squares
Date: 06/08/06   Time: 11:05
Sample (adjusted): 1982 2002
Included observations: 21 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-11902.87	1977.053	-6.020513	0
A15TO19(3)	165.5272	17.85648	9.269866	0
A20TO24(-6)	118.1441	37.84171	3.122059	0.0066
EPCCPRICE	-4.717714	1.84796	-2.552931	0.0213
UTEPPRICE	1.549984	0.513647	3.017607	0.0082

R-squared	0.935891	Mean dependent var	3065.714
Adjusted R-squared	0.919863	S.D. dependent var	825.8484
S.E. of regression	233.7847	Akaike info criterion	13.95093
Sum squared resid	874484.5	Schwarz criterion	14.19963
Log likelihood	-141.4848	F-statistic	58.39338
Durbin-Watson stat	2.031048	Prob(F-statistic)	0.0000

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Trans Mountain Actual and Forecast Fall Headcount

Year	Fall HC	Fall Est HC	Difference	Forecast	Growth Rate
1976					
1977					
1978					
1979					
1980					
1981					
1982	1,871	2,128	-257	2,128	
1983	2,396	2,284	112	2,284	7.32%
1984	2,588	2,515	73	2,515	10.11%
1985	2,521	2,722	-201	2,722	8.25%
1986	2,589	2,855	-266	2,855	4.86%
1987	3,121	2,948	173	2,948	3.28%
1988	3,031	2,898	133	2,898	-1.70%
1989	3,400	3,033	367	3,033	4.65%
1990	3,300	3,110	190	3,110	2.55%
1991	3,049	3,132	-83	3,132	0.71%
1992	3,360	3,592	-232	3,592	14.67%
1993	3,662	3,711	-49	3,711	3.31%
1994	3,944	3,860	84	3,860	4.04%
1995	3,726	3,899	-173	3,899	0.99%
1996	3,736	3,768	-32	3,768	-3.34%
1997	3,629	3,061	568	3,061	-18.78%
1998	3,175	3,193	-18	3,193	4.32%
1999	3,024	3,214	-190	3,214	0.67%
2000	2,940	3,230	-290	3,230	0.50%
2001	3,078	3,278	-200	3,278	1.49%
2002	3,571	3,504	67	3,504	6.89%
2003	4,034	3,799	235	3,799	8.41%
2004	4,195	4,205	-10	4,205	10.68%
2005				4,569	8.65%
2006				5,085	11.30%
2007				5,437	6.93%
2008				5,880	8.15%
2009				6,134	4.32%
2010				6,380	4.02%
2011				6,400	0.31%
2012				6,418	0.27%
2013				6,808	6.08%
2014				7,289	7.06%
2015				7,814	7.20%
2016				8,358	6.97%
2017				8,913	6.64%
2018				9,131	2.44%
2019				9,344	2.34%
2020				9,551	2.21%
2021				9,752	2.11%
2022				9,942	1.95%

# EPCC Transmountain Campus Fall Headcount (Actual and Forecast)
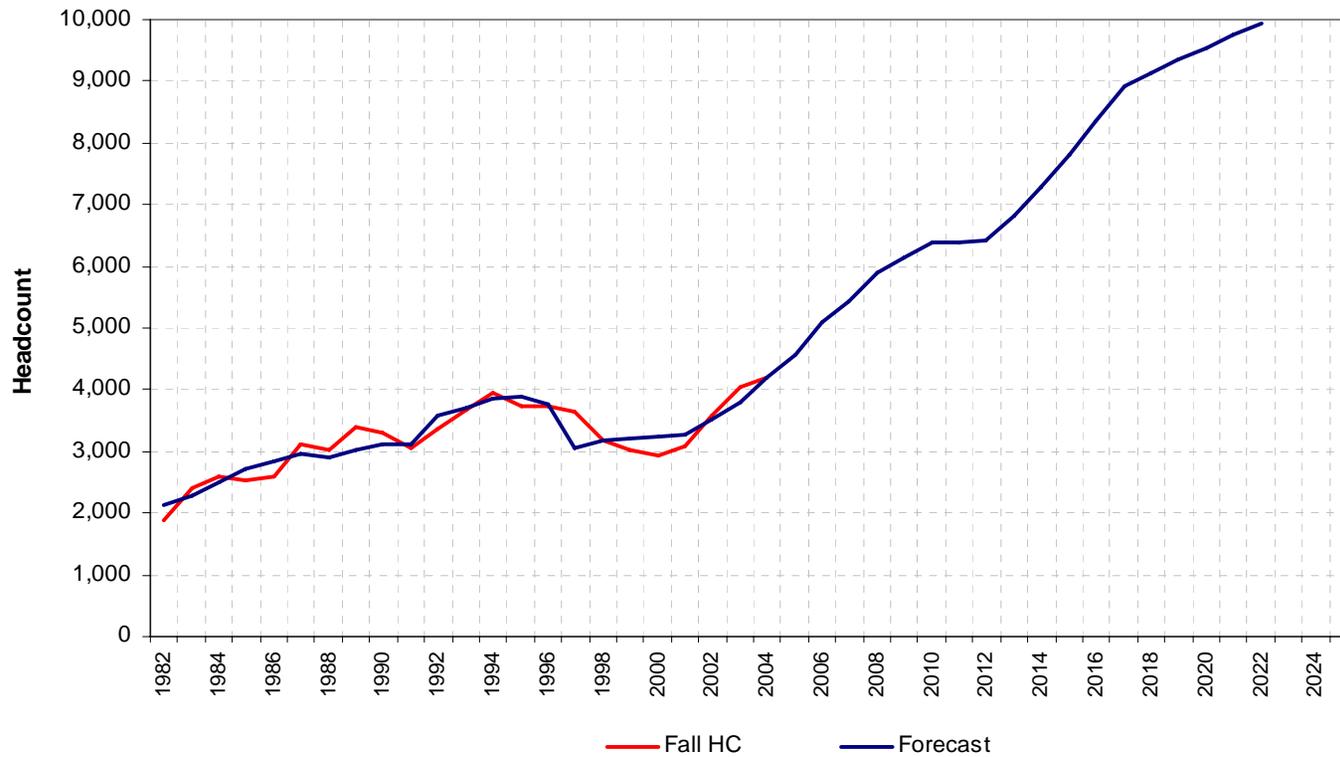

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Dependent Variable: TMFALLHC
Method: Least Squares
Date: 06/13/06   Time: 10:03
Sample (adjusted): 1982 2004
Included observations: 23 after adjustments

Variable              Coefficient   Std. Error   t-Statistic    Prob.

C                     -6407.172     1367.482     -4.685381      0.0002
A15TO19(3)             136.5251      18.74934     7.281594       0.0000
MIL                    0.065944      0.028039     2.351832       0.0296
UTEPPRICE              0.643721      0.2055        3.132467       0.0055

R-squared              0.853133     Mean dependent var      3214.783
Adjusted R-squared     0.829944     S.D. dependent var      572.1586
S.E. of regression     235.9459     Akaike info criterion   13.92185
Sum squared resid      1057739      Schwarz criterion       14.11933
Log likelihood        -156.1013     F-statistic             36.7897
Durbin-Watson stat     1.552351     Prob(F-statistic)       0
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Northwest Actual and Forecast Fall Headcount

Year	Fall HC	Fall Est HC	Difference	Forecast	Growth Rate
1976					
1977					
1978					
1979					
1980					
1981					
1982					
1983					
1984					
1985					
1986					
1987					
1988					
1989					
1990					
1991					
1992					
1993					
1994	699	736	-37	736	
1995	777	808	-31	808	9.79%
1996	878	941	-63	941	16.38%
1997	1,016	1,064	-48	1,064	13.13%
1998	1,092	989	103	989	-7.04%
1999	1,174	1,120	54	1,120	13.19%
2000	1,208	1,223	-15	1,223	9.25%
2001	1,327	1,350	-23	1,350	10.35%
2002	1,586	1,677	-91	1,677	24.23%
2003	2,141	1,843	298	1,843	9.92%
2004	2,218	2,364	-146	2,364	28.27%
2005				2,450	3.62%
2006				2,643	7.87%
2007				2,839	7.41%
2008				3,038	7.01%
2009				3,224	6.14%
2010				3,426	6.26%
2011				3,648	6.48%
2012				3,859	5.80%
2013				4,069	5.43%
2014				4,259	4.67%
2015				4,442	4.30%
2016				4,628	4.20%
2017				4,847	4.72%
2018				5,079	4.78%
2019				5,457	7.46%
2020				5,882	7.79%
2021				6,336	7.71%
2022				6,814	7.54%
2023				7,313	

**EPCC Northwest Campus Fall Headcount (Actual and Forecast)**
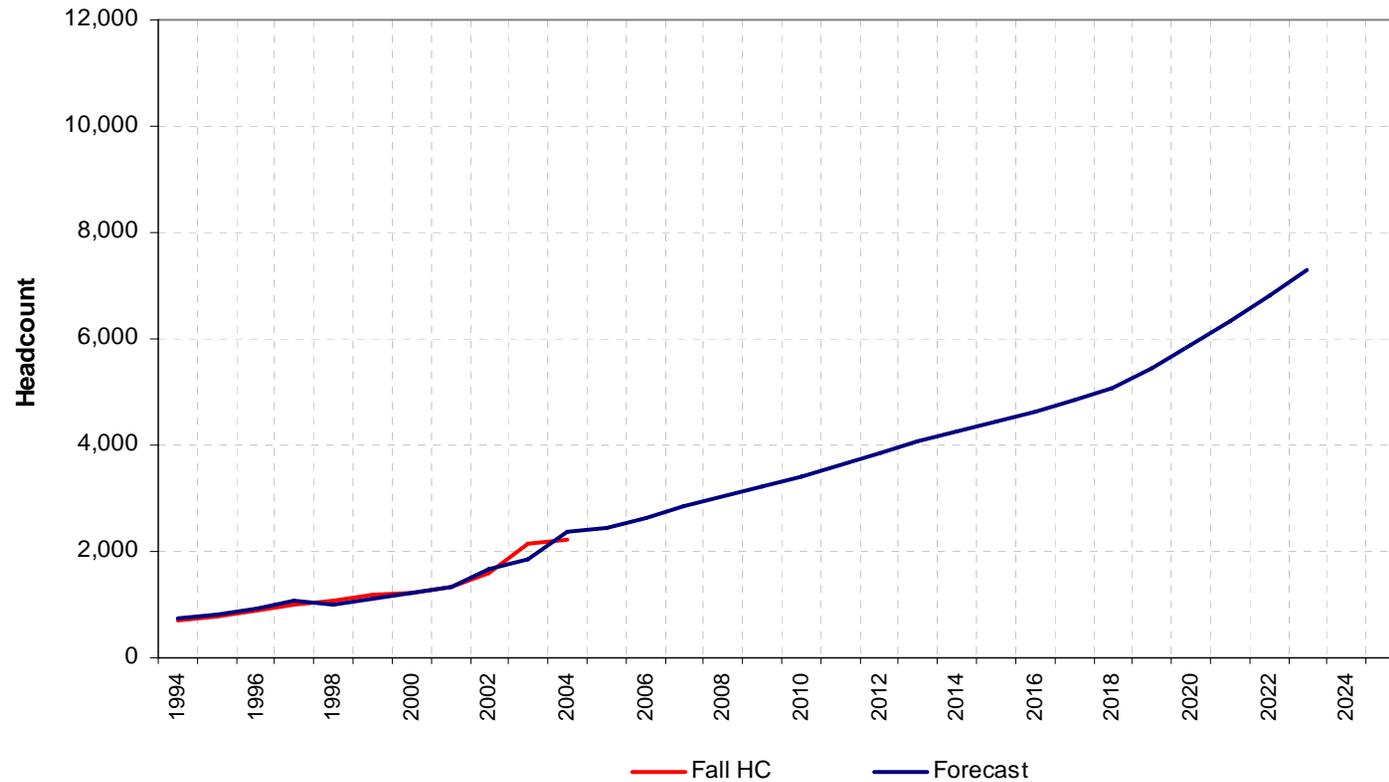
Dependent Variable: NWFALLHC
Method: Least Squares
Date: 06/08/06   Time: 13:04
Sample (adjusted): 1994 2002
Included observations: 9 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-1512.76	299.0557	-5.058455	0.0023
A20TO24(2)	22.37756	6.127676	3.651883	0.0107
UTEPPRICE	1.193591	0.061822	19.30681	0

R-squared	0.988436	Mean dependent var	1084.111
Adjusted R-squared	0.984581	S.D. dependent var	279.3132
S.E. of regression	34.68297	Akaike info criterion	10.19158
Sum squared resid	7217.449	Schwarz criterion	10.25732
Log likelihood	-42.86209	F-statistic	256.4242
Durbin-Watson stat	2.256907	Prob(F-statistic)	0.000002

Mission Del Paso Actual and Forecast Fall Headcount

Year	Fall HC	Fall Est HC	Difference	Forecast	Growth Rate
1976					
1977					
1978					
1979					
1980					
1981					
1982					
1983					
1984					
1985					
1986					
1987					
1988					
1989					
1990					
1991					
1992					
1993					
1994					
1995					
1996					
1997					
1998	1,342	1,409	-67	1,409	
1999	1,535	1,448	87	1,448	2.77%
2000	1,456	1,421	35	1,421	-1.89%
2001	1,510	1,587	-77	1,587	11.72%
2002	1,928	1,931	-3	1,931	21.66%
2003	2,691	2,629	62	2,629	36.17%
2004	3,084	3,121	-37	3,121	18.72%
2005				4,169	33.56%
2006				4,788	14.84%
2007				5,429	13.39%
2008				5,361	-1.25%
2009				5,252	-2.02%
2010				4,991	-4.97%
2011				4,924	-1.35%
2012				4,705	-4.44%
2013				5,615	19.34%
2014				6,774	20.63%
2015				8,042	18.73%
2016				9,345	16.20%
2017				10,654	14.00%
2018				10,923	2.52%
2019				11,150	2.08%
2020				11,326	1.58%
2021				11,455	1.13%
2022				11,514	0.52%

EPCC Mission Del Paso Campus Fall Headcount (Actual and Forecast)


Legend: Fall HC — Forecast
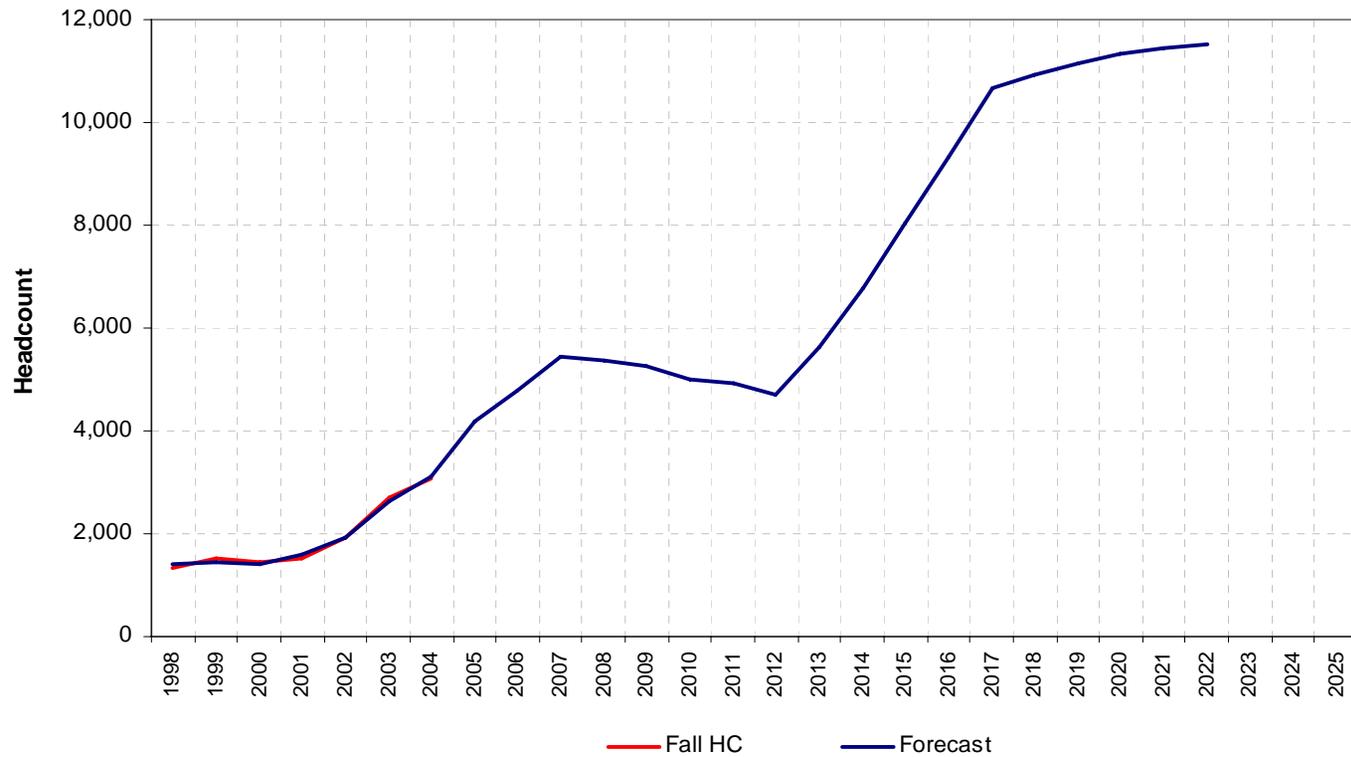
Dependent Variable: MDPFALLHC
Method: Least Squares
Date: 06/08/06   Time: 13:52
Sample (adjusted): 1998 2004
Included observations: 7 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-27283.16	1369.316	-19.92466	0
A15TO19(3)	410.1727	35.49185	11.55681	0.0003
EMP(-1)	0.01467	0.00564	2.600937	0.06

R-squared	0.9913	Mean dependent var	1935.143
Adjusted R-squared	0.98695	S.D. dependent var	684.775
S.E. of regression	78.2256	Akaike info criterion	11.8546
Sum squared resid	24476.98	Schwarz criterion	11.83142
Log likelihood	-38.49109	F-statistic	227.8896
Durbin-Watson stat	2.39209	Prob(F-statistic)	0.000076

Fort Bliss Actual and Forecast Fall Headcount

Year	Fall HC	Fall Est HC	Difference	Forecast	Growth Rate
1976					
1977					
1978					
1979					
1980					
1981					
1982	459	550	-91	550	
1983	544	515	29	515	-6.29%
1984	737	717	20	717	39.01%
1985	806	833	-27	833	16.21%
1986	836	902	-66	902	8.26%
1987	1,172	965	207	965	7.07%
1988	1,101	911	190	911	-5.61%
1989	684	916	-232	916	0.49%
1990	580	728	-148	728	-20.46%
1991	754	531	223	531	-27.12%
1992	780	766	14	766	44.35%
1993	799	760	39	760	-0.75%
1994	874	800	74	800	5.25%
1995	613	713	-100	713	-10.91%
1996	537	447	90	447	-37.31%
1997	559	638	-79	638	42.76%
1998	467	377	90	377	-40.97%
1999	386	374	12	374	-0.59%
2000	369	344	25	344	-7.97%
2001	398	386	12	386	11.94%
2002	370	417	-47	417	8.12%
2003	417	551	-134	551	32.08%
2004	344	446	-102	446	-18.98%
2005				499	11.95%
2006				976	95.49%
2007				1,336	36.89%
2008				2,152	61.05%
2009				2,641	22.68%
2010				3,106	17.61%
2011				3,098	-0.26%
2012				3,157	1.91%
2013				3,195	1.23%
2014				3,343	4.63%
2015				3,490	4.40%
2016				3,656	4.74%
2017				3,838	4.98%
2018				3,994	4.07%
2019				4,026	0.81%
2020				4,014	-0.29%
2021				3,972	-1.04%
2022				3,913	-1.50%
2023				3,868	

EPCC Fort Bliss Campus Fall Headcount (Actual and Forecast)
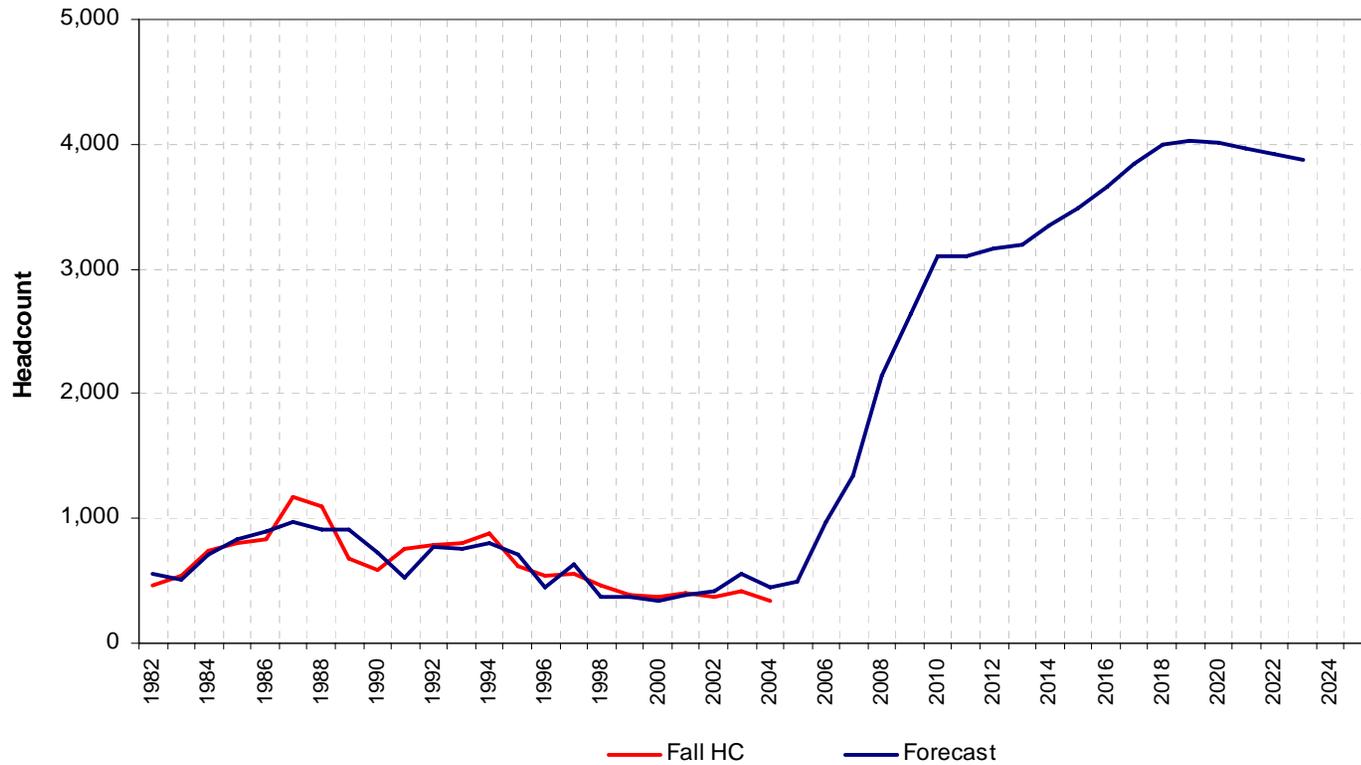
Dependent Variable: FBFALLHC
Method: Least Squares
Date: 06/12/06   Time: 08:54
Sample (adjusted): 1982 2002
Included observations: 21 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-6127.53	1413.898	-4.333785	0.0005
MIL	0.084362	0.011874	7.105065	0.0000
A15TO19(2)	42.27345	10.21303	4.139168	0.0007
A20TO24(-4)	58.74101	23.15054	2.53735	0.0213

R-squared	0.753311	Mean dependent var	658.3333
Adjusted R-squared	0.709777	S.D. dependent var	228.1735
S.E. of regression	122.9223	Akaike info criterion	12.63063
Sum squared resid	256868.2	Schwarz criterion	12.82958
Log likelihood	-128.6216	F-statistic	17.30421
Durbin-Watson stat	2.255615	Prob(F-statistic)	0.000021