Population Forecasts: Long-Term Projections for Clark County, Nevada 2008-2035

2008

Prepared by

Constant Tra, PhD Center for Business and Economic Research

Prepared for

Regional Transportation Commission, Southern Nevada Water Authority, Clark County Comprehensive Planning, and members of the Forecasting Group

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Prepared by

Center for Business and Economic Research

The Center for Business and Economic Research

University of Nevada, Las Vegas 4505 S. Maryland Parkway Las Vegas, Nevada 89154-6002 (702) 895-3191 CBER@unlv.nevada.edu http://cber.unlv.edu Copyright ©2008, CBER

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Executive Summary

Each year, the Regional Transportation Commission (RTC), the Southern Nevada Water Authority (SNWA), Clark County Comprehensive Planning (CCCP), the Center for Business and Economic Research (CBER) at the University of Nevada, Las Vegas, and a group of community demographers and analysts work together to provide a long-term forecast of economic and demographic variables influencing Clark County. The primary goal is to develop a long-term forecast of the Clark County population that is consistent with the structural economic characteristics of the county. Toward this end, we employ a general-equilibrium demographic and economic model developed by Regional Economic Models, Inc. (REMI) specifically for Clark County. We recalibrate the model to reflect the most current information available about the local economy.

The model recalibration incorporates the most recent information about employment growth, expected hotel construction, transit investment, and an amenity factor representing negative externalities from growth. The resulting forecast predicts positive economic growth throughout the range of the forecast, though growth is much more robust in the short run. However, the primary focus remains on the long run, which has a final population forecast of 3.6 million in 2035.

The accompanying table gives the population forecast. Population growth remains strong in the near-term forecast, but falls below the long-term average by 2020 (employment growth does the same more quickly, by 2013, because the recent rapid employment growth leads to a relatively high long-term average). The population in Clark County is predicted to grow at a rate of 4.2 percent in 2008, following the relatively strong showing of 4.4 percent in 2007. The model then predicts that growth will taper off as the economy matures. We note that, despite short-term economic uncertainties and

model difficulties, the main focus of this forecasting exercise, the long-term population estimate is fairly consistent with past forecasts. By 2015, the growth rate is below 2.9 percent, and by 2030 it has leveled off at 1.1 percent. This represents a long-term convergence to the national average annual population-growth rate, which is projected to stabilize at around 1 percent after 2020.

Although we feel these forecasts are sound, there are significant risks to the forecasts which could lead to our having either over- or underestimated growth. We say, however, that these risks tend to arise from short-run uncertainty, whereas, our forecasts are primarily meant to be long-run planning tools.

Table 1: Final Population Forecast: 2000 – 2035						
Year	Population Forecast	Change in Population Forecast	Growth in Population (Percent)			
2000	1,428,690*	107,373	8.1%			
2001	1,498,274*	69,584	4.9%			
2002	1,578,332*	80,058	5.3%			
2003	1,641,529*	63,197	4.0%			
2004	1,747,025*	105,496	6.4%			
2005	1,815,700*	68,675	3.9%			
2006	1,912,654*	96,954	5.3%			
2007	1,996,542*	83,888	4.2%			
2008	2,080,000	83,000	4.2%			
2009	2,166,000	87,000	4.2%			
2010	2,253,000	86,000	4.0%			
2011	2,336,000	84,000	3.7%			
2012	2,418,000	81,000	3.5%			
2013	2,498,000	80,000	3.3%			
2014	2,575,000	78,000	3.1%			
2015	2,649,000	74,000	2.9%			
2016	2,721,000	72,000	2.7%			
2017	2,790,000	68,000	2.5%			
2018	2,855,000	65,000	2.3%			
2019	2,917,000	63,000	2.2%			
2020	2,978,000	61,000	2.1%			
2021	3,036,000	58,000	1.9%			
2022	3,091,000	55,000	1.8%			
2023	3,144,000	53,000	1.7%			
2024	3,194,000	50,000	1.6%			
2025	3,243,000	48,000	1.5%			
2026	3,288,000	46,000	1.4%			
2027	3,332,000	44,000	1.3%			
2028	3,374,000	42,000	1.3%			
2029	3,414,000	41,000	1.2%			
2030	3,454,000	39,000	1.1%			
2031	3,492,000	39,000	1.1%			
2032	3,530,000	38,000	1.1%			
2033	3,569,000	39,000	1.1%			
2034	3,607,000	39,000	1.1%			
2035	3,646,000	39,000	1.1%			
*2000-20	007 are historical estimates f	from Clark County Comprehens	sive Planning.			
Note: The average annual forecasted growth rate is 2.2%.						



Figure 1: Clark County Level and Percent Change in Population, Actual and Forecast: 2000 – 2035

I. Introduction

Each year, the Regional Transportation Commission (RTC), the Southern Nevada Water Authority (SNWA), Clark County Comprehensive Planning (CCCP), the Center for Business and Economic Research (CBER) at the University of Nevada, Las Vegas, and a group of community demographers and analysts work together to provide a long-term forecast of economic and demographic variables influencing Clark County. The primary goal is to develop a long-term forecast of the Clark County population that is consistent with the structural economic characteristics of the county. Toward this end, we employ a general-equilibrium demographic and economic model developed by Regional Economic Models, Inc. (REMI), specifically for Clark County.

The REMI model is a state-of-the-art econometric forecasting model that accounts for dynamic feedbacks between economic and demographic variables. Special features allow the user to update the model to include the most current economic information. CBER calibrates the model using information on new employment levels, infrastructure investment, and new investment in commercial enterprises.

The model employed divides Nevada into five regions: Clark County, Nye County, Lincoln County, Washoe County, and Carson City, and the remaining counties are combined to form a fifth region. These regions are modeled using the US economy as a backdrop. The model contains over 100 economic and demographic relationships that are carefully constructed to concisely represent the Clark County economy. The model includes equations to account for migration and trade between Nevada counties and US states.

The demographic data used to construct the model begin in 1990. These include the aggregate totals of employment, labor force, and population. The economic data for the most recent version of the model (REMI v9.5) now begin also in 1990 and are consistent with the North American Industry Classification System (NAICS). The most recent data for REMI v9.5 are from 2005 because the Bureau of Labor Statistics (BLS) personal-income data are reported with a two-year lag. Over the years the availability of the income data has been the key in setting the last year of history in the model.

The REMI model is the best model available for describing how economies interact geographically. These interactions may take place within a single economy (such as the interaction between house-price growth and employment growth in Clark County) or between two economies (such as the interaction between Southern Nevada and Southern California). These and over 100 other interactions contained within the model are too complex to consider modeling on our own. Rather, we turn to the REMI model because it has a solid foundation in economic theory and the principles of generalequilibrium-based growth distribution, yet it still offers the flexibility required to model a regional economy like Clark County.

To guarantee that the most current data are used in the forecast, we update the model with employment figures from the Nevada Department of Employment, Training, and Rehabilitation (DETR). Further, we calibrate the model to include planned new investment in public infrastructure using information from RTC. In this way, we ensure that the forecast model includes the best available information at the time the forecast is made.

Because of some uncertainty about the new changes contained in the new REMI model (version 9.5) we again use last year's model (version 9.0) to generate the current forecast. One major model change in version 9.5 is the addition of the region-specific housing price elasticity and update feature. We are still uncertain as to how this feature

affects the overall performance of the forecast. As a result we opted to stay with the previous version (9.0) until we have fully grasped the features of the new version. We should however note that we make use of the new data history that is contained in version 9.5 of the model. Hence the last year of history in this forecast is 2005.

In the following sections, we first examine the changes in the REMI model from last year's model. Following that, in Section III, we present sequentially the changes we make to update the model and tailor it to local information. In Section IV we present the population forecast and give a brief discussion of the economic environment surrounding the forecast. We conclude with especially pertinent risks to the forecast and try to give the reader some idea of how changes in policy or market regimes may affect our forecasts.

II. Comparison of REMI Models: Current and Previous Years

Before any model calibrations, we have over the years made comparisons of the out-ofthe-box REMI models, that is, the current forecasts that one finds without any adjustments, with the forecasts from the previous models. This gives us the opportunity to examine how the new model differs from the previous versions and explore the causes of these differences. The most recent data used to develop this year's model are from 2005. Thus, we refer to the current model as last historical year 2005 (LHY2005) and the previous model as LHY2004.

Each year the REMI staff and users discuss the workings of the modeling scheme and propose changes for improvement. Based on research findings, each year's model incorporates improvements in addition to the inclusion of more recent data. The new model, identified as version 9.5, offers three major improvements. First, the economic history for NAICS industries has been added for 1990-2000, and now matches the time period for the demographic history. Second, region-specific housing-price elasticities used as price responses to population and income changes (based on state and metro-area data) are now used for the relative housing-price equation. These are based on REMI econometric state and metro-area time series regressions. Third, a new feature has been added to allow the new region-specific housing-price response coefficients to be modified.

These updates lead to the differences in the population forecast between the LHY2005 model and the LHY2004 model. Table 2 and Figures 2 and 3 compare the population forecast from the out-of-the-box LHY2005 and LHY2004 models, i.e., without any updating for employment, new hotel information, transportation improvements, or the amenity factor.

The out-of-the-box population forecast arising from the LHY2005 model is slightly lower during the first years of the forecast. After 2012, however, the LHY2005 model predicts slightly higher population levels than the LHY2004 model. The initial growth rates in the LHY2005 model are slightly higher than those from the LHY2004 model, on average, over the first fifteen years of the forecast. After 2022, the LHY2004 model predicts higher population growth rates than the LHY2005 model. The growth rate forecasts for the two models are basically identical by 2035. At this point, the out-of-the-box forecasted populations differ 38,634 people, relative to 71,583 last year.

	LHY2004 Population	LHY2005 Population	LHY2004 Population	LHY2005 Population
Year	(Thousands)	(Thousands)	Growth (%)	Growth (%)
2006	1,809	1,788		
2007	1,886	1,866	4.2%	4.4%
2008	1,961	1,942	4.0%	4.1%
2009	2,033	2,016	3.7%	3.8%
2010	2,102	2,090	3.4%	3.7%
2011	2,168	2,162	3.2%	3.4%
2012	2,232	2,233	2.9%	3.3%
2013	2,294	2,302	2.8%	3.1%
2014	2,352	2,369	2.6%	2.9%
2015	2,408	2,434	2.4%	2.7%
2016	2,461	2,496	2.2%	2.6%
2017	2,512	2,555	2.1%	2.4%
2018	2,560	2,610	1.9%	2.2%
2019	2,607	2,662	1.8%	2.0%
2020	2,653	2,712	1.8%	1.8%
2021	2,698	2,758	1.7%	1.7%
2022	2,740	2,803	1.6%	1.6%
2023	2,782	2,846	1.5%	1.5%
2024	2,824	2,887	1.5%	1.4%
2025	2,864	2,927	1.4%	1.4%
2026	2,904	2,965	1.4%	1.3%
2027	2,943	3,003	1.4%	1.3%
2028	2,982	3,039	1.3%	1.2%
2029	3,021	3,076	1.3%	1.2%
2030	3,060	3,112	1.3%	1.2%
2031	3,099	3,148	1.3%	1.2%
2032	3,139	3,185	1.3%	1.2%
2033	3,179	3,222	1.3%	1.2%
2034	3,218	3,259	1.3%	1.2%
2035	3,258	3,297	1.2%	1.2%
Note: Out-of-tl	he-box refers to the mod	el prior to recalibration	n. These numbers are n	ot the final forecast.

Table 2: Out-of-the-Box Clark County Population and Population GrowthForecasts from REMI Models LHY2004 and LHY2005



Figure 2: Clark County Population Forecasts: REMI Out-of-the-Box LHY2005 and LHY2004: 2006-2035

Note: Out-of-the-box refers to the model prior to recalibration. These numbers are not the final forecast.

Figure 3: Clark County Population Growth Rate Forecasts: REMI Out-of-the-Box LHY2005 and LHY2004: 2006-2035



Note: Out-of-the-box refers to the model prior to recalibration. These numbers are not the final forecast.

III. Recalibrating the Model

County-level personal income is only available with a two-year lag. As a result, the REMI model also has a two- to three-year lag with the most recent historical data from 2005 for the current model, version 9.5, released in 2007. To bring the model up to date, we update pertinent model information, including more recent employment figures, spending on capital projects, local information on hotel construction, and adjustments for disamenities related to population growth to reflect local information of the forecast. We describe each update in turn.

Because of some uncertainty about the new changes contained in the new REMI model (version 9.5) we again use last year's model (version 9.0) to generate the current forecast. One major model change in version 9.5 is the addition of the region-specific housing price elasticity and update feature. We are still uncertain as to how this feature affects the overall performance of the forecast. As a result we opted to stay with the previous version (9.0) until we have fully grasped the features of the new version. We should however note that we make use of the new data history that is contained in version 9.5 of the model.¹ Hence the last year of history in this forecast is 2005.

A. Employment adjustment.

Perhaps the most noteworthy update we make to the REMI model each year is the employment adjustment. The industry-level employment data used by REMI are the sum of the BLS wage and salary estimates for Clark County and REMI's BLS-based estimate of the number of proprietors. The most recent year in the model data is 2005. However,

¹ The new model comes with two updates. The data update and the software update. This year's forecast uses the data update only.

more recent wage and salary employment data are available from the Nevada DETR for 2006 and 2007. Thus, we rebase the model to account for the more recent information.

The latest growth rates for the out-of-the-box REMI model forecasts and recent DETR estimates are shown in Table 3 for 2006 and 2007, suggesting a clear need for adjustments. The employment update is as follows. We calculate the annual percentage change using DETR data and apply the percentage changes to generate new estimates for 2006 and 2007. The underlying assumption of this procedure is that the proportion of self-employed in each industry classification grows at the same rate as does the ratio between full- and part-time workers.

Table 3: Employment Growth Rates for Clark County Before Adjustment					
	REMI I Fore	Baseline cast	DETR I	Estimates	
Industrial Classification	2004-2005	2005-2006	2005-2006	2006-2007	
Construction	1.44%	-0.27%	7.00%	-5.71%	
Wholesale trade	-0.85%	-0.87%	6.31%	2.54%	
Retail trade	4.47%	4.80%	3.94%	2.46%	
Transit, ground pass transportation	3.36%	4.10%	4.31%	4.96%	
Monetary authorities, et al.	2.13%	2.71%	1.38%	-3.74%	
Ins carriers, related activities	3.16%	3.81%	4.81%	-4.59%	
Real estate	3.72%	3.84%	7.22%	5.29%	
Prof, technical services	2.72%	2.39%	10.17%	1.85%	
Administrative, support services	3.08%	3.28%	5.44%	-2.97%	
Ambulatory health care services	7.04%	7.93%	3.89%	4.87%	
Hospitals	4.54%	5.49%	3.15%	8.40%	
Accommodation	2.53%	3.17%	2.54%	-1.38%	
Food services, drinking places	4.98%	5.25%	6.88%	3.78%	
State & Local Government	3.63%	4.34%	5.89%	6.55%	

Table 4 reports the rebased employment categories for the model. The recent growth of 2004 and 2005 seems to have carried over to 2006 as evidenced by the strong positive growth rates. Some sectors of the economy experienced a slowdown in 2007. The strong negative growth rates in the construction sector are indicative of the slowdown in the housing market. However, with the exception of accommodation, most of the

components of our tourism industry (that is, amusement, gambling, and recreation; scenic, sightseeing transportation; and transit, ground passenger transportation) grew from 2006 to 2007. Overall, Southern Nevada's economy has continued to thrive.

Table 4: Model Job Adjustments (in 000s) for 2006 and 2007					
	Baseline	DETR Growth Rates Adjusted Job Lev			
Industrial Classification	History 2005	2006	2007	2006	2007
Forestry et al.	0.001	0.00%	0.00%	0.001	0.001
Agriculture	0.325	6.29%	4.44%	0.345	0.361
Oil, gas extraction	0.038	0.00%	0.00%	0.038	0.038
Mining (except oil, gas)	1.212	-8.60%	14.84%	1.108	1.272
Support activities for mining	0.001	0.00%	0.00%	0.001	0.001
Utilities	3.413	5.25%	3.21%	3.592	3.708
Construction	114.588	7.00%	-5.71%	122.609	115.608
Wood product mfg	1.618	4.01%	3.03%	1.683	1.734
Nonmetallic mineral prod mfg	4.161	7.08%	2.22%	4.456	4.555
Primary metal mfg	0.164	-1.25%	-1.27%	0.162	0.160
Fabricated metal prod mfg	1.650	3.42%	1.50%	1.706	1.732
Machinery mfg	0.544	1.05%	0.87%	0.550	0.555
Computer, electronic prod mfg	0.450	-14.54%	-3.40%	0.385	0.371
Electrical equip, appliance mfg	0.497	-1.12%	0.91%	0.491	0.496
Motor vehicle mfg	0.475	0.45%	-1.35%	0.477	0.471
Transp equip mfg. exc. motor veh	0.359	1.76%	1.73%	0.365	0.372
Furniture, related prod mfg	2.489	4.38%	4.93%	2.598	2.726
Miscellaneous mfg	5.446	1.55%	0.35%	5.530	5.549
Food mfg	2.458	4.59%	2.51%	2.571	2.635
Beverage, tobacco prod mfg	0.164	7.69%	6.59%	0.177	0.188
Textile mills	0.153	-6.00%	0.00%	0.144	0.144
Textile prod mills	0.210	0.97%	1.91%	0.212	0.216
Apparel mfg	0.317	0.95%	0.00%	0.320	0.320
Leather, allied prod mfg	0.060	13.79%	6.06%	0.068	0.072
Paper mfg	0.391	4.79%	3.85%	0.410	0.425
Printing, rel supp act	2.280	2.50%	1.85%	2.337	2.380
Petroleum, coal prod mfg	0.033	0.00%	0.00%	0.033	0.033
Chemical mfg	0.929	3.61%	2.96%	0.963	0.991
Plastics, rubber prod mfg	2.173	-2.12%	-1.40%	2.127	2.097
Wholesale trade	26.374	6.31%	2.54%	28.038	28.750
Retail trade	111.541	3.94%	2.46%	115.936	118.788
Air transportation	4.386	-0.30%	0.79%	4.373	4.407
Rail transportation	0.332	1.67%	1.31%	0.338	0.342
Water transportation	0.067	2.17%	4.26%	0.068	0.071
Truck transp; Couriers, msngrs	8.282	3.26%	2.57%	8.552	8.772
Transit, ground pass transp	12.989	4.31%	4.96%	13.549	14.221
Pipeline transportation	0.017	0.00%	4.00%	0.017	0.018

Table 4 Continued:	Baseline	DETR Gro	owth Rates	Adjusted Job Levels	
Industrial Classification	History 2005	2006	2007	2006	2007
Scenic, sightseeing transp; supp	4.547	1.45%	2.09%	4.613	4.710
Warehousing, storage	3.041	3.88%	3.54%	3.159	3.271
Publishing, exc Internet	2.756	1.73%	1.74%	2.804	2.852
Motion picture, sound rec	2.314	5.50%	5.50%	2.441	2.575
Internet serv, data proc, other	1.644	0.85%	1.77%	1.658	1.687
Broadcasting, exc Int; Telecomm	6.642	1.42%	0.83%	6.737	6.793
Monetary authorities, et al.	26.438	1.38%	-3.74%	26.803	25.800
Sec, comm contracts, inv	13.242	0.73%	0.28%	13.339	13.376
Ins carriers, rel act	13.113	4.81%	-4.59%	13.744	13.113
Real estate	54.364	7.22%	5.29%	58.289	61.373
Rental, leasing services	6.522	-4.27%	-0.96%	6.244	6.184
Prof, tech services	54.168	10.17%	1.85%	59.677	60.781
Mgmnt of companies, enterprises	10.203	0.29%	1.06%	10.232	10.340
Administrative, support services	73.838	5.44%	-2.97%	77.855	75.543
Waste mgmnt, remed services	2.103	4.16%	3.01%	2.190	2.256
Educational services	6.240	6.75%	5.14%	6.661	7.003
Ambulatory health care services	29.773	3.89%	4.87%	30.931	32.438
Hospitals	13.275	3.15%	8.40%	13.693	14.843
Nursing, residential care facilities	5.984	7.00%	5.27%	6.403	6.740
Social assistance	13.604	6.89%	5.17%	14.542	15.294
Performing arts, spectator sports	15.257	3.58%	2.64%	15.804	16.221
Museums et al.	0.307	5.92%	4.28%	0.325	0.339
Amusement, gambling, recreation	15.047	4.64%	3.82%	15.745	16.347
Accommodation	180.516	2.54%	-1.38%	185.101	182.547
Food services, drinking places	69.910	6.88%	3.78%	74.720	77.544
Repair, maintenance	9.948	4.40%	3.73%	10.386	10.774
Personal, laundry services	14.357	3.70%	2.71%	14.889	15.292
Membership assoc, organ	6.543	5.82%	3.90%	6.924	7.194
Private households	8.760	3.91%	2.20%	9.102	9.302
State & Local Gov	75.947	5.89%	6.55%	80.420	85.688
Federal Civilian	11.080	1.12%	1.77%	11.204	11.402
Federal Military	11.377	2.86%	3.04%	11.702	12.058
Farm	0.339	-0.58%	-0.88%	0.337	0.334
Total	763.199	4.44%	6.01%	798.674	812.014

B. Adjustments for new hotel construction

Each year, we make an adjustment to future hotel employment based on our expectation of hotel rooms that will be added in the near future. The additional rooms and related employment represent properties that are either under construction with fixed opening dates, or properties that have development plans and a high probability that the projects will be completed during the specified year. In this way, we ensure that the model includes a good short-term forecast of new hotel investment and employment.

As of May 2008, the Las Vegas Convention and Visitors Authority (LVCVA) projects that 8,789 hotel/motel rooms will be added to the local room stock by the end of 2008 (see Table 5). This includes the opening of The Palazzo (3,066), Trump International Hotel and Tower (1,282), and Encore Suites (2,034). In 2009, 16,810 hotel/motel rooms are expected to be added to the inventory. This includes major additions such as Fontainbeau Las Vegas (3,812), ARIA Resort and Casino (4,004), and the Cosmopolitan Resort and Casino (2,998). Hotel room additions are expected to total 5,296 in 2010, with the major addition being the Hotel Echelon (2,500). For 2011, LVCVA projects that 1,200 hotel/motel rooms will be added to the hotel room inventory. In addition to the LVCVA projected new hotel/motel rooms for 2008-2011, we project that an average of 3,715 rooms will be added to the inventory from 2012 to 2014. This brings the total new rooms to 43,240.

Table 5: Hotel Construction Adjustment							
Year	LVCVA Rooms	LVCVA New Rooms	LVCVA New Jobs Implied	REMI Hotel Employment	REMI New Jobs Implied	Cumulative Additional Jobs <i>Over and Above</i> What Is in the Model	
2007	132,947			190.95			
2008	141,736	8,789	15,820	193.604	2,654	13,166	
2009	158,546	16,810	30,258	196.298	2,694	40,730	
2010	163,842	5,296	9,533	198.731	2,433	47,830	
2011	165,042	1,200	2,160	201.378	2,647	47,830*	
2012	168,757	3,715	6,687	203.721	2,343	52,174	
2013	172,472	3,715	6,687	206.184	2,463	56,398	
2014	176,187	3,715	6,687	209.083	2,899	60,186	

^{*} Note: The new jobs implied by the room additions in 2011 are less than the REMI hotel employment.

The adjustment for new hotel construction uses a basic ratio of jobs-to-room. We assume a jobs-to-room ratio of 1.8, which was obtained in the following manner. First, we expect new hotel rooms to create new jobs in hotels services. Using historical information from 2002-2007, we take the historical average ratio of annual accommodation employment from DETR divided by the total hotel rooms. From this calculation we obtain a jobs-to-room multiplier of 1.3 for hotel services. New hotel rooms will also generate economic activity, and hence, additional jobs in other sectors. For example, increased tourism activity from new hotel rooms will also increase the demand for food services and other tourism-related industries. We account for these new jobs in the following manner. Each industry's location quotient² is used to estimate the portion of the industry's employment attributable to tourism activity. We then take the historical average ratio of the annual employment in each of these sectors, which is attributable to tourism activity, divided by the total hotel rooms. The sum of the ratios for the food services and other tourism-related industries is approximately 0.5. This together with the jobs-to-room multiplier of 1.3 for hotel services produces the overall jobs-toroom ratio of 1.8. The jobs-to-room multiplier is then used as the multiplicand times the number of additional rooms over and above the rooms and jobs already accounted for in the model. These results are shown in Table 5, revealing an increase in about 60,000 jobs by 2014 and years after.

 $^{^2}$ The Location quotient (LQ) compares Clark County's employment in a given industry sector to that of the nation. An LQ greater than 1 indicates that the area has proportionately more workers than the nation employed in that specific industry sector. This implies that the area is producing more than is consumed by its residents. Hence, the portion of the LQ that is above 1 represents the proportion of the industry's employment attributable to tourism activity.

C. Transportation and infrastructure improvements.

Clark County has continued to invest in transportation infrastructure such as roads, highways, and mass transit. The model assumes that public-infrastructure investment will continue at a pace consistent with the model history. Thus, some local spending on public infrastructure, such as road building and additional services, is built into the model. However, one-time monies tend to come from outside the region, for example, federal transportation funding. These large, special projects need to be accounted for in the forecast.

Whereas some of the planned expenditures are "new money," the remaining would have been spent for other purposes. Thus, in order to avoid double-counting and retain a balanced budget, the expenditures are entered in the REMI model as translator policy variables. The model then computes the actual new expenditures over and above what is already included and returns them as policy variables.

The estimated federal funding in transportation-infrastructure investment expenditures are about \$531 million between 2006 and 2008, \$331.6 million between 2009 and 2010, \$567 million between 2011 and 2020, and \$677.4 million between 2021 and 2030.³ These \$2.1 billion in expenditures are annualized and included in the REMI investment model as translator policy variables.

D. Amenity Adjustments

For over a decade, the Las Vegas metropolitan area has been one of the fastest-growing communities in the U.S. This has helped maintain a vibrant economy, but research has shown that rapid urban expansion is frequently correlated with a diminishing quality of life as congestion, deteriorating air quality, and a shortage of public services take their

³ Source: Regional Transportation Plan FY 2006-2030 (Draft).

toll on local populations. These "negative externalities" arising from rapid growth impose costs on local residents, making the county less attractive to those living here and potential in-migrants. As a result, people are more likely to relocate to areas with a higher quality of life, all else equal.

To account for the rising social costs of negative externalities from growth, we continue to include an amenity factor in the model. We assume that the social costs of growth rise by 0.033 percent each year. The amenity factor is introduced in the model through the wage equations, effectively causing real wages to fall relative to other regions. Falling wages means less economic migration, and population growth slows as the desirability of Clark County falls.

IV. Analysis of the Economic and Demographic Forecast

As with last year, the forecast continues to predict steady economic growth for Southern Nevada over the forecast period extending out to 2035. However, the rate of growth, which has been decidedly more than the national average over the past fifty years, is beginning to moderate and move toward the national rate of growth. For Southern Nevada to continue along the robust expansion path of the past, new business models, which are competitive on a global scale, will have to evolve. The recalibration of the REMI model and the associated respecification of exogenous growth factors, primarily hotel investment over and above rates implied by historical trend values and econometric relations, yield positive adjustments. Tables 6 - 8, respectively, report the population, employment, and gross regional product (GRP) predictions for Clark County from the calibrated model.

A. Population

Each year, Clark County Comprehensive Planning (CCCP) estimates the Clark County population using the housing-units method. The US Post Office performs a residential vacancy survey. The general idea is to multiply the number of nonvacant units by the census-based persons per household to give a total population estimate in July. This estimate is used instead of the census estimates because it is generally agreed that the housing-unit method works best in rapidly growing urban areas such as Clark County.

We traditionally rebase the population forecast by adding the forecasted annual changes in population to the most recent population estimate. The most recent estimate available for use in rebasing this forecast is CCCP's July 2007 estimate of 1,997,542 people. This leads us to increase the population forecasts by 92,842, so that we forecast that population will grow from roughly 2.1 million in 2008 to about 3.6 million in 2035. See Table 6.

The population in Clark County is predicted to grow at a rate of 4.2 percent in 2008 and 2009. In the following years, growth begins to taper off as the Clark County economy continues to mature. By 2015, population growth has fallen to 2.9 percent, and it stabilizes at 1.1 percent, just above the estimated long-term national population growth rate of 1 percent, around 2030. This type of growth pattern is expected as our economy matures, and is very similar to previous forecasts.

Clark County is forecasted to experience declining net in-migration throughout the forecast as local growth stays just above expected US growth. In the early years of the forecast, economic migrants, those drawn in by relatively high wages and the abundance of employment opportunities, are the bulk of total in-migration. In later years, the population becomes large enough so that local population growth can fill new employment opportunities. As economic migration starts tapering off, more retired or international migrants enter the region. By 2028, these noneconomic migrants dominate net in-migration, drawn by local amenities.

B. Employment

The strong employment growth over the last few years is expected to continue in the near future, though the slowdown in the growth rate comes sooner that previous forecasts. The employment-growth forecast is somewhat lower than last year's forecast. This could be a reflection of the beginning of the housing market slump in 2007. Employment-growth reaches a peak of 5.1 percent in 2009 (as new hotel rooms come online) and then starts to decrease thereafter. By 2027, growth in employment falls to a low of 0.6 percent. Finally, after 2027, growth picks up again slightly, rising back up to about 0.9 percent by 2035 to very nearly match the long-run population-growth estimates. See Table 7.⁴

The slowdown of employment growth can be attributed to three factors. First, employment growth slows as the economy and the gaming industry mature. This is a typical pattern of regional economic growth: large city economies tend to grow more slowly than small cities, in part, because of their larger population base from which the rate is calculated. Second, the labor participation rate is expected to fall as the baby boomers begin retiring in the coming two decades. Third, the increase in the Hispanic population over the last decade has led to an increase in children in Clark County, who would just be entering the work force near the end of the forecast to increase employment growth somewhat again. This shift, seen in the 2000 census, is picked up in the latest versions (9.0 and 9.5) of the model.

⁴ Unadjusted employment forecasts are shown in the Appendix.

Tabl	Table 6: Population History, REMI Forecast, and Rebased Forecast					
			Change in	Growth in Population		
	Population REMI	Population	Population	Rebased		
Year	Forecast	Rebased Forecast	Rebased Forecast	Forecast		
2007	1,996,542*	1,996,542*				
2008	1,988,000	2,080,000	83,000	4.2%		
2009	2,074,000	2,166,000	87,000	4.2%		
2010	2,161,000	2,253,000	86,000	4.0%		
2011	2,244,000	2,336,000	84,000	3.7%		
2012	2,326,000	2,418,000	81,000	3.5%		
2013	2,406,000	2,498,000	80,000	3.3%		
2014	2,483,000	2,575,000	78,000	3.1%		
2015	2,557,000	2,649,000	74,000	2.9%		
2016	2,629,000	2,721,000	72,000	2.7%		
2017	2,698,000	2,790,000	68,000	2.5%		
2018	2,763,000	2,855,000	65,000	2.3%		
2019	2,825,000	2,917,000	63,000	2.2%		
2020	2,886,000	2,978,000	61,000	2.1%		
2021	2,944,000	3,036,000	58,000	1.9%		
2022	2,999,000	3,091,000	55,000	1.8%		
2023	3,052,000	3,144,000	53,000	1.7%		
2024	3,102,000	3,194,000	50,000	1.6%		
2025	3,151,000	3,243,000	48,000	1.5%		
2026	3,196,000	3,288,000	46,000	1.4%		
2027	3,240,000	3,332,000	44,000	1.3%		
2028	3,282,000	3,374,000	42,000	1.3%		
2029	3,322,000	3,414,000	41,000	1.2%		
2030	3,362,000	3,454,000	39,000	1.1%		
2031	3,400,000	3,492,000	39,000	1.1%		
2032	3,438,000	3,530,000	38,000	1.1%		
2033	3,477,000	3,569,000	39,000	1.1%		
2034	3,515,000	3,607,000	39,000	1.1%		
2035	3,554,000	3,646,000	39,000	1.1%		
* Clark	County Comprehensive	e Planning housing-unit	t-based population estima	ite.		

Table 7: E	mployment History	and Forecasts		
Year	Employment REMI Forecast	Change in Employment Forecast	Growth in Employment Forecast	Labor Force Participation Rate (REMI Forecast)
2006	1.125.000			0.62
2007	1,146,000	21,000	1.8%	0.60
2008	1,184,000	39,000	3.4%	0.60
2009	1,245,000	61,000	5.1%	0.60
2010	1,277,000	32,000	2.6%	0.59
2011	1,303,000	26,000	2.0%	0.58
2012	1,331,000	28,000	2.1%	0.57
2013	1,359,000	28,000	2.1%	0.57
2014	1,388,000	29,000	2.1%	0.56
2015	1,411,000	23,000	1.6%	0.55
2016	1,432,000	22,000	1.5%	0.54
2017	1,452,000	19,000	1.3%	0.54
2018	1,468,000	17,000	1.2%	0.53
2019	1,485,000	16,000	1.1%	0.53
2020	1,499,000	14,000	0.9%	0.52
2021	1,512,000	13,000	0.9%	0.51
2022	1,525,000	13,000	0.9%	0.51
2023	1,537,000	12,000	0.8%	0.50
2024	1,549,000	12,000	0.8%	0.50
2025	1,560,000	11,000	0.7%	0.50
2026	1,570,000	10,000	0.7%	0.49
2027	1,580,000	10,000	0.6%	0.49
2028	1,590,000	10,000	0.7%	0.48
2029	1,602,000	11,000	0.7%	0.48
2030	1,613,000	11,000	0.7%	0.48
2031	1,625,000	12,000	0.8%	0.48
2032	1,639,000	14,000	0.8%	0.48
2033	1,653,000	14,000	0.9%	0.48
2034	1,668,000	15,000	0.9%	0.47
2035	1,683,000	14,000	0.9%	0.47

C. Gross Regional Product

Gross regional product (GRP) is defined as the dollar value of all final goods and services for sale in a regional economy. As such, it reflects the output of a local economy and avoids double-counting initial and intermediate goods. The forecast for growth in the Clark County GRP, shown in Table 8, basically mirrors the growth pattern of local employment, but also reflects continued growth in productivity throughout the majority of the forecast. The GRP-growth forecast reaches 6.6 percent in 2009, but falls below 2 percent by 2023. The GRP forecast then cycles through a low of 1.8 percent to end up at 2 percent in 2035.

Table 8	8: Gross Regional	Product History	and Forecasts	
		Change in GRP	Growth in GRP	
	GRP (Billions of	(Billions of	(Billions of	GRP per Capita
	Chained 2000\$)	Chained 2000\$)	Chained 2000\$)	(Chained 2000\$)
Year	REMI Forecast	REMI Forecast	REMI Forecast	REMI Forecast
2006	77.14			42,327
2007	79.127	1.987	2.6%	41,543
2008	82.341	3.214	4.1%	41,429
2009	87.774	5.433	6.6%	42,314
2010	91.473	3.699	4.2%	42,337
2011	94.884	3.411	3.7%	42,282
2012	98.363	3.479	3.7%	42,297
2013	101.998	3.635	3.7%	42,402
2014	105.734	3.736	3.7%	42,582
2015	108.838	3.104	2.9%	42,561
2016	111.972	3.134	2.9%	42,589
2017	114.854	2.882	2.6%	42,576
2018	117.588	2.734	2.4%	42,564
2019	120.315	2.727	2.3%	42,584
2020	122.901	2.586	2.1%	42,580
2021	125.47	2.569	2.1%	42,619
2022	128.036	2.566	2.0%	42,691
2023	130.588	2.552	2.0%	42,789
2024	133.111	2.523	1.9%	42,906
2025	135.616	2.505	1.9%	43,045
2026	138.093	2.477	1.8%	43,207
2027	140.562	2.469	1.8%	43,388
2028	143.136	2.574	1.8%	43,616
2029	145.845	2.709	1.9%	43,899
2030	148.568	2.723	1.9%	44,197
2031	151.448	2.88	1.9%	44,543
2032	154.478	3.03	2.0%	44,930
2033	157.635	3.157	2.0%	45,339
2034	160.937	3.302	2.1%	45,780
2035	164.227	3.29	2.0%	46,207

V. Risks to the Forecast

Long-term forecasts are driven by structural factors. As such, the technical issues associated with cyclical swings around the structural trend do not receive consideration. The wisdom of doing this might not be readily apparent, so further specificity might prove helpful. Observed data may be easily decomposed into the following multiplicative relationship: $Y = T \times C \times S \times I$, where T is the trend, C is the cyclical effect, S is the seasonal, and I is irregular. Moreover, the trend picks up the influence of economic capital, labor, and natural resources. Other meaningful issues we grapple with for long-term trends are technological advances, institutional parameters, culture and social capital. As such, a host of factors might push an economy off the long-term trend. Business cycle swings, even if in the short run and over the business cycle, can easily render departures from long-term forecasts. As we extrapolate from past values, these cyclically dominated swings suggest errors in the short run. Since the effort is to minimize forecasting errors over the full forecast period, an assessment must necessarily wait until you get toward the ending years of the forecast.

Still, the near-term interface between current cyclical activity and long-term trend merits some comment. As such, we believe current short-term problems center on housing, credit, and oil. Housing problems arose because we overbuilt, overlent and overborrowed. Housing problems have reduced the number of jobs, spending and income. These problems will be corrected over time, that is stronger performance will result in greater population growth, other things equal. Similarly, the abuses in credit have constrained activity of recent. As this may take some time to correct over the interim period, perhaps as much as five years, we will continue to see discussion on monetary and financial credit problems. The complex problems of adverse selection, moral hazard, and principal-agent will not be easily solved. Effects to regulate but not snuff out growth may meet with varying degrees of success. Again, the problems of credit excesses could trim near-term observations below what it might otherwise be. Oil provides a true risk to the forecast if the recent run-up in prices is structural, that is, demand and supply. On the other hand, should prices escalation reflect temporary speculation, and then structural models may need further re-estimation. As we undertake this process once a year will find these problems being addressed as part of future evaluation. Further implications of structural shifts include the environment-energy confluence. Again, these risks to the forecast come under the umbrella of annual model estimation and calibration.

The predicted 4.2 percent population-growth rate for 2008 may seem a little high based on current sentiments from local authorities. This may be addressed via additional rebasing of the population estimates. The current rebasing approach assumes that, going forward, the model makes the same prediction error as in 2007 (92,842). This difference is then added to the population forecasts for 2007-2035 to obtain the rebased population forecast. Alternatively, we could instead use the current sentiments of the authorities on the ground and use a more conservative rebasing approach in 2008. For instance, rebasing the population forecast for 2008-2010 using 60,000, instead of 92,000, produces growth rate forecasts of roughly 2.5 percent over the first three years of the forecast.

Our forecast assumes that national employment growth accelerates in the coming quarters, so that other economies will become more competitive relative to Nevada's (still the fastest-growing state in the nation in terms of employment). If that does not occur, our forecast may underestimate employment growth, especially in the near term. The model also forecasts that the recent economic growth will last through the short run. This includes both population growth and growth in our major economic sectors. Our hotel room adjustments assume that a total of 43,000 will be added to the current hotel room inventory by 2014. If, for example, capacity constraints at McCarran International Airport put downward pressure on growth by constraining visitor volume, these forecasts may be overestimates, especially in the short run.⁵

Another risk is that the current forecasts are based off relatively short economic histories. This again suggests that there is the possibility that the forecasts will over- or underestimate reality, especially in the long run. We must stress, therefore, that the updates of the next few years will be critical in stabilizing the long-term forecasts, not only because the model will improve, but because of the current uncertainty surrounding growth.

Finally, the implicit price of land in the model rises as population density increases, and the model assumes land-price appreciation at a rate similar to past rates. The past appreciation rates reflect existing policies regarding land availability, the housing market, and other factors. If local or national policies influence the availability of land, the housing market, or other factors, then the model may overestimate or underestimate local economic and population growth. In addition, as growth in the Las Vegas area begins to extend beyond the borders of Clark County, the model will need to be updated to reflect this expanded geography. We note that there is also a new factor affecting land prices and, therefore, population growth: the popularity of high-rise condominium projects. The effects of this new development, which could change the face

⁵ How this pressure would affect growth in the long run will depend on the extent to which our visitors find substitute markets. For the time being, however, the LVCVA is continuing its campaign in 2009 to increase visitor volume to over 43 million visitors annually.

of the housing market, will certainly need to be incorporated into future forecasts once more information becomes available about the likely completion of projects now in the conceptual stage, especially if some of the more optimistic concepts come to fruition.

Therefore, although we feel these forecasts are sound, there are significant risks to the forecasts which could lead to our having either over- or underestimated growth. We say again, however, that these risks tend to arise from short-run uncertainty, whereas, our forecasts are primarily meant to be long-run planning tools.

VI. Conclusion

The latest REMI model projects population-growth patterns that are very similar to those forecasted last year. The short-term forecast is slightly less than last year's forecast. However, in the long term, the current population forecast is similar to last year's forecast. We note that, despite short-term economic uncertainties and model difficulties, the main focus of this forecasting exercise, the long-term population estimate is fairly consistent with past forecasts. In 2035, Clark County is expected to have 3.6 million residents. The model continues to predict changes in the economy as the city grows and matures. Thus, the breakneck percentage annual growth rates seen in the past two decades is expected to moderate over the long term.

APPENDIX

Table 9: Las Vegas Room Inventory Summary

	Cost (\$ millions)	Additional Convention Space (Sq. Ft.)	Additional Hotel/Motel Rooms (1)	Additional Time-Share Units (2)	Estimated Year-End Hotel/Motel Room Count
Las Vegas Room Inventory (December 31, 2007)					132,947
Projects scheduled to open in 2008					
Open and/or under construction (as of May 28, 2008)	6,526	204,789	8,789	1,634	
Planned (as of May 28, 2008)	—	—	—	—	
Total	6,526	204,789	8,789	1,634	141,736
Projects scheduled to open in 2009					
Open and/or under construction (as of May 28, 2008)	19,740	1,105,000	16,710	2,028	
Planned (as of May 28, 2008)	—	—	100	—	
Total	19,740	1,105,000	16,810	2,028	158,546
Projects scheduled to open in 2010					
Open and/or under construction (as of May 28, 2008)	4,800	749,000	4,910	_	
Planned (as of May 28, 2008)	680	1,216,000	386	281	
Total	5,480	1,965,000	5,296	281	163,842
Projects scheduled to open in 2011					
Open and/or under construction (as of May 28, 2008)	890	86,616	-	_	
Planned (as of May 28, 2008)	100	9,600	1,200	—	
Total	990	96,216	1,200	_	165,042
Projects scheduled to open in 2008 – 2011					
Open and/or under construction (as of May 28, 2008)	31,956	2,145,405	30,409	3,662	
Planned (as of May 28, 2008)	780	1,225,600	1,686	281	
Total	32,736	3,371,005	32,095	3,943	165,042

NOTE: Both time-share and condo hotel unites are properties that may be rented out to overnight lodgers

Room count includes condo-hotel units that may be rented to overnight lodgers when individual condo owners place their units into a nightly inventory.
 Time-share: Ownership is divided among multiple owners with each owning the unit for a short interval of time (typically a week).

Table 10: Economic Forecast After Employment, Hotel, Amenity, and Transit Adjustments Note: The population forecast will differ from Table 1. See Page 18 for details on rebasing the forecast

Variable	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total Emp (Thous)	1124.761	1145.534	1184.456	1245.125	1277.333	1303.486	1331.227	1359.162	1388.093	1410.605
Total GRP (Bil Chained 2000\$)	77.14	79.127	82.341	87.774	91.473	94.884	98.363	101.998	105.734	108.838
Total GRP (Bil Fixed 2000\$)	80.621	83.292	87.3	93.734	98.394	102.807	107.357	112.144	117.11	121.424
Personal Income (Bil Nom \$)	68.194	73.079	78.961	85.801	91.733	97.73	103.776	110.109	116.56	122.791
PCE-Price Index (Fixed 2000\$)	120.829	124.159	127.228	131.112	134.973	138.736	142.459	146.155	149.817	153.562
Real Disp Pers Inc (Bil Fixed 2000\$)	49.691	51.906	54.751	57.728	59.97	62.184	64.321	66.536	68.718	70.644
Demand (Bil Fixed 2000\$)	118.694	123.407	130.593	140.283	148.277	156.072	163.763	171.806	179.932	187.64
Output (Bil Fixed 2000\$)	116.447	119.521	125.078	134.548	141.173	147.431	153.859	160.634	167.656	173.851
Labor Productivity (Thous Fixed 2000\$)	114.056	115.387	116.793	119.146	121.928	124.902	127.728	130.699	133.649	136.466
Relative Delivered Price	1.059	1.06	1.06	1.06	1.06	1.06	1.059	1.058	1.058	1.057
Relative Cost of Production	1.088	1.089	1.089	1.09	1.09	1.089	1.088	1.087	1.086	1.084
Relative Labor Intensity	0.962	0.962	0.962	0.963	0.963	0.964	0.965	0.966	0.967	0.968
Labor Access Index	1.003	1.004	1.005	1.007	1.009	1.011	1.012	1.014	1.016	1.017
Industrial Mix Index (average)	1	0.999	0.999	0.999	0.998	0.998	0.998	0.998	0.997	0.997
Industrial Mix Index (calculated)	1.008	1.012	1.016	1.02	1.024	1.028	1.032	1.036	1.04	1.04
Reg Pur Coeff (SS over Dem)	0.629	0.623	0.615	0.612	0.609	0.608	0.607	0.605	0.605	0.604
Imports from Multiregions (Bil Fixed 2000\$)	0.294	0.301	0.315	0.338	0.357	0.376	0.394	0.414	0.433	0.454
Imports from Rest of Nation (Bil Fixed 2000\$)	34.621	36.423	39.186	42.693	45.649	48.273	51.041	53.915	56.711	59.387
Imports from Rest of World (Bil Fixed 2000\$)	9.115	9.787	10.741	11.401	11.948	12.476	12.979	13.493	13.999	14.465
Self Supply (Bil Fixed 2000\$)	74.664	76.897	80.35	85.851	90.323	94.948	99.349	103.984	108.789	113.334
Exports to Multiregions (Bil Fixed 2000\$)	0.536	0.548	0.563	0.592	0.612	0.633	0.654	0.676	0.696	0.718
Exports to Rest of Nation (Bil Fixed 2000\$)	38.254	38.86	40.711	44.419	46.271	47.63	49.332	51.127	52.982	54.41
Exports to Rest of World (Bil Fixed 2000\$)	2.882	3.11	3.351	3.595	3.878	4.191	4.497	4.82	5.164	5.363
Exogenous Industry Sales (Bil Fixed 2000\$)	0.111	0.107	0.103	0.092	0.088	0.029	0.028	0.027	0.026	0.025
Exogenous Industry Demand (Bil Fixed 2000\$)	0	0	0	0	0	0	0	0	0	0
Ave Ann Comp Rate (Thous Nom \$)	41.58	43.144	44.853	46.721	48.47	50.18	51.94	53.744	55.588	57.322
Population (Thous)	1822.461	1904.7	1987.524	2074.331	2160.595	2244.099	2325.538	2405.519	2483.069	2557.203
Labor Force	923.655	963.025	1000.943	1046.018	1088.304	1125.629	1159.833	1192.435	1225.973	1256.639

Table 10: Economic Forecast After Employment, Hotel, Amenity, and Transit Adjustments continued Note: The population forecast will differ from Table 1. See Page 18 for details on rebasing the forecast

Variable	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Total Emp (Thous)	1432.288	1451.506	1468.356	1484.605	1498.65	1512.066	1524.969	1537.259	1548.849	1559.758
Total GRP (Bil Chained 2000\$)	111.972	114.854	117.588	120.315	122.901	125.47	128.036	130.588	133.111	135.616
Total GRP (Bil Fixed 2000\$)	125.813	129.96	133.975	138.015	141.925	145.846	149.793	153.752	157.705	161.662
Personal Income (Bil Nom \$)	129.25	135.819	142.576	149.412	156.355	163.517	171.13	179.029	187.419	196.018
PCE-Price Index (Fixed 2000\$)	157.361	161.213	165.129	169.135	173.237	177.418	181.693	186.089	190.608	195.253
Real Disp Pers Inc (Bil Fixed 2000\$)	72.581	74.464	76.336	78.117	79.825	81.527	83.335	85.144	87.046	88.897
Demand (Bil Fixed 2000\$)	195.332	202.665	209.885	216.954	223.829	230.694	237.713	244.872	252.155	259.421
Output (Bil Fixed 2000\$)	180.155	186.085	191.835	197.631	203.244	208.878	214.559	220.262	225.956	231.662
Labor Productivity (Thous Fixed 2000\$)	139.36	142.137	144.927	147.741	150.577	153.436	156.327	159.246	162.184	165.161
Relative Delivered Price	1.056	1.055	1.054	1.054	1.053	1.052	1.052	1.051	1.051	1.05
Relative Cost of Production	1.083	1.082	1.081	1.079	1.078	1.077	1.076	1.075	1.075	1.074
Relative Labor Intensity	0.969	0.97	0.971	0.973	0.974	0.975	0.976	0.977	0.978	0.979
Labor Access Index	1.018	1.02	1.021	1.022	1.023	1.024	1.025	1.025	1.026	1.027
Industrial Mix Index (average)	0.997	0.997	0.997	0.997	0.997	0.997	0.997	0.997	0.997	0.997
Industrial Mix Index (calculated)	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Reg Pur Coeff (SS over Dem)	0.604	0.603	0.603	0.602	0.602	0.601	0.601	0.6	0.599	0.598
Imports from Multiregions (Bil Fixed 2000\$)	0.475	0.494	0.513	0.532	0.55	0.568	0.586	0.605	0.623	0.641
Imports from Rest of Nation (Bil Fixed 2000\$)	61.957	64.475	67.03	69.423	71.788	74.131	76.556	79.106	81.758	84.387
Imports from Rest of World (Bil Fixed 2000\$)	14.939	15.399	15.861	16.325	16.788	17.26	17.754	18.268	18.802	19.343
Self Supply (Bil Fixed 2000\$)	117.961	122.297	126.48	130.673	134.703	138.735	142.817	146.893	150.972	155.049
Exports to Multiregions (Bil Fixed 2000\$)	0.74	0.76	0.781	0.801	0.821	0.842	0.862	0.881	0.901	0.922
Exports to Rest of Nation (Bil Fixed 2000\$)	55.864	57.237	58.581	59.955	61.305	62.664	64.021	65.398	66.761	68.131
Exports to Rest of World (Bil Fixed 2000\$)	5.567	5.767	5.97	6.18	6.394	6.613	6.836	7.067	7.3	7.539
Exogenous Industry Sales (Bil Fixed 2000\$)	0.024	0.023	0.023	0.022	0.021	0.025	0.024	0.023	0.022	0.022
Exogenous Industry Demand (Bil Fixed 2000\$)	0	0	0	0	0	0	0	0	0	0
Ave Ann Comp Rate (Thous Nom \$)	59.122	60.978	62.897	64.902	66.999	69.158	71.393	73.72	76.14	78.651
Population (Thous)	2629.114	2697.611	2762.638	2825.353	2886.345	2943.99	2999.157	3051.937	3102.381	3150.554
Labor Force	1282.496	1308.456	1331.575	1349.978	1365.289	1385.204	1402.334	1417.158	1430.58	1443.851

Table 10: Economic Forecast After Employment, Hotel, Amenity, and Transit Adjustments continued Note: The population forecast will differ from Table 1. See Page 18 for details on rebasing the forecast

Variable	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Total Emp (Thous)	1569.975	1579.722	1590.193	1601.682	1612.928	1625.363	1638.879	1653.242	1668.448	1682.863
Total GRP (Bil Chained 2000\$)	138.093	140.562	143.136	145.845	148.568	151.448	154.478	157.635	160.937	164.227
Total GRP (Bil Fixed 2000\$)	165.612	169.578	173.694	178.001	182.35	186.919	191.703	196.671	201.853	207.049
Personal Income (Bil Nom \$)	204.639	213.946	223.697	233.948	245.024	256.693	268.824	281.864	295.252	309.391
PCE-Price Index (Fixed 2000\$)	200.024	204.927	209.99	215.218	220.618	226.196	231.953	237.894	244.035	250.364
Real Disp Pers Inc (Bil Fixed 2000\$)	90.608	92.487	94.393	96.341	98.463	100.636	102.798	105.118	107.356	109.675
Demand (Bil Fixed 2000\$)	266.623	274.072	281.765	289.768	298.103	306.715	315.516	324.741	334.164	343.772
Output (Bil Fixed 2000\$)	237.359	243.078	249.02	255.24	261.521	268.121	275.037	282.215	289.709	297.207
Labor Productivity (Thous Fixed 2000\$)	168.165	171.197	174.268	177.379	180.518	183.695	186.917	190.169	193.484	196.848
Relative Delivered Price	1.05	1.049	1.049	1.049	1.048	1.048	1.048	1.048	1.048	1.048
Relative Cost of Production	1.073	1.072	1.072	1.071	1.071	1.071	1.071	1.071	1.071	1.071
Relative Labor Intensity	0.98	0.981	0.982	0.983	0.984	0.985	0.986	0.987	0.988	0.989
Labor Access Index	1.027	1.028	1.028	1.029	1.029	1.03	1.03	1.03	1.031	1.031
Industrial Mix Index (average)	0.997	0.997	0.997	0.997	0.997	0.997	0.997	0.997	0.997	0.997
Industrial Mix Index (calculated)	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Reg Pur Coeff (SS over Dem)	0.597	0.595	0.594	0.593	0.591	0.59	0.59	0.589	0.589	0.589
Imports from Multiregions (Bil Fixed 2000\$)	0.66	0.678	0.698	0.717	0.738	0.759	0.78	0.802	0.825	0.848
Imports from Rest of Nation (Bil Fixed 2000\$)	87	89.789	92.637	95.556	98.685	101.778	104.786	107.93	111.009	114.205
Imports from Rest of World (Bil Fixed 2000\$)	19.893	20.47	21.076	21.719	22.398	23.11	23.852	24.644	25.48	26.357
Self Supply (Bil Fixed 2000\$)	159.071	163.135	167.355	171.776	176.282	181.069	186.098	191.365	196.849	202.362
Exports to Multiregions (Bil Fixed 2000\$)	0.942	0.962	0.983	1.003	1.024	1.045	1.068	1.09	1.115	1.137
Exports to Rest of Nation (Bil Fixed 2000\$)	69.538	70.925	72.364	73.868	75.346	76.869	78.436	80.018	81.676	83.306
Exports to Rest of World (Bil Fixed 2000\$)	7.787	8.037	8.298	8.573	8.85	9.137	9.435	9.743	10.07	10.402
Exogenous Industry Sales (Bil Fixed 2000\$)	0.021	0.02	0.02	0.019	0.018	0	0	0	0	0
Exogenous Industry Demand (Bil Fixed 2000\$)	0	0	0	0	0	0	0	0	0	0
Ave Ann Comp Rate (Thous Nom \$)	81.253	83.948	86.75	89.663	92.691	95.842	99.121	102.537	106.081	109.763
Population (Thous)	3196.1	3239.663	3281.757	3322.292	3361.52	3400.073	3438.204	3476.81	3515.434	3554.171
Labor Force	1456.986	1469.131	1480.396	1492.191	1502.61	1513.366	1524.477	1534.904	1547.212	1558.271

Table 11: Employment

Variable	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total Employment	1124.761	1145.534	1184.456	1245.125	1277.333	1303.486	1331.227	1359.162	1388.093	1410.605
As % of Nation	0.638	0.64	0.654	0.681	0.693	0.701	0.71	0.72	0.73	0.738
Private Non-Farm	1020.959	1035.829	1070.936	1129.273	1157.835	1180.374	1204.588	1229.034	1254.45	1273.952
Nat Res, Mining, Util, Const	128.255	121.079	124.313	131.793	134.933	137.833	140.426	142.906	145.366	147.353
Forestry, Fishing, Other	0.341	0.358	0.368	0.38	0.391	0.403	0.415	0.427	0.441	0.456
Mining	1.478	1.168	1.393	1.496	1.455	1.417	1.375	1.333	1.295	1.323
Utilities	3.544	3.674	3.736	3.807	3.858	3.904	3.936	3.964	3.989	4.083
Construction	122.891	115.879	118.816	126.11	129.229	132.109	134.7	137.182	139.641	141.491
Manufacturing	27.142	27.173	27.141	27.313	27.359	27.386	27.273	27.119	26.962	27.503
Trade	143.981	147.544	151.428	157.45	160.476	163.761	166.561	169.404	172.436	173.884
Wholesale Trade	28.039	28.751	28.842	29.267	29.364	29.547	29.682	29.855	30.107	30.231
Retail Trade	115.942	118.793	122.586	128.183	131.113	134.213	136.878	139.549	142.329	143.653
Transp, Inform, Fin Act	166.668	169.491	171.876	175.12	177.657	180.442	182.782	185.195	187.848	190.339
Air transportation	4.432	4.515	4.523	4.525	4.567	4.615	4.652	4.691	4.741	4.724
Rail transportation	0.334	0.331	0.331	0.334	0.333	0.332	0.329	0.327	0.324	0.324
Water transportation	0.07	0.072	0.073	0.074	0.074	0.074	0.074	0.074	0.073	0.075
Truck transp; Couriers, msngrs	8.481	8.57	8.684	8.838	8.89	8.941	8.957	8.965	8.978	9.077
Transit, ground pass transp	13.549	14.221	14.522	14.809	15.137	15.476	15.79	16.107	16.456	16.828
Pipeline transportation	0.017	0.018	0.018	0.018	0.018	0.018	0.017	0.017	0.017	0.018
Scenic, sightseeing transp; supp	4.662	4.746	4.801	4.858	4.907	4.959	4.994	5.028	5.071	5.069
Warehousing, storage	3.153	3.241	3.326	3.419	3.488	3.559	3.621	3.682	3.749	3.806
Services	554.913	570.542	596.177	637.597	657.409	670.952	687.546	704.41	721.837	734.872
Profess, Tech Services	59.68	60.784	62.106	63.942	65.603	67.339	68.875	70.429	72.106	73.882
Mngmt of Co, Enter	10.293	10.309	10.375	10.49	10.538	10.605	10.65	10.702	10.782	10.781
Admin, Waste Services	80.031	77.8	79.356	81.306	82.943	84.676	86.213	87.783	89.486	90.835
Educational Services	6.665	7.143	7.423	7.71	7.997	8.303	8.588	8.884	9.193	9.543
Health Care, Social Asst	65.513	69.711	72.513	75.374	78.731	82.243	85.559	88.98	92.539	96.058
Arts, Enter, Rec	31.727	33.103	33.814	34.594	35.325	36.114	36.821	37.553	38.346	39.019
Accom, Food Services	259.81	268.496	286.474	319.075	330.24	334.659	342.974	351.358	359.783	364.137
Other Services (excl Gov)	41.193	43.196	44.116	45.106	46.033	47.012	47.866	48.721	49.602	50.617
Public Admin	103.466	109.371	113.189	115.524	119.171	122.788	126.318	129.809	133.327	136.342
State & Local Gov	80.415	85.683	88.854	91.593	95.093	98.56	101.944	105.285	108.639	111.852
Federal Civilian	11.327	11.396	11.624	11.833	11.853	11.876	11.898	11.921	11.946	11.855
Federal Military	11.724	12.292	12.711	12.098	12.225	12.352	12.476	12.603	12.742	12.635
Farm	0.337	0.334	0.332	0.329	0.327	0.324	0.321	0.319	0.316	0.311

Table 11: Employment continued

Variable	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Total Employment	1432.288	1451.506	1468.356	1484.605	1498.65	1512.066	1524.969	1537.259	1548.849	1559.758
As % of Nation	0.746	0.753	0.758	0.764	0.769	0.773	0.778	0.781	0.784	0.786
Private Non-Farm	1292.733	1309.195	1323.664	1337.688	1349.761	1361.336	1372.499	1383.156	1393.203	1402.645
Nat Res, Mining, Util, Const	149.025	150.263	151.14	151.877	152.351	152.742	153.077	153.382	153.657	153.916
Forestry, Fishing, Other	0.47	0.483	0.496	0.508	0.52	0.531	0.542	0.553	0.564	0.575
Mining	1.352	1.379	1.405	1.429	1.453	1.476	1.5	1.521	1.543	1.564
Utilities	4.17	4.248	4.316	4.381	4.437	4.487	4.537	4.584	4.624	4.661
Construction	143.033	144.153	144.923	145.559	145.941	146.248	146.498	146.724	146.926	147.116
Manufacturing	28.04	28.525	28.973	29.41	29.82	30.207	30.592	30.965	31.312	31.649
Trade	175.18	176.078	176.632	177.093	177.23	177.273	177.263	177.148	176.938	176.63
Wholesale Trade	30.353	30.433	30.473	30.512	30.508	30.497	30.483	30.455	30.416	30.36
Retail Trade	144.827	145.645	146.159	146.581	146.721	146.776	146.779	146.692	146.522	146.269
Transp, Inform, Fin Act	192.802	194.957	196.863	198.749	200.36	201.914	203.436	204.886	206.252	207.539
Air transportation	4.706	4.682	4.653	4.624	4.589	4.553	4.516	4.478	4.439	4.399
Rail transportation	0.323	0.322	0.321	0.319	0.317	0.314	0.312	0.309	0.307	0.304
Water transportation	0.076	0.078	0.08	0.081	0.082	0.084	0.085	0.087	0.088	0.089
Truck transp; Couriers, msngrs	9.169	9.245	9.305	9.361	9.402	9.437	9.468	9.494	9.515	9.529
Transit, ground pass transp	17.199	17.552	17.886	18.219	18.529	18.834	19.135	19.43	19.716	19.995
Pipeline transportation	0.018	0.019	0.019	0.02	0.02	0.021	0.021	0.021	0.022	0.022
Scenic, sightseeing transp; supp	5.065	5.054	5.037	5.018	4.991	4.963	4.933	4.9	4.865	4.827
Warehousing, storage	3.861	3.911	3.956	4	4.038	4.074	4.108	4.141	4.171	4.198
Services	747.685	759.372	770.056	780.559	790	799.199	808.131	816.775	825.043	832.91
Profess, Tech Services	75.628	77.251	78.762	80.255	81.623	82.961	84.248	85.503	86.698	87.836
Mngmt of Co, Enter	10.78	10.769	10.747	10.725	10.691	10.655	10.616	10.574	10.528	10.475
Admin, Waste Services	92.132	93.259	94.237	95.169	95.957	96.704	97.409	98.065	98.675	99.231
Educational Services	9.893	10.227	10.549	10.873	11.181	11.49	11.801	12.112	12.421	12.728
Health Care, Social Asst	99.558	102.855	105.983	109.08	112.004	114.903	117.768	120.612	123.398	126.121
Arts, Enter, Rec	39.674	40.26	40.782	41.293	41.738	42.166	42.58	42.979	43.353	43.709
Accom, Food Services	368.431	372.306	375.795	379.245	382.276	385.21	388.04	390.739	393.289	395.672
Other Services (excl Gov)	51.589	52.445	53.201	53.919	54.53	55.111	55.67	56.192	56.682	57.139
Public Admin	139.248	142.008	144.392	146.623	148.599	150.444	152.188	153.825	155.372	156.842
State & Local Gov	114.94	117.866	120.454	122.87	125.041	127.066	128.974	130.761	132.442	134.032
Federal Civilian	11.769	11.689	11.601	11.52	11.438	11.362	11.291	11.226	11.166	11.112
Federal Military	12.539	12.453	12.337	12.233	12.12	12.016	11.923	11.838	11.764	11.698
Farm	0.307	0.303	0.299	0.294	0.29	0.286	0.282	0.278	0.274	0.271

Table 11: Employment continued

Variable	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Total Employment	1569.975	1579.722	1590.193	1601.682	1612.928	1625.363	1638.879	1653.242	1668.448	1682.863
As % of Nation	0.788	0.789	0.791	0.792	0.793	0.795	0.797	0.8	0.803	0.806
Private Non-Farm	1411.467	1419.876	1428.947	1438.953	1448.73	1459.599	1471.442	1484.021	1497.325	1509.83
Nat Res, Mining, Util, Const	154.194	154.506	154.984	155.652	156.397	157.343	158.526	159.902	161.461	163.004
Forestry, Fishing, Other	0.585	0.595	0.606	0.617	0.628	0.64	0.653	0.665	0.679	0.692
Mining	1.585	1.604	1.626	1.647	1.668	1.69	1.712	1.736	1.759	1.782
Utilities	4.699	4.73	4.764	4.805	4.842	4.882	4.926	4.973	5.021	5.069
Construction	147.325	147.576	147.988	148.583	149.259	150.131	151.235	152.528	154.002	155.461
Manufacturing	31.966	32.26	32.565	32.89	33.2	33.52	33.848	34.196	34.56	34.905
Trade	176.226	175.795	175.44	175.21	174.977	174.905	174.968	175.138	175.428	175.652
Wholesale Trade	30.285	30.201	30.127	30.068	29.999	29.948	29.913	29.888	29.877	29.861
Retail Trade	145.94	145.593	145.312	145.141	144.977	144.957	145.055	145.25	145.551	145.791
Transp, Inform, Fin Act	208.732	209.871	211.122	212.516	213.889	215.436	217.134	218.932	220.881	222.695
Air transportation	4.357	4.313	4.273	4.234	4.195	4.159	4.125	4.093	4.064	4.033
Rail transportation	0.301	0.299	0.296	0.293	0.291	0.289	0.286	0.284	0.283	0.281
Water transportation	0.09	0.091	0.093	0.094	0.095	0.097	0.098	0.099	0.101	0.102
Truck transp; Couriers, msngrs	9.537	9.54	9.546	9.557	9.563	9.574	9.589	9.607	9.629	9.647
Transit, ground pass transp	20.265	20.524	20.794	21.074	21.343	21.624	21.915	22.215	22.525	22.825
Pipeline transportation	0.022	0.022	0.023	0.023	0.024	0.024	0.025	0.025	0.026	0.026
Scenic, sightseeing transp; supp	4.787	4.743	4.702	4.663	4.622	4.582	4.544	4.508	4.474	4.437
Warehousing, storage	4.222	4.244	4.267	4.291	4.313	4.336	4.361	4.386	4.413	4.438
Services	840.348	847.444	854.835	862.685	870.267	878.394	886.965	895.852	904.995	913.573
Profess, Tech Services	88.88	89.864	90.843	91.843	92.762	93.71	94.661	95.619	96.566	97.5
Mngmt of Co, Enter	10.417	10.353	10.293	10.238	10.176	10.119	10.065	10.014	9.965	9.913
Admin, Waste Services	99.736	100.195	100.699	101.259	101.785	102.379	103.029	103.72	104.467	105.14
Educational Services	13.034	13.337	13.649	13.973	14.301	14.644	15.007	15.382	15.773	16.16
Health Care, Social Asst	128.8	131.448	134.161	137.003	139.864	142.896	146.047	149.249	152.435	155.405
Arts, Enter, Rec	44.042	44.352	44.679	45.031	45.371	45.741	46.142	46.562	47.007	47.428
Accom, Food Services	397.879	399.935	402.13	404.496	406.708	409.101	411.652	414.343	417.175	419.806
Other Services (excl Gov)	57.561	57.961	58.382	58.842	59.3	59.804	60.363	60.964	61.607	62.222
Public Admin	158.241	159.583	160.987	162.473	163.946	165.515	167.192	168.979	170.884	172.797
State & Local Gov	135.538	136.973	138.432	139.935	141.412	142.953	144.57	146.269	148.058	149.853
Federal Civilian	11.062	11.017	10.983	10.96	10.941	10.93	10.927	10.931	10.943	10.957
Federal Military	11.641	11.593	11.572	11.578	11.593	11.632	11.695	11.779	11.883	11.987
Farm	0.267	0.263	0.259	0.256	0.252	0.249	0.245	0.242	0.238	0.235

Table 12: Employment II

Variable	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
By Demand Source	1020.959	1035.829	1070.936	1129.273	1157.835	1180.374	1204.588	1229.034	1254.45	1273.952
Intermediate Demand	232.508	233.368	238.408	247.236	253.251	259.341	265.062	270.924	277.363	281.325
Local Consumption Demand	322.647	334.109	344.129	355.741	363.342	371.287	378.244	385.461	392.839	400.895
Government Demand	8.896	8.785	9.091	9.563	9.865	10.251	10.61	10.973	11.344	11.62
Investment Activity Demand	97.654	95.589	99.404	106.998	111.631	115.825	119.106	122.156	125.108	128.013
Exports to Multiregions	4.733	4.811	4.911	5.073	5.149	5.212	5.285	5.355	5.413	5.483
Exports to Rest of Nation	338.804	342.898	358.169	387.487	396.909	400.646	407.921	415.251	422.88	427.035
Exports to Rest of World	14.745	15.335	15.932	16.39	16.947	17.574	18.134	18.699	19.3	19.388
Exogenous Industry Sales	0.972	0.933	0.892	0.786	0.742	0.24	0.227	0.215	0.203	0.193
Exogenous Industry Demand	0	0	0	0	0	0	0	0	0	0
Variable	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
By Demand Source	1292.733	1309.195	1323.664	1337.688	1349.761	1361.336	1372.499	1383.156	1393.203	1402.645
Intermediate Demand	285.28	288.659	291.468	294.329	296.703	298.978	301.064	302.925	304.524	306.027
Local Consumption Demand	408.834	415.91	422.376	428.488	433.829	439.004	444.258	449.305	454.292	458.932
Government Demand	11.87	12.084	12.265	12.434	12.585	12.718	12.827	12.926	13.002	13.067
Investment Activity Demand	130.518	132.558	134.195	135.611	136.692	137.607	138.483	139.317	140.128	140.899
Exports to Multiregions	5.546	5.605	5.655	5.706	5.749	5.8	5.838	5.871	5.903	5.94
Exports to Rest of Nation	431.027	434.646	437.9	441.224	444.218	447.12	449.828	452.506	454.944	457.266
Exports to Rest of World	19.475	19.557	19.639	19.736	19.833	19.935	20.035	20.149	20.258	20.37
Exogenous Industry Sales	0.184	0.175	0.167	0.16	0.152	0.174	0.166	0.159	0.152	0.145
Exogenous Industry Demand	0	0	0	0	0	0	0	0	0	0
Variable	2026	2027	2028	2020	2030	2031	2032	2033	2034	2035
By Demand Source	1411 467	1419 876	1428 947	1438 953	1448 73	1459 599	1471 442	1484 021	1497 325	1509.83
Intermediate Demand	307 386	308 466	309 715	311 15	312 349	313 885	315 761	317 746	319 985	321 972
Local Consumption Demand	463.083	467 439	471 977	476 866	482.041	487 664	493 556	499 918	506 296	512.467
Government Demand	13.138	13,195	13.251	13.312	13.355	13.402	13.444	13.478	13.525	13.56
Investment Activity Demand	141.563	142.217	142.982	143.883	144.859	146.097	147.457	149.023	150.729	152.432
Exports to Multiregions	5.973	6	6.031	6.054	6.076	6.104	6.134	6.164	6.2	6.226
Exports to Rest of Nation	459.685	461.81	464.112	466.659	468.878	471.236	473.712	476.143	478.843	481.232
Exports to Rest of World	20.499	20.618	20.753	20.908	21.055	21.211	21.378	21.55	21.748	21.942
Exogenous Industry Sales	0.138	0.132	0.127	0.121	0.116	0	0	0	0	0
Exogenous Industry Demand	0	0	0	0	0	0	0	0	0	0

Table 13: Gross Regional Product

Variable	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Total Consumption	52.433	55.108	57.944	61.155	63.945	66.931	69.667	72.625	75.635	78.557	81.571	84.422	87.229	89.977	92.69
Vehicles & Parts	2.927	3.059	3.205	3.384	3.538	3.698	3.854	4.015	4.198	4.368	4.557	4.741	4.931	5.119	5.312
Computers & Furniture	3.53	3.7	4.088	4.456	4.699	4.928	5.103	5.267	5.403	5.574	5.756	5.942	6.12	6.307	6.486
Other Durables	1.408	1.477	1.577	1.706	1.819	1.942	2.06	2.19	2.326	2.467	2.619	2.77	2.925	3.082	3.241
Food & Beverages	6.858	7.162	7.467	7.874	8.153	8.442	8.716	9.007	9.299	9.577	9.861	10.115	10.365	10.599	10.82
Clothing & Shoes	2.735	2.991	3.205	3.347	3.424	3.512	3.586	3.668	3.756	3.812	3.89	3.948	4.011	4.071	4.135
Gasoline & Oil	2.627	2.742	2.938	3.065	3.195	3.361	3.443	3.586	3.706	3.798	3.873	3.944	4.018	4.051	4.121
Fuel Oil & Coal	0.171	0.182	0.19	0.197	0.202	0.209	0.211	0.216	0.22	0.221	0.221	0.221	0.221	0.219	0.219
Other Non-Durables	4.037	4.322	4.561	4.787	5.007	5.24	5.458	5.68	5.909	6.128	6.352	6.557	6.759	6.961	7.159
Housing	8.103	8.715	9.147	9.691	10.17	10.676	11.169	11.686	12.209	12.698	13.184	13.632	14.058	14.479	14.884
Household Operation	2.587	2.69	2.799	2.933	3.052	3.181	3.301	3.431	3.564	3.695	3.827	3.951	4.072	4.19	4.3
Transportation	1.794	1.843	1.919	2.018	2.099	2.188	2.27	2.358	2.449	2.537	2.628	2.713	2.795	2.874	2.947
Medical Care	7.48	7.92	8.275	8.721	9.261	9.836	10.395	10.992	11.612	12.228	12.861	13.47	14.07	14.675	15.271
Other Services	8.612	8.878	9.236	9.713	10.128	10.571	10.984	11.428	11.881	12.322	12.778	13.208	13.633	14.052	14.452
Total Fixed Investment	21.331	21.196	22.457	24.306	25.867	27.402	28.766	30.15	31.573	33.037	34.457	35.84	37.083	38.341	39.547
Residential	7.39	6.949	7.186	7.848	8.29	8.736	9.11	9.48	9.833	10.15	10.456	10.722	10.962	11.18	11.363
Non-Residential	3.246	3.349	3.566	3.929	4.138	4.294	4.409	4.527	4.656	4.723	4.782	4.822	4.849	4.87	4.895
Producers Durable Equip	11.108	11.421	12.4	13.498	14.648	15.84	16.979	18.162	19.407	20.786	22.153	23.543	24.841	26.185	27.513
CBI net IVA+MISC	0.087	0.073	0.059	0.053	0.045	0.037	0.029	0.021	0.014	0.014	0.014	0.015	0.015	0.016	0.016
Exogenous Final Demand	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Government	9.547	9.787	10.035	10.291	10.603	10.938	11.262	11.596	11.94	12.286	12.626	12.954	13.259	13.557	13.846
Federal Military	2.699	2.619	2.612	2.594	2.586	2.594	2.597	2.608	2.624	2.651	2.683	2.718	2.751	2.788	2.83
Federal Civilian	0.994	0.944	0.939	0.928	0.916	0.911	0.904	0.898	0.894	0.893	0.894	0.895	0.896	0.898	0.902
State & Local Gov	5.846	6.216	6.476	6.76	7.09	7.421	7.746	8.072	8.399	8.715	9.018	9.306	9.572	9.826	10.064
Total Exports	49.286	49.727	51.96	56.252	58.488	60.113	62.168	64.32	66.539	68.145	69.827	71.459	73.084	74.78	76.475
Total Imports	57.063	58.734	62.804	67.532	71.573	75.654	79.589	83.808	88.168	92.627	97.127	101.6	105.941	110.295	114.696

Table 13: (Gross Regional	Product	continued
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Variable	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Total Consumption	95.422	98.262	101.07	103.95	106.84	109.62	112.45	115.46	118.61	121.92	125.39	128.98	132.799	136.736	140.712
Vehicles & Parts	5.503	5.708	5.923	6.142	6.361	6.561	6.793	7.014	7.248	7.505	7.766	8.034	8.321	8.612	8.914
Computers & Furniture	6.675	6.882	7.083	7.295	7.517	7.721	7.936	8.17	8.413	8.674	8.951	9.241	9.549	9.872	10.204
Other Durables	3.404	3.576	3.752	3.934	4.119	4.297	4.484	4.678	4.881	5.093	5.315	5.543	5.785	6.029	6.279
Food & Beverages	11.037	11.272	11.501	11.738	11.964	12.181	12.417	12.658	12.917	13.202	13.493	13.806	14.147	14.509	14.867
Clothing & Shoes	4.197	4.268	4.35	4.427	4.513	4.598	4.689	4.797	4.912	5.046	5.189	5.338	5.517	5.71	5.92
Gasoline & Oil	4.194	4.276	4.317	4.408	4.498	4.583	4.606	4.706	4.811	4.93	5.055	5.184	5.327	5.472	5.627
Fuel Oil & Coal	0.219	0.219	0.217	0.218	0.218	0.218	0.216	0.216	0.217	0.218	0.22	0.221	0.223	0.225	0.228
Other Non-Durables	7.36	7.556	7.755	7.952	8.145	8.341	8.542	8.746	8.962	9.18	9.409	9.642	9.897	10.175	10.447
Housing	15.279	15.67	16.055	16.433	16.802	17.168	17.537	17.914	18.307	18.704	19.116	19.543	19.987	20.452	20.917
Household Operation	4.408	4.525	4.641	4.757	4.87	4.978	5.09	5.207	5.329	5.459	5.592	5.733	5.876	6.025	6.178
Transportation	3.021	3.097	3.171	3.248	3.322	3.39	3.462	3.536	3.612	3.693	3.777	3.863	3.955	4.047	4.141
Medical Care	15.875	16.486	17.107	17.728	18.352	18.985	19.623	20.285	20.978	21.686	22.435	23.214	24.011	24.81	25.581
Other Services	14.861	15.29	15.725	16.176	16.625	17.059	17.52	18.001	18.505	19.044	19.615	20.211	20.851	21.511	22.193
Total Fixed Investment	40.733	41.945	43.089	44.236	45.438	46.574	47.654	49.09	50.243	51.368	52.536	53.748	54.949	56.252	57.502
Residential	11.532	11.711	11.891	12.085	12.28	12.455	12.648	12.863	13.102	13.378	13.702	14.049	14.441	14.852	15.279
Non-Residential	4.922	4.951	4.969	4.993	5.019	5.047	5.074	5.528	5.568	5.61	5.665	5.736	5.821	5.921	6.026
Producers Durable Equip	28.84	30.197	31.502	32.807	34.178	35.502	36.768	38.088	39.411	40.689	41.98	43.303	44.585	45.965	47.289
CBI net IVA+MISC	0.016	0.017	0.017	0.017	0.018	0.018	0.018	0.019	0.019	0.019	0.019	0.02	0.02	0.02	0.02
Exogenous Final Demand	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Government	14.124	14.398	14.665	14.927	15.184	15.443	15.688	15.946	16.214	16.478	16.749	17.026	17.307	17.604	17.898
Federal Military	2.873	2.92	2.965	3.013	3.063	3.117	3.165	3.221	3.28	3.338	3.401	3.466	3.532	3.601	3.668
Federal Civilian	0.907	0.912	0.918	0.925	0.934	0.943	0.953	0.965	0.978	0.992	1.007	1.023	1.039	1.057	1.075
State & Local Gov	10.29	10.506	10.717	10.919	11.113	11.303	11.486	11.671	11.863	12.05	12.238	12.429	12.624	12.83	13.034
Total Exports	78.205	79.937	81.702	83.461	85.243	87.08	88.891	90.77	92.736	94.665	96.637	98.695	100.779	102.982	105.164
Total Imports	119.14	123.77	128.29	132.98	137.82	142.52	147.18	152.69	157.79	163.02	168.39	173.91	179.574	185.558	191.511

Table 14: Income and Consumption

Variable	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Personal Income	68.194	73.079	78.961	85.801	91.733	97.73	103.78	110.11	116.56	122.79
As % of Nation	0.623	0.631	0.647	0.67	0.684	0.695	0.706	0.717	0.727	0.735
Earnings by Place of Work	56.128	59.4	63.755	69.333	73.735	77.954	82.383	86.999	91.894	96.31
Wage & Salary Disbursements	40.694	43.101	46.33	50.724	54.029	57.137	60.454	63.913	67.555	70.854
Supplements to wages and salaries	8.78	9.333	10.069	10.929	11.628	12.296	12.998	13.731	14.499	15.214
Employer contr for employee										
pension and ins funds	5.977	6.327	6.8	7.355	7.8	8.223	8.669	9.134	9.623	10.074
Employer contr for gov social ins	2.803	3.006	3.269	3.575	3.829	4.073	4.329	4.597	4.876	5.14
Proprietors' income	6.654	6.966	7.357	7.68	8.078	8.521	8.931	9.355	9.84	10.243
Earnings by Industry	56.128	59.4	63.755	69.333	73.735	77.954	82.383	86.999	91.894	96.31
Contr for Gov Social Ins	5.671	6.034	6.514	7.175	7.711	8.226	8.768	9.334	9.927	10.484
Adj for Residence	-0.812	-0.86	-0.937	-1.046	-1.123	-1.194	-1.27	-1.351	-1.437	-1.512
Dividends, Interest, and Rent	11.188	12.277	13.379	14.59	15.819	17.143	18.421	19.768	21.071	22.466
Personal Current Transfer Receipts	7.362	8.296	9.279	10.098	11.013	12.053	13.011	14.027	14.959	16.011
Personal Taxes	8.152	8.632	9.302	10.113	10.79	11.459	12.145	12.863	13.608	14.308
Disp Pers Inc	60.042	64.446	69.659	75.688	80.944	86.271	91.631	97.246	102.95	108.48
PCE-Price Index (Fixed 2000\$)	124.21	128.02	131.47	135.82	140.21	144.44	148.62	152.77	156.89	161.07
Commodity Access Index	1	1	1	1	1	1	1	1	1	1
Relative Composite Price	1.088	1.088	1.088	1.089	1.089	1.088	1.088	1.087	1.086	1.086
Relative Composite Labor Costs	1.149	1.146	1.142	1.139	1.134	1.129	1.123	1.118	1.112	1.107
Relative Fuel Costs	1	1	1	1	1	1	1	1	1	1
Relative Capital Costs	1.038	1.044	1.047	1.052	1.057	1.06	1.063	1.065	1.067	1.07
Relative Composite Input Costs	1.057	1.058	1.058	1.058	1.058	1.058	1.057	1.056	1.056	1.055
Real Disp Pers Inc per Cap										
(Thous Fixed 2000\$)	27.266	27.252	27.547	27.83	27.756	27.71	27.659	27.66	27.675	27.626
Real Pers Inc (Bil Fixed 2000\$)	56.438	58.859	62.063	65.441	67.964	70.443	72.846	75.337	77.802	79.962
Real Pers Inc per Cap										
(Thous Fixed 2000\$)	30.968	30.902	31.226	31.548	31.456	31.39	31.325	31.318	31.333	31.269
As % of Nation	0.596	0.604	0.62	0.641	0.654	0.666	0.676	0.687	0.697	0.706

Table 14: Income and Consumption continued

Variable	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Personal Income	129.25	135.819	142.576	149.412	156.355	163.517	171.13	179.029	187.419	196.018
As % of Nation	0.744	0.752	0.759	0.765	0.771	0.776	0.781	0.786	0.792	0.797
Earnings by Place of Work	100.909	105.53	110.164	114.936	119.804	124.803	129.962	135.251	140.755	146.425
Wage & Salary Disbursements	74.261	77.684	81.117	84.678	88.284	91.984	95.803	99.75	103.822	108.018
Supplements to wages and salaries	15.949	16.685	17.423	18.187	18.959	19.751	20.567	21.409	22.277	23.172
Employer contr for employee										
pension and ins funds	10.535	10.996	11.455	11.929	12.405	12.891	13.391	13.905	14.433	14.975
Employer contr for gov social ins	5.413	5.689	5.968	6.259	6.554	6.86	7.176	7.504	7.845	8.197
Proprietors' income	10.699	11.161	11.624	12.07	12.561	13.068	13.592	14.092	14.655	15.236
Earnings by Industry	100.91	105.53	110.164	114.936	119.804	124.803	129.962	135.251	140.755	146.425
Contr for Gov Social Ins	11.063	11.651	12.248	12.871	13.509	14.168	14.855	15.569	16.312	17.083
Adj for Residence	-1.593	-1.672	-1.751	-1.832	-1.915	-1.999	-2.086	-2.174	-2.266	-2.36
Dividends, Interest, and Rent	23.908	25.398	26.976	28.557	30.16	31.825	33.646	35.565	37.637	39.757
Personal Current Transfer Receipts	17.089	18.214	19.435	20.623	21.815	23.056	24.463	25.956	27.605	29.279
Personal Taxes	15.036	15.773	16.523	17.289	18.069	18.873	19.716	20.586	21.503	22.445
Disp Pers Inc	114.21	120.046	126.053	132.124	138.286	144.644	151.414	158.443	165.916	173.573
PCE-Price Index (Fixed 2000\$)	165.29	169.57	173.904	178.32	182.822	187.401	192.069	196.865	201.782	206.832
Commodity Access Index	1	1	1	1	1	1	1	1	1	1
Relative Composite Price	1.085	1.084	1.083	1.083	1.082	1.081	1.081	1.08	1.08	1.079
Relative Composite Labor Costs	1.102	1.097	1.092	1.088	1.084	1.08	1.077	1.074	1.071	1.068
Relative Fuel Costs	1	1	1	1	1	1	1	1	1	1
Relative Capital Costs	1.072	1.074	1.075	1.077	1.078	1.079	1.08	1.081	1.082	1.083
Relative Composite Input Costs	1.054	1.053	1.053	1.052	1.051	1.051	1.05	1.05	1.049	1.049
Real Disp Pers Inc per Cap										
(Thous Fixed 2000\$)	27.607	27.604	27.632	27.649	27.656	27.693	27.786	27.898	28.058	28.216
Real Pers Inc (Bil Fixed 2000\$)	82.136	84.248	86.342	88.339	90.255	92.165	94.186	96.206	98.327	100.392
Real Pers Inc per Cap										
(Thous Fixed 2000\$)	31.241	31.231	31.253	31.267	31.27	31.306	31.404	31.523	31.694	31.865
As % of Nation	0.715	0.723	0.731	0.737	0.742	0.748	0.754	0.759	0.765	0.77

Table 14: Income and Consumption continued

Variable	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Personal Income	204.639	213.946	223.697	233.948	245.024	256.693	268.824	281.864	295.252	309.391
As % of Nation	0.8	0.804	0.808	0.812	0.817	0.823	0.828	0.835	0.841	0.847
Earnings by Place of Work	152.257	158.275	164.647	171.374	178.369	185.801	193.692	202.043	210.861	219.963
Wage & Salary Disbursements	112.332	116.784	121.478	126.451	131.618	137.108	142.934	149.101	155.608	162.327
Supplements to wages and salaries	24.091	25.039	26.038	27.097	28.197	29.365	30.605	31.918	33.303	34.734
Employer contr for employee										
pension and ins funds	15.529	16.099	16.699	17.333	17.99	18.687	19.424	20.203	21.024	21.868
Employer contr for gov social ins	8.561	8.939	9.339	9.764	10.207	10.679	11.181	11.714	12.279	12.865
Proprietors' income	15.834	16.452	17.13	17.826	18.554	19.328	20.153	21.025	21.95	22.903
Earnings by Industry	152.257	158.275	164.647	171.374	178.369	185.801	193.692	202.043	210.861	219.963
Contr for Gov Social Ins	17.883	18.715	19.597	20.534	21.515	22.561	23.676	24.862	26.121	27.431
Adj for Residence	-2.455	-2.552	-2.657	-2.766	-2.88	-3.003	-3.136	-3.278	-3.428	-3.583
Dividends, Interest, and Rent	41.847	44.194	46.63	49.187	52.039	55.025	58.078	61.405	64.757	68.379
Personal Current Transfer Receipts	30.873	32.745	34.673	36.687	39.011	41.432	43.866	46.556	49.183	52.063
Personal Taxes	23.402	24.415	25.48	26.603	27.797	29.058	30.382	31.795	33.265	34.803
Disp Pers Inc	181.238	189.532	198.216	207.344	217.227	227.635	238.443	250.069	261.987	274.588
PCE-Price Index (Fixed 2000\$)	212.007	217.303	222.774	228.417	234.238	240.254	246.462	252.863	259.489	266.308
Commodity Access Index	1	1	1	1	1	1	1	1	1	1
Relative Composite Price	1.079	1.078	1.078	1.078	1.078	1.077	1.077	1.077	1.077	1.077
Relative Composite Labor Costs	1.066	1.063	1.061	1.06	1.058	1.057	1.056	1.055	1.054	1.054
Relative Fuel Costs	1	1	1	1	1	1	1	1	1	1
Relative Capital Costs	1.084	1.084	1.085	1.086	1.086	1.087	1.088	1.089	1.09	1.09
Relative Composite Input Costs	1.048	1.048	1.047	1.047	1.047	1.047	1.047	1.047	1.047	1.047
Real Disp Pers Inc per Cap										
(Thous Fixed 2000\$)	28.349	28.548	28.763	28.999	29.291	29.598	29.899	30.234	30.539	30.858
Real Pers Inc (Bil Fixed 2000\$)	102.307	104.401	106.527	108.703	111.063	113.483	115.896	118.483	120.987	123.576
Real Pers Inc per Cap										
(Thous Fixed 2000\$)	32.01	32.226	32.46	32.719	33.039	33.377	33.708	34.078	34.416	34.769
As % of Nation	0.773	0.777	0.782	0.786	0.791	0.797	0.802	0.809	0.814	0.821

Table 15: Population and Labor Force

Variable	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Total Population	1822.461	1904.7	1987.524	2074.331	2160.595	2244.099	2325.538	2405.519	2483.069	2557.203	2629.114
Population As % of Nation	0.609	0.631	0.652	0.674	0.696	0.716	0.735	0.754	0.771	0.787	0.802
By Race and Ethnicity											
White	1009.558	1048.892	1088.005	1128.824	1169.065	1207.243	1243.934	1279.347	1313.175	1344.575	1374.413
Black	160.951	167.499	174.156	180.875	187.702	194.267	200.684	207.002	213.04	218.822	224.402
Other	179.614	189.2	198.996	209.488	219.948	230.165	240.206	250.074	259.71	269.024	278.105
Hispanic	472.338	499.109	526.366	555.144	583.879	612.424	640.714	669.096	697.144	724.782	752.193
By Age											
Ages 0-14	403.507	422.942	440.953	458.819	479.458	498.971	520.021	536.951	553.015	571.79	581.204
Ages 15-24	249.727	258.43	265.963	277.288	283.854	293.199	302.67	312.372	322.651	325.77	338.305
Ages 25-64	975.288	1018.1	1060.073	1105.142	1153.638	1195.519	1230.906	1268.911	1307.687	1344.972	1380.607
Ages 65 & Older	193.939	205.229	220.535	233.083	243.645	256.41	271.941	287.284	299.715	314.67	328.997
Labor Force	923.655	963.025	1000.943	1046.018	1088.304	1125.629	1159.833	1192.435	1225.973	1256.639	1282.496
Participation Rates by Gender											
Male (16 & Older)	0.715	0.71	0.707	0.706	0.704	0.701	0.695	0.692	0.687	0.683	0.68
Female (16 & Older)	0.628	0.628	0.626	0.628	0.628	0.626	0.624	0.621	0.619	0.616	0.611
Variable	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Total Population	2697.611	2762.638	2825.353	2886.345	2943.99	2999.157	3051.937	3102.381	3150.554	3196.1	3239.663
Population As % of Nation	0.815	0.828	0.839	0.85	0.86	0.868	0.876	0.884	0.89	0.896	0.901
By Race and Ethnicity		•	•		•	•	•	•	•		•
White	1402.069	1427.469	1451.379	1473.984	1494.678	1513.941	1531.807	1548.333	1563.595	1577.371	1589.998
Black	229.697	234.636	239.304	243.926	248.212	252.249	256.022	259.528	262.926	266.023	268.972
Other	286.814	295.123	303.201	311.088	318.618	325.911	332.949	339.768	346.355	352.635	358.717
Hispanic	779.031	805.411	831.469	857.347	882.482	907.055	931.159	954.752	977.677	1000.071	1021.976
By Age											
Ages 0-14	591.704	609.209	628.408	639.795	649.678	658.778	666.711	673.598	679.116	683.455	687.25
Ages 15-24	350.969	353.504	352.438	360.957	368.761	378.408	384.462	390.357	399.936	400.896	403.502
Ages 25-64	1411.392	1439.914	1469.655	1496.482	1522.452	1541.013	1561.095	1578.141	1590.694	1614.823	1631.739
Ages 65 & Older	343.545	360.012	374.851	389.112	403.099	420.958	439.67	460.286	480.808	496.926	517.172
Labor Force	1308.456	1331.575	1349.978	1365.289	1385.204	1402.334	1417.158	1430.58	1443.851	1456.986	1469.131
Participation Rates by Gender		•		•						•	
Male (16 & Older)	0.674	0.669	0.664	0.66	0.656	0.652	0.647	0.642	0.637	0.632	0.628
Female (16 & Older)	0.604	0.598	0.594	0.588	0.583	0.578	0.573	0.567	0.562	0.558	0.553

Variable	2028	2029	2030	2031	2032	2033	2034	2035
Total Population	3281.757	3322.292	3361.52	3400.073	3438.204	3476.81	3515.434	3554.171
Population As % of Nation	0.906	0.91	0.914	0.917	0.921	0.924	0.928	0.932
By Race and Ethnicity								
White	1601.754	1612.533	1622.534	1632.057	1641.23	1650.478	1659.568	1668.662
Black	271.78	274.451	277.092	279.619	282.123	284.652	287.142	289.66
Other	364.657	370.444	376.091	381.62	387.081	392.595	398.113	403.619
Hispanic	1043.566	1064.863	1085.804	1106.777	1127.771	1149.085	1170.61	1192.23
By Age								
Ages 0-14	690.52	693.632	696.209	698.685	701.079	703.784	707.071	710.535
Ages 15-24	413.916	426.445	431.862	436.9	441.901	446.624	450.9	454.695
Ages 25-64	1640.826	1646.32	1654.395	1665.046	1678.647	1690.497	1705.349	1716.882
Ages 65 & Older	536.494	555.895	579.053	599.443	616.577	635.906	652.113	672.059
Labor Force	1480.396	1492.191	1502.61	1513.366	1524.477	1534.904	1547.212	1558.271
Participation Rates by Gender								
Male (16 & Older)	0.624	0.62	0.616	0.612	0.609	0.606	0.603	0.6
Female (16 & Older)	0.548	0.544	0.54	0.536	0.533	0.529	0.526	0.523

Table 15: Population and Labor Force continued

Table 16: Demographics

Variable	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Starting Population	1735.166	1822.461	1904.7	1987.524	2074.331	2160.595	2244.099	2325.538	2405.519	2483.069	2557.203
Births	28.18	29.511	31.015	32.221	33.968	35.533	36.663	37.884	38.665	39.854	40.853
Deaths	12.954	13.567	14.193	14.821	15.491	16.126	16.765	17.415	18.07	18.696	19.336
Natural Growth	15.226	15.944	16.822	17.4	18.478	19.406	19.898	20.469	20.595	21.159	21.517
Population Before Migrants	1750.392	1838.405	1921.523	2004.924	2092.809	2180.001	2263.998	2346.007	2426.114	2504.228	2578.72
Total Migrants	72.069	66.296	66.001	69.407	67.786	64.098	61.541	59.512	56.955	52.975	50.394
Economic Migrants	58.954	52.711	52.604	57.862	54.804	50.984	48.177	45.928	43.132	39.386	36.564
Retired Migrants	3.917	3.994	4.114	4.216	4.313	4.407	4.628	4.807	4.989	5.178	5.363
International Migrants	8.552	8.532	8.502	8.471	8.433	8.47	8.505	8.54	8.575	8.611	8.645
Total Special Pops	100.356	101.415	102.196	101.054	101.29	101.527	101.758	101.995	102.254	102.054	101.876
Military	8.527	8.94	9.245	8.799	8.892	8.984	9.074	9.167	9.268	9.19	9.12
Military Dependents	13.325	13.97	14.447	13.75	13.894	14.039	14.18	14.324	14.482	14.36	14.251
College	69.247	69.247	69.247	69.247	69.247	69.247	69.247	69.247	69.247	69.247	69.247
Prisoners	9.257	9.257	9.257	9.257	9.257	9.257	9.257	9.257	9.257	9.257	9.257
Unexplained Growth	0	0	0	0	0	0	0	0	0	0	0
Total Population	1822.461	1904.7	1987.524	2074.331	2160.595	2244.099	2325.538	2405.519	2483.069	2557.203	2629.114
Variable	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Variable Starting Population	2017 2629.114	2018 2697.611	2019 2762.638	2020 2825.353	2021 2886.345	2022 2943.99	2023 2999.157	2024 3051.937	2025 3102.381	2026 3150.554	2027 3196.1
Variable Starting Population Births	2017 2629.114 41.78	2018 2697.611 42.5	2019 2762.638 42.873	2020 2825.353 43.586	2021 2886.345 43.988	2022 2943.99 44.569	2023 2999.157 44.914	2024 3051.937 44.958	2025 3102.381 45.065	2026 3150.554 45.306	2027 3196.1 45.653
Variable Starting Population Births Deaths	2017 2629.114 41.78 19.991	2018 2697.611 42.5 20.64	2019 2762.638 42.873 21.252	2020 2825.353 43.586 21.891	2021 2886.345 43.988 22.55	2022 2943.99 44.569 23.189	2023 2999.157 44.914 23.848	2024 3051.937 44.958 24.513	2025 3102.381 45.065 25.171	2026 3150.554 45.306 25.842	2027 3196.1 45.653 26.497
Variable Starting Population Births Deaths Natural Growth	2017 2629.114 41.78 19.991 21.789	2018 2697.611 42.5 20.64 21.86	2019 2762.638 42.873 21.252 21.621	2020 2825.353 43.586 21.891 21.696	2021 2886.345 43.988 22.55 21.438	2022 2943.99 44.569 23.189 21.38	2023 2999.157 44.914 23.848 21.066	2024 3051.937 44.958 24.513 20.445	2025 3102.381 45.065 25.171 19.894	2026 3150.554 45.306 25.842 19.463	2027 3196.1 45.653 26.497 19.156
Variable Starting Population Births Deaths Natural Growth Population Before Migrants	2017 2629.114 41.78 19.991 21.789 2650.903	2018 2697.611 42.5 20.64 21.86 2719.471	2019 2762.638 42.873 21.252 21.621 2784.259	2020 2825.353 43.586 21.891 21.696 2847.048	2021 2886.345 43.988 22.55 21.438 2907.784	2022 2943.99 44.569 23.189 21.38 2965.37	2023 2999.157 44.914 23.848 21.066 3020.223	2024 3051.937 44.958 24.513 20.445 3072.382	2025 3102.381 45.065 25.171 19.894 3122.275	2026 3150.554 45.306 25.842 19.463 3170.017	2027 3196.1 45.653 26.497 19.156 3215.257
Variable Starting Population Births Deaths Natural Growth Population Before Migrants Total Migrants	2017 2629.114 41.78 19.991 21.789 2650.903 46.708	2018 2697.611 42.5 20.64 21.86 2719.471 43.168	2019 2762.638 42.873 21.252 21.621 2784.259 41.093	2020 2825.353 43.586 21.891 21.696 2847.048 39.298	2021 2886.345 43.988 22.55 21.438 2907.784 36.206	2022 2943.99 44.569 23.189 21.38 2965.37 33.786	2023 2999.157 44.914 23.848 21.066 3020.223 31.714	2024 3051.937 44.958 24.513 20.445 3072.382 29.999	2025 3102.381 45.065 25.171 19.894 3122.275 28.279	2026 3150.554 45.306 25.842 19.463 3170.017 26.083	2027 3196.1 45.653 26.497 19.156 3215.257 24.406
VariableStarting PopulationBirthsDeathsNatural GrowthPopulation Before MigrantsTotal MigrantsEconomic Migrants	2017 2629.114 41.78 19.991 21.789 2650.903 46.708 32.656	2018 2697.611 42.5 20.64 21.86 2719.471 43.168 28.963	2019 2762.638 42.873 21.252 21.621 2784.259 41.093 26.641	2020 2825.353 43.586 21.891 21.696 2847.048 39.298 24.621	2021 2886.345 43.988 22.55 21.438 2907.784 36.206 21.319	2022 2943.99 44.569 23.189 21.38 2965.37 33.786 18.7	2023 2999.157 44.914 23.848 21.066 3020.223 31.714 16.422	2024 3051.937 44.958 24.513 20.445 3072.382 29.999 14.505	2025 3102.381 45.065 25.171 19.894 3122.275 28.279 12.574	2026 3150.554 45.306 25.842 19.463 3170.017 26.083 10.176	2027 3196.1 45.653 26.497 19.156 3215.257 24.406 8.326
VariableStarting PopulationBirthsDeathsNatural GrowthPopulation Before MigrantsTotal MigrantsEconomic MigrantsRetired Migrants	2017 2629.114 41.78 19.991 21.789 2650.903 46.708 32.656 5.532	2018 2697.611 42.5 20.64 21.86 2719.471 43.168 28.963 5.706	2019 2762.638 42.873 21.252 21.621 2784.259 41.093 26.641 5.896	2020 2825.353 43.586 21.891 21.696 2847.048 39.298 24.621 6.101	2021 2886.345 43.988 22.55 21.438 2907.784 36.206 21.319 6.299	2022 2943.99 44.569 23.189 21.38 2965.37 33.786 18.7 6.479	2023 2999.157 44.914 23.848 21.066 3020.223 31.714 16.422 6.662	2024 3051.937 44.958 24.513 20.445 3072.382 29.999 14.505 6.838	2025 3102.381 45.065 25.171 19.894 3122.275 28.279 12.574 7.027	2026 3150.554 45.306 25.842 19.463 3170.017 26.083 10.176 7.201	2027 3196.1 45.653 26.497 19.156 3215.257 24.406 8.326 7.346
VariableStarting PopulationBirthsDeathsNatural GrowthPopulation Before MigrantsTotal MigrantsEconomic MigrantsRetired MigrantsInternational Migrants	2017 2629.114 41.78 19.991 21.789 2650.903 46.708 32.656 5.532 8.68	2018 2697.611 42.5 20.64 21.86 2719.471 43.168 28.963 5.706 8.715	2019 2762.638 42.873 21.252 21.621 2784.259 41.093 26.641 5.896 8.75	2020 2825.353 43.586 21.891 21.696 2847.048 39.298 24.621 6.101 8.786	2021 2886.345 43.988 22.55 21.438 2907.784 36.206 21.319 6.299 8.782	2022 2943.99 44.569 23.189 21.38 2965.37 33.786 18.7 6.479 8.781	2023 2999.157 44.914 23.848 21.066 3020.223 31.714 16.422 6.662 8.788	2024 3051.937 44.958 24.513 20.445 3072.382 29.999 14.505 6.838 8.794	2025 3102.381 45.065 25.171 19.894 3122.275 28.279 12.574 7.027 8.802	2026 3150.554 45.306 25.842 19.463 3170.017 26.083 10.176 7.201 8.812	2027 3196.1 45.653 26.497 19.156 3215.257 24.406 8.326 7.346 8.824
VariableStarting PopulationBirthsDeathsNatural GrowthPopulation Before MigrantsTotal MigrantsEconomic MigrantsRetired MigrantsInternational MigrantsTotal Special Pops	2017 2629.114 41.78 19.991 21.789 2650.903 46.708 32.656 5.532 8.68 101.715	2018 2697.611 42.5 20.64 21.86 2719.471 43.168 28.963 5.706 8.715 101.499	2019 2762.638 42.873 21.252 21.621 2784.259 41.093 26.641 5.896 8.75 101.305	2020 2825.353 43.586 21.891 21.696 2847.048 39.298 24.621 6.101 8.786 101.095	2021 2886.345 43.988 22.55 21.438 2907.784 36.206 21.319 6.299 8.782 100.901	2022 2943.99 44.569 23.189 21.38 2965.37 33.786 18.7 6.479 8.781 100.727	2023 2999.157 44.914 23.848 21.066 3020.223 31.714 16.422 6.662 8.788 100.569	2024 3051.937 44.958 24.513 20.445 3072.382 29.999 14.505 6.838 8.794 100.431	2025 3102.381 45.065 25.171 19.894 3122.275 28.279 12.574 7.027 8.802 100.308	2026 3150.554 45.306 25.842 19.463 3170.017 26.083 10.176 7.201 8.812 100.202	2027 3196.1 45.653 26.497 19.156 3215.257 24.406 8.326 7.346 8.824 100.112
VariableStarting PopulationBirthsDeathsNatural GrowthPopulation Before MigrantsTotal MigrantsEconomic MigrantsRetired MigrantsInternational MigrantsTotal Special PopsMilitary	2017 2629.114 41.78 19.991 21.789 2650.903 46.708 32.656 5.532 8.68 101.715 9.058	2018 2697.611 42.5 20.64 21.86 2719.471 43.168 28.963 5.706 8.715 101.499 8.973	2019 2762.638 42.873 21.252 21.621 2784.259 41.093 26.641 5.896 8.75 101.305 8.898	2020 2825.353 43.586 21.891 21.696 2847.048 39.298 24.621 6.101 8.786 101.095 8.815	2021 2886.345 43.988 22.55 21.438 2907.784 36.206 21.319 6.299 8.782 100.901 8.74	2022 2943.99 44.569 23.189 21.38 2965.37 33.786 18.7 6.479 8.781 100.727 8.672	2023 2999.157 44.914 23.848 21.066 3020.223 31.714 16.422 6.662 8.788 100.569 8.61	2024 3051.937 44.958 24.513 20.445 3072.382 29.999 14.505 6.838 8.794 100.431 8.556	2025 3102.381 45.065 25.171 19.894 3122.275 28.279 12.574 7.027 8.802 100.308 8.508	2026 3150.554 45.306 25.842 19.463 3170.017 26.083 10.176 7.201 8.812 100.202 8.467	2027 3196.1 45.653 26.497 19.156 3215.257 24.406 8.326 7.346 8.824 100.112 8.432
VariableStarting PopulationBirthsDeathsNatural GrowthPopulation Before MigrantsTotal MigrantsEconomic MigrantsRetired MigrantsInternational MigrantsTotal Special PopsMilitaryMilitary Dependents	2017 2629.114 41.78 19.991 21.789 2650.903 46.708 32.656 5.532 8.68 101.715 9.058 14.153	2018 2697.611 42.5 20.64 21.86 2719.471 43.168 28.963 5.706 8.715 101.499 8.973 14.022	2019 2762.638 42.873 21.252 21.621 2784.259 41.093 26.641 5.896 8.75 101.305 8.898 13.903	2020 2825.353 43.586 21.891 21.696 2847.048 39.298 24.621 6.101 8.786 101.095 8.815 13.775	2021 2886.345 43.988 22.55 21.438 2907.784 36.206 21.319 6.299 8.782 100.901 8.74 13.657	2022 2943.99 44.569 23.189 21.38 2965.37 33.786 18.7 6.479 8.781 100.727 8.672 13.551	2023 2999.157 44.914 23.848 21.066 3020.223 31.714 16.422 6.662 8.788 100.569 8.61 13.454	2024 3051.937 44.958 24.513 20.445 3072.382 29.999 14.505 6.838 8.794 100.431 8.556 13.37	2025 3102.381 45.065 25.171 19.894 3122.275 28.279 12.574 7.027 8.802 100.308 8.508 13.295	2026 3150.554 45.306 25.842 19.463 3170.017 26.083 10.176 7.201 8.812 100.202 8.467 13.231	2027 3196.1 45.653 26.497 19.156 3215.257 24.406 8.326 7.346 8.824 100.112 8.432 13.176
VariableStarting PopulationBirthsDeathsNatural GrowthPopulation Before MigrantsTotal MigrantsEconomic MigrantsRetired MigrantsInternational MigrantsTotal Special PopsMilitaryMilitary DependentsCollege	2017 2629.114 41.78 19.991 21.789 2650.903 46.708 32.656 5.532 8.68 101.715 9.058 14.153 69.247	2018 2697.611 42.5 20.64 21.86 2719.471 43.168 28.963 5.706 8.715 101.499 8.973 14.022 69.247	2019 2762.638 42.873 21.252 21.621 2784.259 41.093 26.641 5.896 8.75 101.305 8.898 13.903 69.247	2020 2825.353 43.586 21.891 21.696 2847.048 39.298 24.621 6.101 8.786 101.095 8.815 13.775 69.247	2021 2886.345 43.988 22.55 21.438 2907.784 36.206 21.319 6.299 8.782 100.901 8.74 13.657 69.247	2022 2943.99 44.569 23.189 21.38 2965.37 33.786 18.7 6.479 8.781 100.727 8.672 13.551 69.247	2023 2999.157 44.914 23.848 21.066 3020.223 31.714 16.422 6.662 8.788 100.569 8.61 13.454 69.247	2024 3051.937 44.958 24.513 20.445 3072.382 29.999 14.505 6.838 8.794 100.431 8.556 13.37 69.247	2025 3102.381 45.065 25.171 19.894 3122.275 28.279 12.574 7.027 8.802 100.308 8.508 13.295 69.247	2026 3150.554 45.306 25.842 19.463 3170.017 26.083 10.176 7.201 8.812 100.202 8.467 13.231 69.247	2027 3196.1 45.653 26.497 19.156 3215.257 24.406 8.326 7.346 8.824 100.112 8.432 13.176 69.247
VariableStarting PopulationBirthsDeathsNatural GrowthPopulation Before MigrantsTotal MigrantsEconomic MigrantsRetired MigrantsInternational MigrantsTotal Special PopsMilitaryMilitary DependentsCollegePrisoners	2017 2629.114 41.78 19.991 21.789 2650.903 46.708 32.656 5.532 8.68 101.715 9.058 14.153 69.247 9.257	2018 2697.611 42.5 20.64 21.86 2719.471 43.168 28.963 5.706 8.715 101.499 8.973 14.022 69.247 9.257	2019 2762.638 42.873 21.252 21.621 2784.259 41.093 26.641 5.896 8.75 101.305 8.898 13.903 69.247 9.257	2020 2825.353 43.586 21.891 21.696 2847.048 39.298 24.621 6.101 8.786 101.095 8.815 13.775 69.247 9.257	2021 2886.345 43.988 22.55 21.438 2907.784 36.206 21.319 6.299 8.782 100.901 8.74 13.657 69.247 9.257	2022 2943.99 44.569 23.189 21.38 2965.37 33.786 18.7 6.479 8.781 100.727 8.672 13.551 69.247 9.257	2023 2999.157 44.914 23.848 21.066 3020.223 31.714 16.422 6.662 8.788 100.569 8.61 13.454 69.247 9.257	2024 3051.937 44.958 24.513 20.445 3072.382 29.999 14.505 6.838 8.794 100.431 8.556 13.37 69.247 9.257	2025 3102.381 45.065 25.171 19.894 3122.275 28.279 12.574 7.027 8.802 100.308 8.508 13.295 69.247 9.257	2026 3150.554 45.306 25.842 19.463 3170.017 26.083 10.176 7.201 8.812 100.202 8.467 13.231 69.247 9.257	2027 3196.1 45.653 26.497 19.156 3215.257 24.406 8.326 7.346 8.824 100.112 8.432 13.176 69.247 9.257
VariableStarting PopulationBirthsDeathsNatural GrowthPopulation Before MigrantsTotal MigrantsEconomic MigrantsRetired MigrantsInternational MigrantsTotal Special PopsMilitaryMilitary DependentsCollegePrisonersUnexplained Growth	2017 2629.114 41.78 19.991 21.789 2650.903 46.708 32.656 5.532 8.68 101.715 9.058 14.153 69.247 9.257 0	2018 2697.611 42.5 20.64 21.86 2719.471 43.168 28.963 5.706 8.715 101.499 8.973 14.022 69.247 9.257 0	2019 2762.638 42.873 21.252 21.621 2784.259 41.093 26.641 5.896 8.75 101.305 8.898 13.903 69.247 9.257 0	2020 2825.353 43.586 21.891 21.696 2847.048 39.298 24.621 6.101 8.786 101.095 8.815 13.775 69.247 9.257 0	2021 2886.345 43.988 22.55 21.438 2907.784 36.206 21.319 6.299 8.782 100.901 8.74 13.657 69.247 9.257 0	2022 2943.99 44.569 23.189 21.38 2965.37 33.786 18.7 6.479 8.781 100.727 8.672 13.551 69.247 9.257 0	2023 2999.157 44.914 23.848 21.066 3020.223 31.714 16.422 6.662 8.788 100.569 8.61 13.454 69.247 9.257 0	2024 3051.937 44.958 24.513 20.445 3072.382 29.999 14.505 6.838 8.794 100.431 8.556 13.37 69.247 9.257 0	2025 3102.381 45.065 25.171 19.894 3122.275 28.279 12.574 7.027 8.802 100.308 8.508 13.295 69.247 9.257 0	2026 3150.554 45.306 25.842 19.463 3170.017 26.083 10.176 7.201 8.812 100.202 8.467 13.231 69.247 9.257 0	2027 3196.1 45.653 26.497 19.156 3215.257 24.406 8.326 7.346 8.824 100.112 8.432 13.176 69.247 9.257 0

Table 16: Demographics continued

Variable	2028	2029	2030	2031	2032	2033	2034	2035
Starting Population	3239.663	3281.757	3322.292	3361.52	3400.073	3438.204	3476.81	3515.434
Births	45.974	46.269	46.523	46.926	47.228	47.581	48.077	48.499
Deaths	27.194	27.849	28.525	29.252	29.951	30.647	31.349	32.062
Natural Growth	18.78	18.42	17.998	17.675	17.276	16.934	16.728	16.437
Population Before Migrants	3258.443	3300.177	3340.29	3379.195	3417.35	3455.137	3493.538	3531.871
Total Migrants	23.314	22.114	21.231	20.879	20.854	21.673	21.895	22.3
Economic Migrants	7.032	5.637	4.611	4.185	4.11	4.886	5.057	5.42
Retired Migrants	7.482	7.613	7.722	7.791	7.834	7.872	7.918	7.988
International Migrants	8.84	8.853	8.87	8.83	8.792	8.758	8.726	8.698
Total Special Pops	100.073	100.084	100.112	100.185	100.302	100.459	100.653	100.847
Military	8.417	8.421	8.432	8.46	8.506	8.567	8.643	8.719
Military Dependents	13.152	13.159	13.176	13.22	13.292	13.387	13.506	13.624
College	69.247	69.247	69.247	69.247	69.247	69.247	69.247	69.247
Prisoners	9.257	9.257	9.257	9.257	9.257	9.257	9.257	9.257
Unexplained Growth	0	0	0	0	0	0	0	0
Total Population	3281.757	3322.292	3361.52	3400.073	3438.204	3476.81	3515.434	3554.171

