THE FUTURE OF THE WASHINGTON METROPOLITAN AREA ECONOMY: ALTERNATIVE GROWTH SCENARIOS AND THEIR REGIONAL IMPLICATIONS

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Abstract

The Washington metropolitan area is projected to experience substantial economic growth over the next two decades building on its base of national capital functions and its growing competitive position as a good place in which to do business locally, national and globally. An analysis of the Washington metropolitan area's growth potential going forward establishes the expected magnitude of this future growth. This forecast reflects an extension of the Washington metropolitan area economy building from its federal government base and related core industries given their relative strengths in the national economy as these sectors are projected to grow over the next twenty years.

- The value of goods and services that the Washington area economy can generate over the 2010-2030 period is projected to grow 94 percent adjusted for inflation;
- This economic growth is projected to generate a total of 1.58 million net new jobs in the metropolitan area; and,
- Forecasts for population and household growth for this same period project the Washington area's population to increase by 1.67 million and its number of households to grow by 694,000.

An alternative forecast for this Washington metropolitan area economy was developed building on the region's competitive advan-

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tages that are linked to the federal government and related national capital functions and targeting greater business-based growth. This alternative forecast incorporated selected high-value added, high salary sectors in which the Washington area economy already possessed relatively high concentrations of employment but which have been growing more slowly than in competitive metropolitan areas.

The analysis of the alternative economic futures for the Washington metropolitan area found that if the Washington metropolitan area economy achieved stronger than initially projected growth rates for just seven business-oriented sectors and strengthened its business base in parallel with its historic advantages in federal government and related national capital function – emerging as a global business and government center – its economy would grow faster than initially forecast adding an additional $41.4 billion to its total gross regional product by 2030. The faster growth of these key business sectors would generate an additional $28.9 billion in new personal earnings for workers in the metropolitan area and support 481,225 additional jobs by 2030. These forecasts – the standard forecast and the business-based forecast – are presented in the following table.

Washington Metropolitan Area Economic Forecasts, 2010-2030
(in billions of 2010 dollars)

Distribution of Gross Regional Product	Base Estimate 2010	Forecasts for 2030	
		Standard	Alternative
Retained in metro area	$423.4	$783.6	$821.3
Lost to non-resident workers	18.8	75.1	78.8
Totals	$442.2	$858.7	$900.1

SOURCE: GMU Center for Regional Analysis

Filling the Washington area's significant job requirements over the coming twenty years will require regional and multi-facetted solutions. Preparing the next generation of workers – the pre-school and K-12 school-age children – who already live in the Washington metropolitan area so that they are competitive for the new jobs will require increased investment in new programs and facilities. Institutionalizing the continuing education and skills development for workers in the early and mid-stages of their work life so that they can move up the career ladder and increase their productivity and contribution to the region's future economy will require substantially different models for continuing education and life-long-learning than presently exist. Investing in the region's existing workforce and extending its opportunities to remain active in the workforce well beyond typical retirement ages needs to be given priority at the local and state government levels as well as by business leaders.

However, all of these locally focused efforts on strengthening the metropolitan area's existing human resources will still leave the regional economy well short of its future labor requirements. In fact, the majority of the region's labor force requirements will have to be filled by workers moving to the region. How and where these new household will be housed will be a major challenge having region-wide implications, not only for the Washington metropolitan area but also for all the jurisdictions beyond the Washington region that will become bedroom communities for these new workers coming to the region to fill the new jobs in the Washington metropolitan area.

Beyond the housing challenge associated with future growth will be the infrastructure requirements to support the population growth projected for the metropolitan area: the local and inter-jurisdictional transportation systems, the water and sewer capacity, the parks and recreation centers, the health clinics and hospitals, the public safety services and the cultural facilities. The linkages between work force development, housing and infrastructure and the region's ability to achieve its future economic growth potential are clear. However, the real challenge to the region's economic future will be creating and implementing an institutional framework having the ability to address and resolve these challenges on a long-range and regional basis.

Sumário

Stephen S. Fuller perspectiva um forte crescimento económico da área metropolitana de Washington nas próximas duas décadas, com base nas suas funções de capital nacional e na sua crescente competitividade como lugar de negócio, de âmbitos local, nacional e global. A magnitude do futuro crescimento reflectirá a da sua economia, assente no governo federal e em actividades económicas fundamentais, dado o seu peso relativo na economia nacional e porque estes sectores devem ter um crescimento bastante acelerado nos próximos 20 anos. No período 2010-2030 o valor de bens e serviços gerados pela sua economia deve crescer 94%, descontada a inflação, a par da criação líquida de 1,58 milhões de novos empregos, de 1,67 milhões de habitantes e de mais 694 mil famílias. Foi também

considerada uma previsão alternativa com base nas vantagens competitivas da região associadas ao governo federal e às correspondentes funções de capital nacional mas um maior crescimento na área do negócio, incorporando sectores de alto valor acrescentado e altos salários: de notar que a economia da área metropolitana de Washington conta de há muito concentrações relativamente altas de emprego, embora com taxas de crescimento mais lentas do que nas áreas metropolitanas competitivas. A análise dos cenários económicos alternativos mostra que se a economia registar taxas de crescimento mais fortes do que as previstas para sete sectores orientados para o mercado e reforçar a sua base de negócio em paralelo com as suas vantagens históricas no governo federal e nas correspondentes funções de capital nacional, emergindo como um centro de negócio global e um centro governamental, a sua economia poderá crescer bem mais do que o inicialmente previsto, adicionando um acréscimo de $41,4 mil milhões ao produto regional bruto em 2030: tais taxas de crescimento destes sectores chave gerarão por sua vez, um adicional de $28,9 mil milhões em poupanças pessoais dos trabalhadores e suportarão 481.225 novos empregos em 2030. Para responder a estas novas exigências em termos de força de trabalho, soluções regionais e multifacetadas: investimento crescente em ensino e formação especializada de jovens e dos activos adultos e de meia-idade, melhorando a sua produtividade e a sua carreira profissional (reforço da aprendizagem ao longo da vida e das oportunidades em continuar em actividade, retardando a idade da reforma). No caso de insuficiência, recurso a trabalhadores migrantes, o que implicará a construção de novas habitações na área metropolitana e na envolvente, tornada dormitório, bem como novos sistemas de transporte, de abastecimento de água, de esgotos, e ainda parques e centros recreativos, clínicas e hospitais, serviços de segurança e actividades culturais. São evidentes as ligações entre desenvolvimento da força de trabalho, habitação, infra-estruturas e a capacidade da região em concretizar o seu potencial de crescimento, muito embora o verdadeiro desafio para o futuro crescimento económico da região seja a criação e implementação de um instrumento institucional capaz de abranger e resolver estes desafios numa base regional e de longo alcance.

The Outlook for the Washington Metropolitan Area Economy: Standard Forecast

The "standard" forecast for Washington metropolitan area economy projects it to almost double in size by 2030 increasing by 94.2% between 2010 and 2030. Compared to its peer metropolitan areas (see Table 1), its projected growth rate is more than double those projected for the New York and Chicago metropolitan areas for this same period and almost double the growth rate expected for the Los Angeles metropolitan area. However, the Washington metropolitan area economy is not projected to grow as fast as the economies of Dallas-Fort Worth or Atlanta metropolitan areas. The projections for these six metropolitan economies are presented graphically for the 2010-2030 period in Figure 1.

As a result of these differential growth rates, the ranking of these metropolitan area economies will change. Chicago, which in 2010 will still be the third largest metropolitan area economy, a ranking it has held for many decades, will slip to fifth by 2030 being passed by the Dallas-Fort Worth economy that will move up in order to third, also surpassing the Washington metropolitan area that will remain in fourth position. The Atlanta metropolitan area economy, which currently ranks 10^{th}, will likely surpass Miami (9^{th}), Boston (8^{th}), and Philadelphia (6^{th}) to rank seventh behind Houston's economy that will move up to sixth place. By 2030, the Houston and Chicago metropolitan area economies might have switched places, too, with Houston ranking 5^{th} and Chicago dropping to 6^{th}.

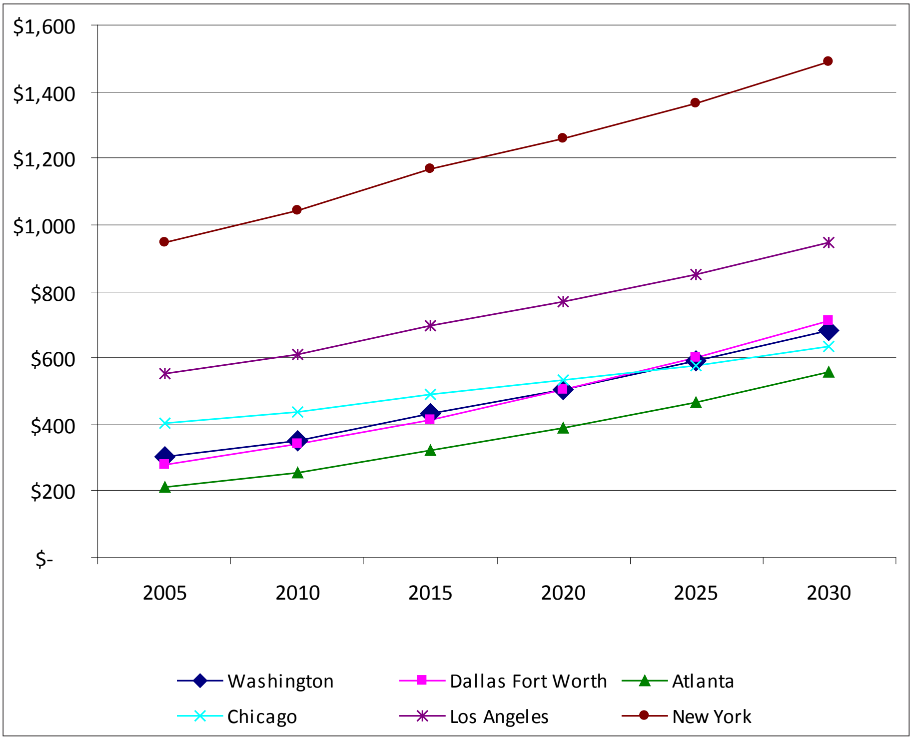
Table 1 – Gross Regional Product Forecasts: 2010-2030
Washington Metropolitan Area and Five Peer Metropolitan Areas
(in billions of 2000$s)

Metro Area	2010	2030	Change	% Change
New York	$1,045.0	$1,489.2	$444.2	42.5
Los Angeles	611.4	947.9	336.5	55.0
Chicago	438.1	633.7	195.6	44.6
Washington	352.1	683.7	331.6	94.2
Dallas-Ft Worth 339.2	709.9	370.7	109.3	109.3
Atlanta	253.7	556.9	303.2	119.5

Sources: NPA Data Services, GMU Center for Regional Analysis

While each of these economies differs in important ways, the Washington metropolitan area economy is the most different in both sectoral structure and value-added per jobs. These characteristics, as seen in job mix and earnings, are well known and help explain the economy's projected long-term performance as well as its counter-cyclical performance during the downside of business cycles.

Figure 1 – Gross Regional Product
($ billion, 2000 dollars)



What is less well understood and what will have a major impact on achieving the Washington metropolitan area's economic growth potentials is the Washington metropolitan area's growing dependency on non-resident workers to fill the local economy's job requirements. This dependency on non-resident labor resources to fill its jobs will affect the region's ability to finance the public services and infrastructure required to retain the area's competitive position and support the demands of future growth, This is not a new problem and it is projected to worsen over the next twenty years. This problem is unique to the Washington metropolitan area as revealed in Table 2.

The Washington metropolitan area has the highest jobs-to-population ratio of the five peer metropolitan areas examined in this analysis. On average these five metropolitan areas have 6 jobs for every 10 residents while the Washington metropolitan area has 7.3 jobs for every ten residents. By 2030, these ratios are projected to be 6.5 jobs per 10 residents on average for the five peer metropolitan areas and 7.8 jobs for every 10 residents in the Washington metropolitan area.

Table 2 – Job-to-Population Ratios and GRP Loses to Commuters, 2010 and 2030

Washington Metropolitan Area and Five Peer Metropolitan Areas
(GRP in percent total GRP and billions of 2000$s)

Metro Area	2010		2030		
	Jobs/Pop	%GRP	Jobs/Pop	%GRP	$GRP
New York	.57	–1.41	.61	–0.22	–$3.2
Los Angeles	.60	–2.85	.66	–2.88	–$27.3
Chicago	.60	–0.61	.64	–0.46	–$2.9
Washington	.73	–4.25	.78	–8.75	–$59.8
Dallas-Ft Worth	.62	–0.15	.66	+2.87	+$20.4
Atlanta	.63	–0.65	.66	–1.21	–$3.7

Sources: NPA Data Services, GMU Center for Regional Analysis

What this means is that the Washington metropolitan area is more dependent than other metropolitan areas on non-resident workers to fill its job requirements. These non-resident workers generate longer average commutes than do resident workers helping to explain the growing commuter traffic congestion in the Washington metropolitan area.

Beyond this very visible and growing problem, these workers take their earnings with them when they leave the metropolitan area each day for their home jurisdictions where they spend these earnings in support of retail and consumer services to the benefit of these non-Washington metropolitan area economies. This loss of personal earnings and related residential-serving economic activity has important employment as well as fiscal implications. Washington area jurisdictions are supplying the employment base and related public services for these non-resident workers but losing their spending effects and related tax revenues to jurisdictions outside of the metropolitan area.

How big a problem is this? In 2010, the Washington economy is projected to lose 4.25% of its total value of output (GRP) to locations beyond the metropolitan boundaries. This represents a loss of approximately $15 billion (in 2000$s). If these dollars had been re-spent within the Washington metropolitan area instead of leaking out to non-local jurisdictions this spending would have generated another $12.9 billion in indirect and induced economic benefits for a total loss of $27.8 billion (in 2000$s) or 7.9% of projected GRP. By 2030, this loss is projected to increase to 8.75% or $59.8 billion (in 2000$s). The total direct and indirect and induced value of this loss of personal earnings would be $111.2 billion (in 2000$s) or 14.2% of projected GRP.

This leakage of earnings and its impact on the Washington metropolitan area economy represents a significant opportunity cost. As can be seen in Table 2, the other five metropolitan area economies retain a much greater share of their respective earnings and this share is increasing over time, with one metropolitan area – Dallas-Fort Worth – actually importing net earnings; that is, its economy is enlarged as a result of net commuting. In contrast, the Washington metropolitan area economy is diminished significantly by its inability to house its workforce to the extent common in competing metropolitan areas.

Sources of Economic Strength in the Washington Area Economy

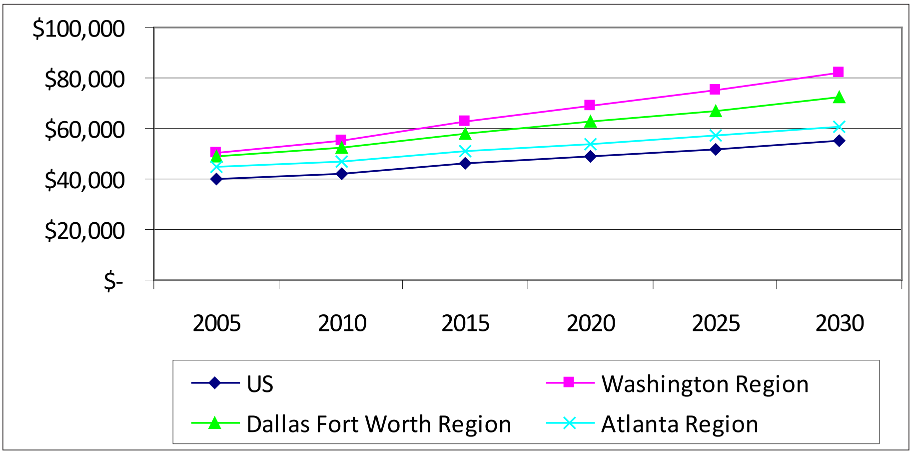
While Dallas-Fort Worth's economy is projected to be larger than the economy of the Washington area by 2020, its economy will not be as much larger as will be its population and employment bases. These differences are even greater in comparison to Atlanta's economy. While Atlanta's population and employment bases are projected to exceed those of the Washington metropolitan area by 2030, its economy will remain considerably smaller.

All jobs are not equal. The average income of workers in the Washington area is substantially greater than in either Dallas-Fort Worth or Atlanta and with more workers per household and fewer dependents, the

Washington area's per capita income levels are also substantial greater and these trends are projected to continue through the forecast period.

The metropolitan areas' population growth patterns offer a partial explanation for these income and earnings differences. With fewer residents than Dallas-Fort Worth and Atlanta, the employment base in the Washington area has a smaller proportion of retail and consumer service jobs that have lower average wages and salaries than the non-residentially supported employment base. Also, the Washington area has a larger proportion of higher value added jobs that are associated with federal contracting and other knowledge and technology-intensive work that characterizes the professional and business services sector. These types of jobs support higher GDP per worker than in other metropolitan areas.

FIGURE 2 – Earnings per Employee – Private Nonfarm Employment

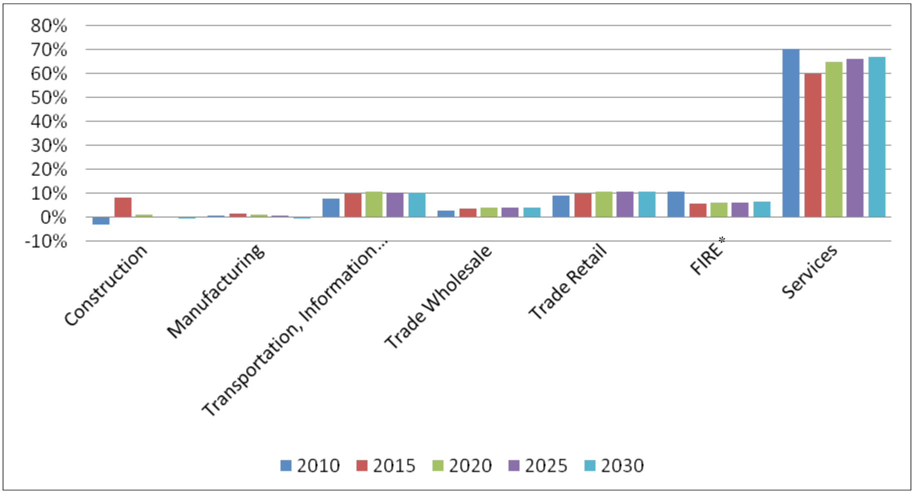


SOURCES: NPA Data Services, Inc., GMU Center for Regional Analysis

The service sector is the dominant source of employment in the Washington area economy accounting approximately 60% of all private sector jobs in 2008. The continuing importance of the service sector in the Washington area's economic growth is illustrated by its contribution to job change over each of the future five-year period.

As shown in Figure 3, the service sector is projected to be the principal source of new jobs ranging from 70% of the private sector job growth projected between 2005 and 2010 and ranging from 60% to 67% of the

FIGURE 3 – Washington Area – Percent of Private Nonfarm Employment Growth by Sector



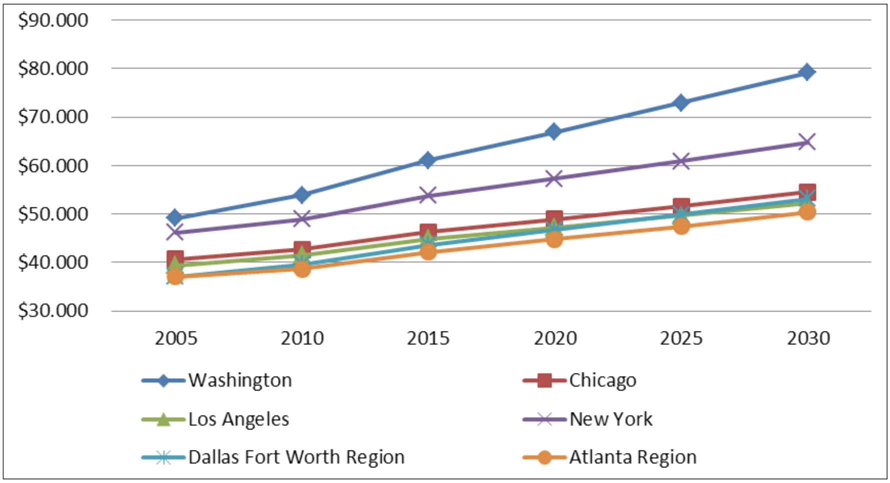
SOURCES: NPA Data Services, Inc.; GMU Center for Regional Analysis
* FIRE = finance, insurance and real estate

Washington area's new private sector job growth in each of the subsequent five-year periods through 2030. In comparison, retail trade is projected to account for only 10% of the Washington area new jobs. In Dallas-Fort Worth and Atlanta, the service sectors are not as dominant accounting for 44% and 47% respectively of all private sector employment. Similarly, their contributions to job growth are projected to be much less (50% and 55%) than in the Washington area economy between 2010 and 2030.

The services sector in the Washington area is a major source of earnings growth. Reflecting the combination of job growth and a favorable salary structure, services will account for 60% of the projected growth in private sector earnings over the next twenty years. Besides being the dominant source of earnings in the Washington area, the services sector has much higher average earnings per employee than is found in the other peer metropolitan areas, as shown in Figure 4.

The Washington area's service sector is larger and consists of a mix of sub-sectors and occupations that distinguish it from other metropolitan area economies. This sub-sector and occupational mix accounts for higher average earnings per worker and supports higher-value added business activities. These differences help explain why the Washington area

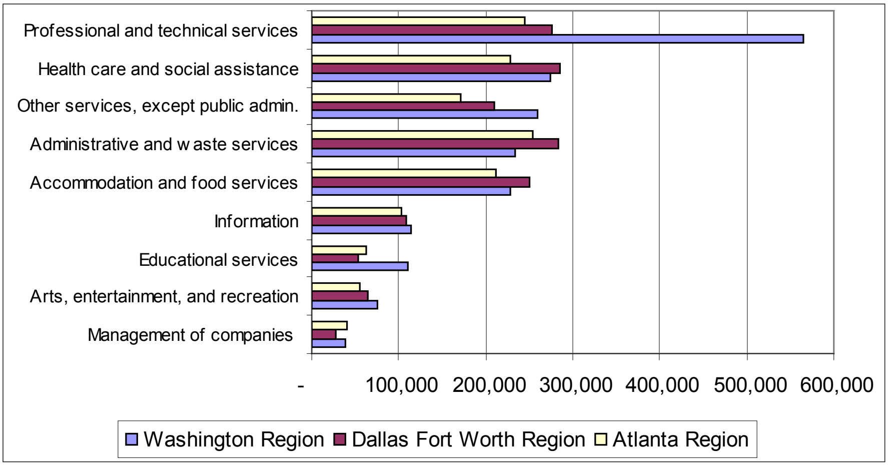
FIGURE 4 – Earnings per Employee – Service Sector



SOURCES: NPA Data Services, Inc.; GMU Center for Regional Analysis

has a higher gross regional product than would otherwise be supported by the size of its employment base. This mix of sub-sector specializations and occupations reflects the Washington area's comparative advantage and may provide the basis for achieving an even greater economic growth over the next twenty years than that is presently forecast.

FIGURE 5 – Employment in Select Services Industries, 2006



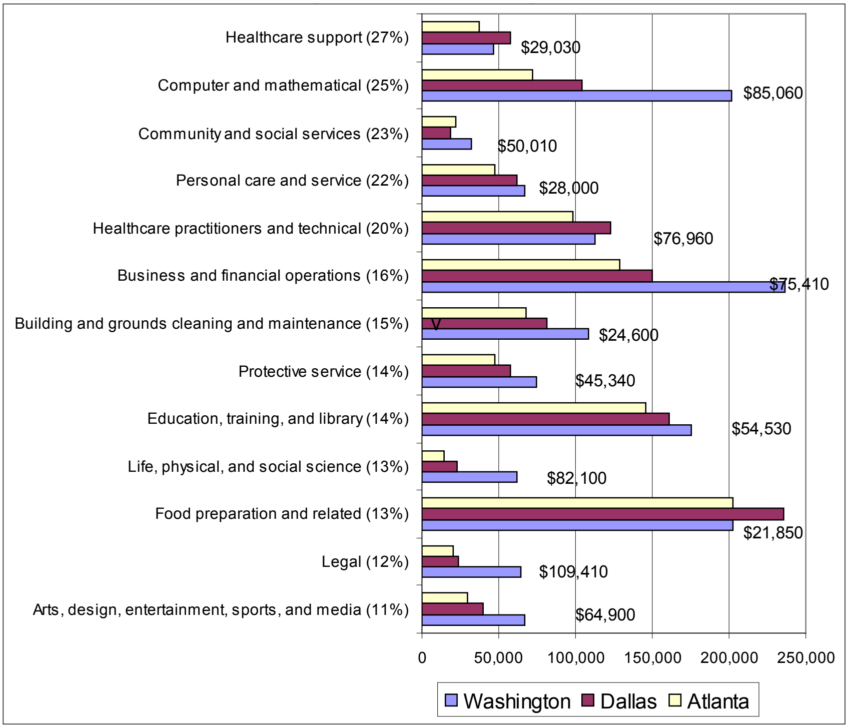
SOURCES: U.S. Bureau of Economic Analysis, GMU Center for Regional Analysis

The principal structural difference that distinguishes the service sector in the Washington metropolitan area economy is the relative size of its professional and technical services sub-sector, its importance as a source of total earnings, and its higher earnings level per employee, as seen in Figure 5. The remaining major sub-sectors comprising the service sector are not significantly different from their counterparts in Dallas-Fort Worth and Atlanta.

The Washington metropolitan area specializes in several of the occupations projected to experience rapid growth over the 2006-2016 period. Some of these have significantly higher wages than for the same occupations in Dallas-Fort Worth or Atlanta. These fast growing occupations are shown by descending rates of growth in Figure 6.

FIGURE 6 – Employment by Occupation (2006) with Forecast Growth > 10% (2006-2016)

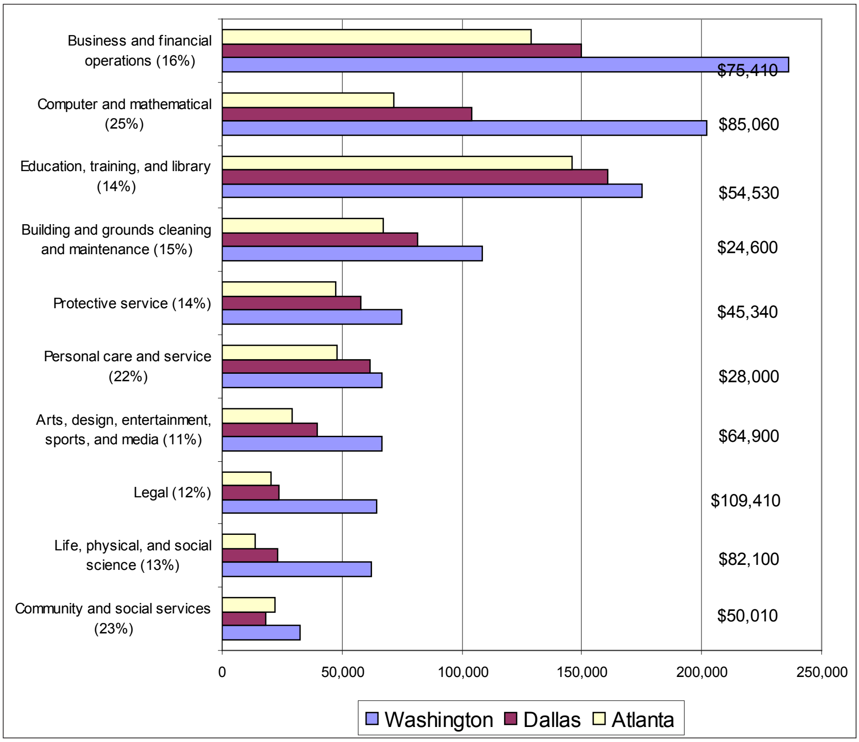
Washington Mean Annual Wage (2006)



SOURCES: U.S. Bureau of Labor Statistics; GMU Center for Regional Analysis

The occupations in which the Washington area has the greatest relative strengths in comparison to Dallas-Fort Worth and Atlanta are presented in rank order in Figure 7. These occupations represent projected job gains totaling 900,000 over the 2006-2016 period and suggest some specializations that may offer faster future economic growth opportunities building on the Washington area's basic comparative strengths.

FIGURE 7 – Employment by Washington's Relative Occupational Strengths
(2006) with Forecast Growth > 10% (2006-2016)
Washington Mean Annual Wage (2006)



SOURCES: U.S. Bureau of Labor Statistics; GMU Center for Regional Analysis

An Alternative Economic Future for the Washington Area

The "standard" forecast presented above reflects an extension of the Washington area economy building from its federal government base and related core industries given the relative strengths of this economic structure as these sectors are projected to grow nationally over the next twenty years. To develop an alternative projection for the Washington area's economic growth potential beyond its national capital functions, an analysis of the private sector structure was undertaken to distinguish those sectors in which the Washington area economy is specialized (has a greater proportion of jobs than is true for the national economy) and that are also characterized by above-average salaries (high value added).

This analysis identified 52 high growth sectors, sectors that were disproportionally strong in the Washington area as well as having above-average salaries at the regional level. While these 52 sectors accounted for 17 percent of the economy's total private sectors they represented 27 percent of Washington area's total private employment base. However, some of these 52 high growth sectors were too small to accommodate future gains of sufficient magnitude to become independent drivers of the metropolitan area economy and others were substantially local serving and whose future growth depended on the area's population growth and therefore were not "export" based.

Further inspection identified 14 sectors whose markets were predominantly non-local (export oriented) and that had a sufficiently large employment base and had also experienced sufficient job growth over the past five years to offer a realistic capacity to support a sufficient magnitude of job growth over the next twenty years to drive the output of the metropolitan area economy beyond the magnitude projected in the "standard" forecast. These 14 sectors included: electronic markets and agents and brokers, other financial investment activities, legal services, accounting and booking services, architectural and engineering services, specialized design services, computer systems design and related services, management and technical consulting services, scientific research and development services, advertising and related services, other professional and technical services, management of companies and enterprises, colleges, universities, and professional schools, and social advocacy organizations.

These 14 private sectors accounted for 557,022 jobs in the Washington metropolitan area in 2003 and added a total of 136,165 net new jobs during the next five years, for a growth rate of 24.4 percent. For seven of these 14 high growth sectors, the Washington metropolitan area economy had the highest location quotients in comparison to its five peer metropolitan areas; that is, the Washington area economy already had a competitive advantage in these 7 sectors. These seven high-growth sectors are: legal services, architectural and engineering services, computer systems design and related services, management and technical consulting services, scientific research and development services, other professional and technical services, and social advocacy organizations.

For the remaining seven high-growth sectors, the Washington metropolitan area economy has been underperforming its peer metropolitan areas; that is, even though these are high-growth sectors in the Washington area economy, these sectors have been growing even faster and are more concentrated in some or all of the other peer metropolitan areas. The growth forecasts for these sectors are presented in the Appendix A.

The question that was answered in this alternative forecast was: if the Washington metropolitan area economy continued to maintain its competitive advantage in the seven high-growth sectors over the next twenty years it has maintained over the recent past and accelerates its performance in the other seven high-growth sectors where is has lagged its peer metropolitan areas to achieve comparable location quotients by 2030 (the same proportion of jobs in these sectors as is currently found in its peer metro areas), how much larger would the Washington metropolitan area economy be in 2030 than currently forecast (the standard forecast) and how many more jobs would this additional economic growth support?

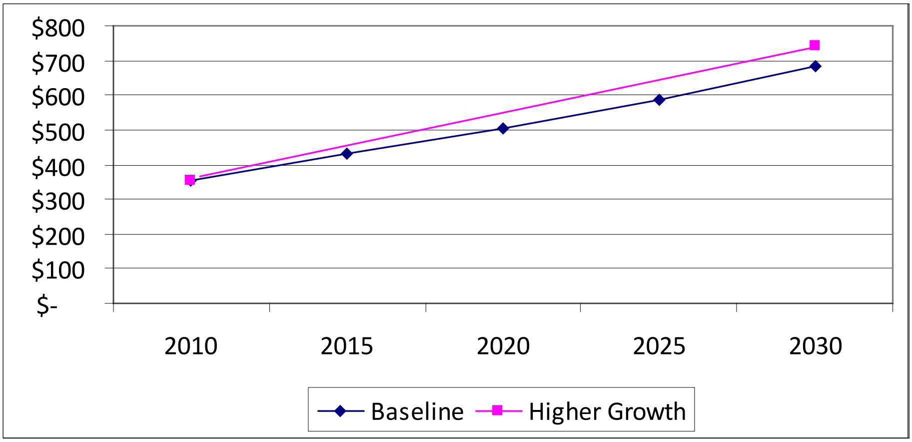
The answer to this question is presented in Table 3 and shown on Figure 8. If the Washington metropolitan area economy evolved beyond its current forecast that builds on its competitive advantages linked to the federal and other national capital functions to become more like its peer metropolitan areas – reflecting business-centered growth – by achieving faster growth in seven key business sectors while maintaining its competitive advantages in the other seven sectors where it currently exists, the Washington area economy could add $37.9 billion additional dollars (in 2000$s) to its projected 2030 base (standard forecast), increase the personal earnings of local residents by $28 billion and add 481,225 new jobs beyond the current forecast. This additional growth, building from the economy's under-performing strength (strong sectors that would be expected to grow at even a faster pace in a more business-centered metropolitan economy) would increase the Washington area's economy from $683.7 billion in 2030 to $721.6 billion and from a growth rate of 94.2% to 105% over this 20-year period. The impacts on the Washington area economy of these potential increases in the growth of its high-growth sectors are detailed in the Appendix B.

Table 3 – Washington Metropolitan Area Alternative Economic Forecast
2010-2030
(in billions of 2000 $s)

Sources	Total Output (1)	Personal Earnings (2)	Jobs Supported (3)
Direct	$22.571	$17.807	226,274
Indirect	15.358	10.245	254,951
Totals	$37.929	$28.052	481,225

Sources: EMSI, Inc, GMU Center for Regional Analysis

Figure 8 – Greater Washington Gross Regional Product
Alternate Forecast ($ billion)



The Challenges of Economic Growth: Developing the Future Workforce

This economic growth projected for the Washington metropolitan area over the next twenty years is not automatic. Its realization will depend on many independent and interdependent factors not the least of which is where are the workers going to come from to fill the projected 1.6 million in new jobs that the economy could generate. And, beyond these net new jobs that will need to be filled, the current workforce will need to be backfilled as workers retire or otherwise exit the workforce adding as many as 1.5 million more job vacancies that will need to be filled by 2030. Further complicating the challenge of meeting the workforce requirements of the Washington area economy is that the mix of jobs and their educational and skills requirements will experience significant and accelerating change during the next twenty years.

There are only three sources for the workers the Washington area economy will require: graduates of local schools and universities, the resident population and existing workforce, and workers willing to move to the region. Building the workforce for the future requires increased and continuing investment in the region's human resources. Historically, priority has been placed on improving the quality of educational opportunities available to children of all ages before they enter the labor force and this remains a critical need. However, continuing education beyond high school and throughout the work life of the area's population must be recognized as being equally important.

With as many as 50 percent of the workers currently employed in the Washington metropolitan area likely to retire or otherwise exit area's labor force over the coming twenty years, the remaining workers represent the foundation for the future workforce. The large majority of these workers – the ones not retiring – are presently under the age of 45. While these workers may be well qualified for the jobs they now hold, as the economy evolves and grows and the mix of occupations and skills requirements changes over the next twenty years many of these workers could benefit from or may even require further education and/or skills upgrading in order to remain productive throughout the second half of their career.

Retaining older workers longer in the labor force and instituting more effective ways to deploy older workers to better utilize their experience and life-long knowledge will become an important strategy for addressing the area's growing labor shortage. The need for increased and on-going education and training to continually advance the quality of the existing work force becomes even more important as workers extend their working life beyond the traditional retirement age. Consequently, giving priority to and institutionalizing life-long learning and continuing investment in advancing the skills levels of mid-career and even older workers will be critical to meeting the future labor force needs of the Washington metropolitan area and will require a concerted and cooperative effort by local and state government agencies and the private sector.

The Challenge of Economic Growth: Housing the Future Workforce

While some of the new workers filling the metropolitan area's future job needs will have been born in the Washington metropolitan area or come to the area to attend college or universities located here, most future workers will have to move to the area from elsewhere in the nation and world. This has been the usual pattern underlying metropolitan area growth in the past. This raises a critical question. If these new workers are going to move to the Washington metropolitan area to fill its new jobs, where are they going to live?

Current population and household forecasts for the Washington metropolitan area for the 2010-2030 period project household growth at approximately 700,000. At 1.5 workers per household, this new household growth would yield 1.05 million new workers. This number (assuming none of them work outside the Washington metropolitan area) falls 539,000 workers short of meeting the economy's projected job requirements over 2010-2030 period. At 1.5 workers per household, this shortage represents 345,000 households.

To fill the job growth demand of the Washington metropolitan area economy over the next twenty years will require the daily importation of as many as 770,000 long-distance commuters (231,000 that were in-commuting in 2010 plus the additional 539,000 that will be added over the subsequent 20 years) from beyond its borders. This growing dependence on non-residents to do the Washington metropolitan area's work has already been shown to represent a significant cost to the metropolitan area economy. The impact of adding another 539,000 daily commuters to the region's highway and public transportation system also will be dramatic.

While the current forecasts show that the Washington metropolitan area is only expected to house 70 percent of its future workforce, housing 700,000 new households raises additional challenges. In order to house these 700,000 new household will require constructing an average of 35,000 new housing units annually for twenty years. To date, the metropolitan area has never added this many units in a single year. And even if the metropolitan area does succeed in expanding its housing stock to accommodate 70 percent of its future work force, this achievement will not have addressed the new housing needed to house new workers coming to the area to back fill jobs being vacated by retiring workers who have chosen to remain in the Washington region and continue to require housing in their retirement.

Housing the future workforce will be a major challenge for the Washington metropolitan area. Under current housing policies the Washington metropolitan area it is unlikely that it will be able to achieve the level of housing construction needed to achieve the growth potential inherent in the region's economy. And, failure to satisfy these future housing requirements will have significant impact the viability of local economies and their tax bases, on the future location of employers and even if they ultimately choose to locate and operate their businesses in the Washington area, and the quality of life in the region with worsening transportation congestion and increasing time of commute being primary consequences of how successful the Washington metropolitan area is in housing its future workers.

There are fundamental interdependencies among the growth of the Washington metropolitan area economy over the coming two decades, its ability to house its future workforce, the quality of life the region will be able to support for its current and future residents, and its fiscal capacity and ability to maintain and expand the infrastructure required to remain competitive among the nation's major metropolitan areas. Where the metropolitan area's workers will resident is key to whether the Washington metropolitan area will be able to achieve its substantial economic potential. If the local housing supply is constrained it will be too expensive to be attractive to many potential workers considering relocation to the Washington area to fill its good jobs. And for many of those workers choosing to relocate to the Washington area to fill its good jobs, they will be forced to commute long distances in order to secure affordable housing and by having to do so will result in their earnings being exported out of the metropolitan area economy to be spent elsewhere while at the same time further burdening the regional transportation system.

The Washington metropolitan area is unlikely to succeed in realizing its future economic potential without a sufficient housing capacity consisting of a mix of housing types and prices fitted to the emerging demand patterns of the region's future residents and located in proximity to major employment centers. Housing is one of the critical requirements for attracting the labor resources prerequisite to maintaining the quality of life that has been taken for granted by the current residents of the Washington metropolitan area. Without a significant increase in the production of new housing, the economy will not be able to accommodate the workers it needs to back fill the jobs being vacated by retiring workers or the new jobs generated by an advancing economy. Without these new workers the region's economy, that has been shown to be so full of promise, will be stifled and lose its competitiveness.

Research Findings and Conclusions

While the Washington area economy is projected to experience strong growth over the next 20 years, this growth will substantially exceed the growth of its population and, as a result, it resident work force will also grow more slowly than in its peer metropolitan areas. Consequently, the Washington area will become increasingly dependent on non-resident workers (commuters) to fulfill its employment requirements. However, the Washington area's emerging economy is projected to continue shifting towards higher-value added jobs in the services sector enabling a relatively smaller employment base to generate a relatively higher value of output. This is seen in the Washington area's employment base being surpassed by both Dallas-Fort Worth and Atlanta while maintaining a significantly higher average salary per job. The Washington area's job and earnings mix more closely parallels that of New York City (with an economy three times the size of Washington's) than other major metropolitan areas.

Key findings of this research can be summarized as follows:

- The Washington area economy will be increasingly impacted by its growing commuter dependency that results in the transfer of income and consumer spending potential to jurisdictions outside of the metropolitan area as seen in disproportionally smaller employment in consumer and retail services, local government services and health services than exists in other metropolitan areas;
- If the Washington area economy had proportionally scaled consumer service sectors to Dallas-Fort Worth and Atlanta, its gross regional product would be an estimated 11.4% larger in 2010 and 12.0% larger by 2030 than currently forecast;

- Still, the Washington area economy is larger than what would be normally supported by its smaller population and resident job bases;
- The Washington area's larger economy is partially explained by its greater number of workers per capita (more workers per household) and fewer dependents; it is also explained by the economy's structure that favors higher-valued business activities with higher earnings per worker and more advanced occupations supported by less cyclically sensitive core industries (e.g., the federal government, international business, hospitality, education and health, technology);
- The private sector strength in the Washington area economy is found in its service sector that reflects a greater proportion of its private sector job base and is projected to account for between 60% and 70% of all net job growth over the next twenty years as well as similar percentages of new earnings; these are significantly greater percentages than projected for the other metropolitan area economies;
- The primary sources of new private sector jobs are found in professional and business services, health services and education services incorporating occupations that are projected to enjoy above-average growth rates and for which the Washington area has both numerical and earnings advantages, including business and financial operations; computer and mathematical; education and training; protective services; arts, design, entertainments, sports and media; legal; life, physical, and social science; and community and social services.

Historically, the growth of the Washington area economy has been dominated by its primary core sectors consisting of federal and national capital functions. While driving the area's economy along a less cyclical growth trajectory these core sectors also have supported the growth of occupations and businesses that are projected to be both rapidly growing and high value added. These faster growing sub-sectors, in combination with the Washington area's historic strengths and its emerging attractiveness as a global center for governmental and international business activities, may provide the framework for raising the economy's growth trajectory in the coming decades.

The Washington area economy has substantial growth potential reflecting the addition of new high value-added jobs. Satisfying the quantitative and qualitative demands of this growing job potential and housing these workers will be the major challenges of the next twenty years. How successful the Washington metropolitan area is in addressing these challenges – housing its work force and work force development – will determine the future growth path of the Washington metropolitan area economy and determine its local jurisdictions' capacities to finance the public services and infrastructure required to realize their economic growth potentials.

APPENDIX A

High-Growth Sectors Having Potential For Additional Job Growth
in the Washington Area Economy and Their Location Quotients (LQ)
(in billions of 2000 $s)

Sectors	2008 LQ	Target LQ	Added Jobs*
Electronic Markets, Agents, Brokers	0.84	2.63	36,160
Other Financial Investment Activities	0.96	2.37	54,020
Accounting & Bookkeeping Services	1.19	2.40	13,331
Specialized Design Services	1.18	2.11	7,233
Advertising and Related Services	1.46	2.51	21,851
Management of Companies/Enterprises	0.95	1.45	20,915
Colleges, Universities, Professional Schools	1.17	1.62	11,514

SOURCES: EMSI, Inc., GMU Center for Regional Analysis.
*job growth beyond gains projected in the Standard Forecast.

APPENDIX B

The Impact of Strong Performances in Seven High-Growth Sectors

On the Washington area Economy, 2010-2030
(in billions of 2000$s)

Sector	GRP Boost	Total GRP Gain	Personal Earnings	Jobs Supported
Agriculture		**	**	104
Mining		**	**	49
Utilities		$0.24	$0.06	550
Construction		0.43	0.38	7,786
Manufacturing		0.19	0.13	2,293
Wholesale Trade	$6.7	7.23	4.21	48,470
Retail Trade		1.77	1.09	37,337
Transportation		0.54	0.44	8,363
Information		1.22	0.56	7,583
Finance/Insurance	5.3	6.38	5.81	72,248
Real Estate		1.92	0.47	17,779
Professional Services	5.0	6.73	5.63	80,739
Management Services	4.6	4.61	3.61	31,647
Administrative Services		0.73	0.60	20,211
Educational Services	1.0	1.10	1.06	26,524
Health Care Services		1.92	1.66	38,414
Arts, Entertainment		0.23	0.18	6,640
Accommodations/Food Services		0.87	0.56	30,213
Other Services		0.63	0.49	21,682
Federal Government		n.a.	n.a.	0
State Government		n.a.	n.a.	0
Local Government		1.17	1.08	20,594
Totals	$22.6	$37.93	$28.05	481,225

SOURCES: EMSI, Inc., GMU Center for Regional Analysis.
** less than $15 million. a. these analyses exclude public sector fiscal impacts.