Spokane Aerospace Cluster

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Section 1.0 Washington State and Spokane Analysis

Washington State was chosen as the broad region to analyze due to the vested interest the authors of this paper have as current residents of Washington State. A brief overview of the paper is provided, followed by a more in depth look at the state of Washington State and Spokane in terms of economic conditions, and social structure. Additionally, an analysis of the State’s current state of competitiveness is provided, followed by recommendations.

Section 1.1: Overview

Washington State is currently performing ever so slightly under the national average in terms of GDP (08’ – 10’), unemployment is on par with the national average and the business environment is overall significantly business unfriendly. Spokane itself is not exempt from the conditions that Washington State as a whole experiences and is in worse economic straits with 9% unemployment and a decreasing real GDP (08’ – 10’). As of May 2011, Chiefexecutive.net (2012) has rated Washington State 37th in performance and business friendliness.

Washington State has several key industries that include aerospace, clean energy, global health and life sciences, information and communication technology, manufacturing, marine technology, value-added agricultural and food processing and tourism. Yet, even with several active industries, Washington State continues to face several severe problems that contribute to its inability to grow economically. The problems are specifically costs relative to employment, the regulatory environment, and failed business programs.

However, Washington State does possess several factors that put it in a position for positive economic growth. Industry, transportation and business is largely localized in the greater Seattle area which allows for easy access to the third largest ferry system in the world, an extensive array of shipyards, a deep bay, a vast airport infrastructure and a well trained work force.

Spokane as well possesses endowments that are capable of being harnessed and used to spur economic growth. Some of these endowments include an international airport, a developing
aerospace cluster, a significantly large medical infrastructure, and eleven institutions of higher education with a medical school currently being built by the University of Washington. Additionally, Spokane has programs funded by the State and federal government to help stimulate economic growth. This funding is directed towards taking advantage of educational programs for training people in technical skills needed within the local growing aerospace cluster.

To help stimulate economic growth not just in Washington State but more specifically in the Spokane area, it is recommended that several changes be made at the State and local level. Those changes are deregulating the business environment so that hiring and terminating employees is not as costly to businesses as it currently is, implementing programs for business development in a manner that is in keeping with the advertisements made for such, lessening the burden on health and safety regulations, reducing the complexity and costliness of the tax code, and making zoning regulations less burdensome.

Section 1.2: Current Performance – Economic and Social

Washington State has experienced a 7% increase in real GDP per capita (BEA, 2011) as compared to the US real GDP per capita of 6.2% from 01’ to 10’. Spokane County has experienced a 4.3% increase in real (GDP) per capita (BEA, 2011) between 01’ and 10’. This compares unfavorably to the US GDP per capita growth of 6.2% between the same years. This GDP differential is further illustrated by the following table on the next page.
If we look more closely at the sector contributions to Spokane county GDP, we see that the manufacturing sector has remained even in overall contribution between 2001 and 2010, while health care and government sectors have increased.

**Metro GDP by Major Sector: Spokane County**

<table>
<thead>
<tr>
<th>Sector</th>
<th>2001 (in Millions)</th>
<th>2010 (in Millions)</th>
<th>2001%</th>
<th>2010%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total GDP</td>
<td>$ 12,714</td>
<td>$ 18,090</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Real Estate and Rental and Leasing (in Millions)</td>
<td>$ 1,528</td>
<td>$ 2,235</td>
<td>12%</td>
<td>12%</td>
</tr>
<tr>
<td>Manufacturing (in Millions)</td>
<td>$ 1,116</td>
<td>$ 1,592</td>
<td>9%</td>
<td>9%</td>
</tr>
<tr>
<td>Health Care and Social Assistance (in Millions)</td>
<td>$ 1,281</td>
<td>$ 2,279</td>
<td>10%</td>
<td>13%</td>
</tr>
<tr>
<td>Government (in Millions)</td>
<td>$ 1,965</td>
<td>$ 2,931</td>
<td>15%</td>
<td>16%</td>
</tr>
<tr>
<td>Retail Trade (in Millions)</td>
<td>$ 1,344</td>
<td>$ 1,599</td>
<td>11%</td>
<td>9%</td>
</tr>
</tbody>
</table>

Source: http://www.communityindicators.ewu.edu/
Section 1.2.1: Unemployment Rate

Unemployment rate in Spokane County in April of 2012 (BLS, 2012) was 8.9%. Washington State and the US were at 8.1% (BLS, 2012). The unemployment data for Spokane County and the State of Washington shows (BLS, 2012) that Spokane County and the State track closely, but Spokane County has been slower to recover jobs than the state as a whole.

Section 1.2.2: Population Growth

Spokane County’s population growth rate has declined (OFM, 2011) since 2006 and is approaching 0% in 2011. This follows the trend in Washington State although the State rate decline has slowed over the last three years, whereas Spokane County has continued to decline.

This growth rate decline is alarming because it can lead to a general economic decline especially when the decline is mostly through loss of a youthful population base. Fiscal difficulties can occur if the population base erodes the tax base.
The data for this population indicator come from the State of Washington Office of Financial Management's April 1st Population Estimates (OFM, 2011). The estimates are updated every year and use information from the most recent decennial Census (in this case, the year 2010 Census). Since these are estimates, and not actual counts, there is room for some error, although the methods used are standardized and tested to reduce the size of the error.

**Population Total and Annual Growth Rate: Spokane County**

Source: http://www.communityindicators.ewu.edu/

**Section 1.2.3: Local Aerospace Businesses**

Using the tier 1, 2, and 3 definitions mentioned earlier, Spokane County has no Tier 1 suppliers, and 25 businesses which attribute 51% or more annual revenue to aerospace customers in the Tier 2 and 3 sectors. The largest of the Tier 2 suppliers is Triumph Composite Systems which ships roughly 6 semi-trucks per day to Boeing Corporation. This business operated for 12 years as Boeing Spokane was sold in 2003 to Triumph Group, a global leader in manufacturing and overhauling aerospace structures, systems and components. Triumph is operating at about 50% capacity in their Spokane facility (Triumph Group, 2012).
Scanivalve Corporation has been operating as a Tier 2 supplier to the aerospace industry since 1955 (Scanivalve, 2012). Their products and success are the result of innovative engineering keeping pace with rapidly changing technologies. They have not relied on state supported initiatives to be competitive. Addison Pemberton (personal communication, May 2012), Vice President of Engineering, claims their only competitive threat comes from China, where the company patents are not protected. In the U.S. and other countries around the world the product core technologies are copyright and patent protected. Their business currently is “steady” according to Mr. Pemberton (personal communication, May 2012). Scanivalve is certified to ISO 9001:2008, conforms to quality standard ANSI Z540.1, and meets European standards for EMI, EMS, and ESD (Scanivalve, 2012).

Novation has operated in Spokane Valley for over 20 years (Novation.com, 2012) as a metal and surface finisher service. They are a Tier 3 supplier providing painting, plating, and other surface finish treatments to products made locally and around the region. Founder, Fred LeFriec says (personal communication, May 2012) the amount aerospace business Novation is taking in is increasing and currently is between 25% and 35% of total business. Mr. LeFriec attributes the increase of aerospace business to two things.

First, Novation’s quality assurance certifications include Nadcap, and Boeing. Achieving and maintaining these certifications were a many year process and was a strategic decision designed to bring in more aerospace business. Second, finishers similar to Novation on the west side of the state are nearly saturated and have a hard time delivering the quality with the short lead times offered by Novation. They have become active in attending aerospace manufacturing trade shows on the west side, and belong to INWAC (Inland Northwest Aerospace Consortium) and PNAA (Pacific Northwest Aerospace Alliance, a west-side located consortium similar to INWAC).

Altek Machining is a Tier 2 provider of custom machining, molding and tool making. They are AS9100 certified and ITAR registered. Mike Marzetta, President of Altek says currently about
30% of their business is aerospace related (Altek.com, 2012). 75% of new business is aerospace related, so Mr. Marzetta sees a shift in their business mix. He attributes this to achieving AS9100 certification, the visibility they gain from attending trade shows and events on the west side of the state, and being active in organizations like INWAC and PNAA.

Spokane County hosts a larger number of Tier 2 and 3 aerospace suppliers than do neighboring counties of Kootenai and Bonner, in Idaho. These two counties have small clusters of aerospace businesses that deserve mention. Quest Aviation in Sandpoint is a relative new Tier 1 aircraft manufacturer and as such requires aerospace quality suppliers like those mentioned above. Novation, as an example provides plating and coatings to a number of Quest parts manufactured in the region. Quest Aircraft spun off its float business to what is now Aerocet in Priest River, Idaho. Other suppliers in the Coeur d’Alene area have been around for decades providing parts and subsystems to the aircraft and aerospace industry.

Section 1.2.4: The Future of the Spokane Area Aerospace Industry

In 2013, the Post Falls and Coeur d’Alene areas will be included in the Spokane metropolitan statistical area. As the region’s aerospace industries grow, if they grow, they may generate enough annual revenue to be included in the North American Industry Classification System (NAICS). The NAICS code for aerospace related industry is 3364--. With such a small number of businesses in the region participating in the aerospace industry, there is insufficient data to be reported and included in U.S. aerospace business economy.

To promote competition in the region for aerospace industries, one of the barriers to overcome is the appropriate business practices and quality certifications required to participate in the aerospace marketplace. These include certifications for AS9100, Boeing, NADCAP, ISO 9001, MIL standard practices often required by aircraft manufacturers. Achieving these certifications are expensive achieve and maintain. They often require periodic inspections and testing which is also costly. For small businesses the cost of entering this market is too high to risk the cash outlay for
the certifications. State supported programs that provide grants or low interest loans could be beneficial for more small businesses to decide to enter this market.

2.0 Analysis of Washington State Competitiveness

Washington State competitiveness was evaluated in two ways: 1) at a broad level in terms of comparative competitiveness to other States in the Union rated by several elements that directly correspond to business and economic growth and 2) at a local greater Spokane area level in terms of specific issues that were uncovered as important to Spokane’s growth. The greater Spokane area for this paper includes Spokane County, as well as Kootenai and Bonner counties from northern Idaho. The analysis for Spokane competitiveness is below in section 3.0.

The first method of evaluation in terms of the state of competitiveness was done from the perspective of a CEO considering that attracting companies to a State almost always involves the chief executives approval. In order to attain the perspective of a CEO considering Washington State as a competitive business environment for growth of said company, data and analysis is used from Chiefexecutive.net. Analysis drawn upon was conducted by the Kauffman Foundation and Thumbtack.com.

Section 2.1: Natural Endowments

Washington’s main endowments are broken down into: a) workforce, b) taxation, c) higher education, d) transportation, e) utilities/energy and f) international trade statistics. (ChooseWashington.com, 2012) Washington’s work force currently ranks sixth in the U.S. for saturation of adults with at least a high school education. Additionally, 31% of Washington residents possess a college degree and there are over 6,500 aerospace engineers in State as well. Unfortunately, Washington State also has the highest minimum wage in the entire United States, which makes it much more expensive for entry into the State, depending on the industry.
Taxation in the State is considered a very favorable factor when determining whether to move an operation to Washington or not. The State is considered to have the best tax system for starting up a company in the U.S. (usnews.com, 2009), the fifth best tax system in the United States (sbcouncil.org, 2012) for start-up SME’s and ninth place for overall best business tax code. (Tax Foundation, 2010)

Education in Washington State is well above the national average (ChooseWashington.com, 2012) at 89.4% high school educated workers and is twelfth in the nation for college graduates. The State has 34 community college and technical institutes as well as over three-hundred private colleges, universities, career and vocational schools.

The transportation system is very well developed in Washington State (ChooseWashington.com, 2012). Washington is perfectly positioned for direct and easy access to the Asian markets as well as west coast markets of the U.S. Additionally, the State has a robust port, rail, air, and roadway system to facilitate trade efficiently and effectively. The best known transportation highlights are the seven deep ports, 75 port districts, 138 public-use airports, 13 cargo airports, two large international airports, and an extensive intermodal, double-stack container railway transport system.

Washington State also has one of the most competitive (ChooseWashington.com, 2012) utilities and energy systems in the United States. Specifically, the State has the largest coordinated hydro-electric system in the world. Additionally, the hydro-electric system is bolstered by a growing wind power system and is also supplied with natural gas from Canada.

Finally, Washington has a very extensive logistical network that has put the State in the fifth ranking position (ChooseWashington.com, 2012) for exports overall in the United States.

Section 2.2: Macroeconomic Policy

Washington’s macroeconomic policy primarily focuses around low taxation for businesses and industry specific incentives. Washington State has no income tax and sales tax rate of 6.5%
with additional sales and B&O taxes coming from different counties. As to industry specific incentives, companies such as Boeing, Microsoft and Amazon.com receive large tax write-offs per hired person and incentives to locate their buildings in certain districts. Additionally, there are large write-offs for companies that produce high-technology goods within the State, as the aforementioned companies do in Washington.

However, in contrast to the information provided by the State (ChooseWashington.com, 2012), Chiefexecutive.net has conflicting information showing that the economic policies that Washington State enacts are in fact extremely detrimental to economic growth. A survey conducted by the Kauffman Foundation and Thumbtack.com (Thumbtack.com, 2012) of 3,376 Chief Executive Officers indicates that Washington in the area of overall small business friendliness ranks as 32 out of 50 states and a grade of C-. Washington’s overall performance in the survey was 37 out of 50.

Section 2.3: Social Infrastructure and Political Institutions

Washington State has a democratic-republic form of governance. It elects district representatives to the State House and State Senators to the State Senate as well as holds elections every four years for the governorship. With that being said, the Washington State public is very active and many policies are passed by initiative driven by the People. This has what has led to a State constitutionally mandated K-12 education mandate which consumes approximately 50% of the State budget every year.

Section 2.4: State of Cluster Development

Washington State’s main clusters are aerospace, advanced manufacturing, healthcare, transportation, agriculture, and waste management and remediation. Acknowledging these clusters does not however indicate a particular level of maturation. The most developed cluster is the aerospace industry, and then advanced manufacturing, both relative to each other.
The aerospace industry cluster currently employs 92,000 workers, has 153 companies, has 6,550 engineers, produces revenues of $35.4 billion and has a firm saturation of 650 firms in the cluster. Additionally, on a national level, Washington’s aerospace cluster produced almost one third of the entire nation’s aerospace exports in 2010, a clear indicator of the impact of this cluster in Washington.

Section 2.5: Quality of the State Business Environment

Referring to Chiefexecutive.net as a source directly speaking to the quality of the State business environment, the overall rating of Washington is 37th out of 50 States. The most qualitative of the survey questions asked by the Kauffman Foundation and Thumbtack.com were taxation & regulation, living conditions and the workforce. The three topics were addressed over several questions each and were rated on a ten point scale, with ten being the most favorable and one being the least favorable. Interestingly, in complete opposition to the State of Washington and other institution reports discussed above in the macroeconomic policy section, CEO’s found the taxation schedule to be rather poor with a mean of 4.76. However, attractive to workers for a business considering relocating to Washington is the quality of life was rated as rather high at a mean of 7.3. Additionally, work force quality was rated as a 6.63 as well, another good rating.

Section 3.0 Strategic Issues and Policy Recommendations

Based on the information above, Washington State has some serious problems to contend with that it can resolve. The strategic issues and policy recommendation below are primarily tied to the aerospace cluster since that is the primary focus of this paper.

Christina Gregoire was elected Governor of the State of Washington in 2005. At that time she faced a state wide $2.2 billion budget deficit. Having been elected to different political positions within State government in prior years, Governor Gregoire had firsthand knowledge of the economic importance of the States Aerospace cluster. However, even with this knowledge, in the
first few years of office, little seemed to be done and Washington lost a number of high-profile aerospace investments including:

1. Honda Jet Program
2. Bombardier C-Series
3. Rolls Royce Engine Plant
4. Spirit Aerospace Facility
5. Global Aeronautics Joint Venture
6. Second line production for the 787

Alone, the HondaJet program by the Honda Aircraft Company would have initially brought into the State in excess of $100 million in revenue and over 300 jobs (hondajet.honda.com, 2007). The culmination and synergies these 6 new investments would have initially brought to the State in outside revenues would have been enough to eliminate the budget shortfall in a matter of years.

In May 2009, a renewed effort to keep Washington in the forefront of leadership in the aerospace industry started when the Governor drafted Executive Order 09-04 establishing the Washington Council on Aerospace (http://www.governor.wa.gov/execorders/eo_09-04.pdf, 2009). The objectives for this council were to explore and create polices in the following areas (http://www.governor.wa.gov/execorders/eo_09-04.pdf, 2009):

1. Improve coordination, responsiveness and integration of the state’s aerospace training, education, research, and development programs to meet industry needs;
2. Enhance the state’s economic climate for the industry;
3. Provide a forum for industry, labor and government to collaborate to ensure the needs of this vital industry are met in a timely and effective manner; and
4. Ensure that Washington remains the best place in the world to design and manufacture aircraft and grow jobs in the aerospace industry.
The makeup of the Council was initially set at fourteen members. These members represented the public, private and educational sectors. The Council was to report to the Governor and Legislature the state of the aerospace industry in the State at/or near the beginning of each year starting January 1, 2010.

The Council as a whole was charged with the responsibilities of providing advice that would support the job growth and strengthen the aerospace industry in Washington. Because of their involvement on the Council, the members were able to establish the following responsibilities (http://www.governor.wa.gov/execorders/EO 09-04.pdf, 2009):

1. The Executive Director of the State Board for Community and Technical Colleges must ensure coordination of all aerospace training and apprenticeship programs under its authority;

2. The Executive Director of the Higher Education Coordinating Board must ensure that all degree programs of interest to the aerospace industry are provided by and coordinated among the state’s four-year institutions of higher education;

3. The Presidents of the University of Washington and Washington State University must coordinate all aerospace-related research and development activities undertaken within their institutions and ensure that these activities are responsive to the industry’s needs; and

4. The Director of the Department of Commerce must carry out the state’s activities to retain, attract, and grow aerospace companies and jobs.

On January 1, 2010, the Council provided to the Governor and Legislature the first yearly report on the aerospace cluster in Washington. The report centered on the weakening of Washington’s competitive advantage in the aerospace industry. Some of the fundamental changes in the industry such as globalization and shifts towards a more systems integrated business model could not be directly influenced by any state policy. However, many suggestions were made that policy could help strengthen Washington’s competitive advantage.
The main recommendations the report suggested were made to emphasize “…all these objectives (and accompanying strategies) are highly inter-related, and many can only be achieved through public-private partnerships.” (Washington Council on Aerospace, 2010) Recommendations were made in the areas related to Economic Development, Workforce Training and Talent, and Research. Within the three main areas of recommendation, the policy submitted for Workforce Training and Talent has begun to show the most improvement.

To accomplish the task of developing a young and educated workforce, many public and private institutions would need to collaborate. The Council charged themselves with being the “convener among all aerospace organizations in the state.”(Washington Council on Aerospace, 2010) To help accomplish getting public and private organizations together, a number of institutions for collaboration were created. The following is a list of some of these institutions:

<table>
<thead>
<tr>
<th>Washington Aerospace Training &amp; Research Center (WAATRC)</th>
<th>WA Higher Ed Coordinating Board</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aerospace Futures Alliance (AFA)</td>
<td>WA Council on Aerospace</td>
</tr>
<tr>
<td>Pacific Northwest Aerospace Alliance (PNAA)</td>
<td>Spokane Aerospace Technology Center</td>
</tr>
<tr>
<td>Inland Northwest Aerospace Technology Center (INATC)</td>
<td>Center of Excellence for Aerospace &amp; Advanced Materials Manufacturing</td>
</tr>
<tr>
<td>Air Washington Board</td>
<td>Aerospace Curriculum Alignment Team (ACAT)</td>
</tr>
<tr>
<td>Aerospace Joint Apprenticeship Committee (AJAC)</td>
<td>Future of Flight Foundation</td>
</tr>
<tr>
<td>Boeing’s Aerospace Academic Alignment Team</td>
<td></td>
</tr>
</tbody>
</table>

On the boards of these institutions are representatives from educational faculties, private businesses and government legislators. The importance of this collaboration is to “Create better
partnerships between state workforce development agencies and higher education institutions to better connect employers with trained workers.” (Washington Council on Aerospace, 2010) For instance, the WAATRC was not only involved with creating the curriculum for a certificate of completion as well as college credit for a 12 week course. They also helped local high schools with support of lesson plans for students interested in entering the aerospace industry.

**Section 4.0: The Spokane Aerospace Cluster**

The primary focus of this paper is to focus on the state of the aerospace cluster in the greater Spokane area in Washington State. As such, an evolutionary history of the cluster is presented in addition to an analysis of the Spokane area aerospace cluster.

**Section 4.1: Evolution of Aerospace Cluster**

The aerospace industry has recently become an identifiable economic cluster in Spokane County. The cluster has evolved into its own sector from the strong manufacturing industry that Spokane County has developed. A majority of the firms participating in the cluster do not exclusively manufacture and produce aerospace related materials, but also manufacture parts and tools for other industries as well. Aerospace manufacturing and related services is a broad industry consisting of civilian and military aircraft, space vehicles, and missiles, and aviation instrument components. The aerospace sector includes aircraft and components manufacturing activity as well as aircraft maintenance activity that occur in air transport and air services industries. Aircraft suppliers provide parts and machinery for aircraft assembly and maintenance. These parts include engines, interior components, avionics, and aircraft hardware such as landing gear.

The birth of the aerospace industry in the Spokane region dates back to 1990 when Boeing located a plant in the city of Spokane to manufacture floor panels and interiors for planes. This plant was originally known as Boeing Spokane, but since then the company was sold in 2003 to present day Triumph Composites. Triumph Composites is one of the world leaders in producing aircraft floor panels, as well a testing and evaluation facility for plastic and composite products.
The industry grew again in 1998 when Goodrich Corporation located their carbon brake facility in Spokane. Goodrich is another important firm in the Spokane aerospace cluster as they provide assistance and solutions for a broad range of aircraft issues for the aerospace and aircraft defense industries. Other large manufacturers who began participating and producing materials and products for the Spokane County aerospace cluster was Kaiser Aluminum and Inland Northwest Metallurgical Services (INMS). Kaiser Aluminum (the largest manufacturing plant in Spokane County with over 800 full-time employees) is a leading producer of fabricated aluminum plates, rods, bars, coils and sheets for the aerospace and aircraft defense industries. INMS is a service plant that provides heat treating services of alloy and carbon steels, stainless steels, as well as many other minerals. In 2010, INMS became one of the few firms involved in the Spokane County aerospace cluster to become certified to produce and provide services directly for the Boeing Company.

It was not until 2005 that several manufacturing firms who were producing aircraft related products began discussing some of the aerospace work they were doing that it became known that there was a growing aerospace cluster in the region. They decided to form the Inland Northwest Aerospace Consortium, whose mission statement is to “provide the leadership, ideas, and proactive action necessary to advance the aerospace industry…,” (INWAC). Since then, the aerospace cluster has slowly developed into a group of 80 manufacturers, suppliers, distributors, educational institutions and service organizations that all participate in the cluster.

The creation and development of the aerospace cluster in Spokane County has encouraged the governing body of the county to provide tax incentives and credits to the industry to initiate and attract more business to relocate or invest in the Spokane aerospace sector. Along with the state-wide exemption of a corporate income tax, Spokane County provides many incentives such as a reduced B&O tax rate for the manufacturing or selling of commercial airplanes or their component
parts, as well as an exemption of the Sales & Use tax for construction of new buildings used in the manufacturing of super-efficient airplanes.

**Section 4.2: Analysis of Spokane County Competitiveness**

**Section 4.2.1 Natural Endowments**

Historically, the Spokane County economy has been largely dependent upon it’s abundance of natural resources and the products in which they are able to produce through them. Spokane County is home to many natural resources: agricultural production and services, timber, minerals and metals. The agriculture industry as a whole still provides a large economic impact in Spokane County. In 2011, it generated $587 million in annual economic impact and generated 1,576 jobs (USDA). In the recent years, other industries and sectors have emerged and become more prominent than the natural resources sector and has provided Spokane County with a more diversified economy.

**Section 4.2.2 Macroeconomic Policy**

Spokane County’s tax system is mandated by Washington State’s implemented tax system. Spokane County does not assess a tax on income as other states in America do. There is a sales tax placed upon goods and services purchased at a rate of 8.7%. Washington State institutes a 6.5% sales tax rate and Spokane County adds an additional 2.2% charged sales tax rate. Spokane County also institutes a Business and Occupation (B&O) tax on businesses. A B&O tax is a gross receipts tax that is measured on the value of products, gross proceeds of sale, or gross income of the business. The B&O tax varies depending on the classification of a business and its activities, as manufacturing companies have a .48% rate while retails businesses have a .47% B&O tax rate (WSDR, 2012).

To promote business creation and attractiveness, Spokane County provides numerous tax incentives to businesses through their B&O tax rate. Tax credits are offered to research and development expenditures by “high technology” companies, as well as product development costs
of all aerospace institutions. Other B&O tax incentives are provided to aerospace related
companies and the manufacturing of commercial airplane components and tooling by reducing the
B&O tax rate to .28% (WSDR, 2012).

Section 4.2.3: Social Infrastructure and Political Institutions

Spokane County is governed under a commissioner form of county government, and the
government is elected every four years. There have been no major accounts of corruption within
the Spokane County in recent years, so the governing body can be considered stable. Spokane
County is home to fourteen public school districts and eleven universities. Spokane County
remains on par concerning their funding of public education systems. In the school year of 2010-
11, Spokane County funded approximately $9,712 per full-time student enrolled in the county’s K-
12 public schools. This expenditure is the average amount spent on full-time students in the state of
Washington’s public school systems (IPPEA).

Section 4.2.4: State of Cluster Development

A prominent motivation for companies to invest and relocate to Spokane County is the tax
incentives received by these companies. There is no income tax applied to any companies that
participate within Spokane County, and there are also many tax and operations credits offered to
companies whose classifications fall underneath the Business & Occupation guidelines. However,
Spokane County does not compete well in their other business competitiveness inputs, such as a
wealth of talented workers, a strong and sophisticated demand of products from consumers, and
local suppliers who can support large industries.

Spokane currently has six identifiable economic clusters within the county, as identified by
Greater Spokane Incorporated, the leading economic initiative sector in Spokane County. The six
clusters are as follows: Manufacturing, Aerospace, Health Services, Information Technology,
Clean Technology, and Digital Media. Many of these clusters are still operating at a local level and
are in the process of promoting themselves as participating at a traded level, which would allow
them to serve national and international markets and expose themselves to national competition. Manufacturing and health services have played a large part in the development of the Spokane County economy. The manufacturing industry provided over 15,000 jobs in over 500 companies during 2011. The health services industry is built around five major hospitals and employs over 35,000 people, which represents 12.5% of the local workforce (GSI).

As of 2012, Spokane County is in fifth year of attempting to establish and implement an economic development plan for the economic clusters present in the community and to establish Spokane County as a more competitive environment to do business in. Plans have been made to develop the clusters but progress to implement the desired tactics has been slow. Spokane is currently attempting to strengthen their health services industry more as they are constructing a new Academic Health Sciences Center that will be used in cooperation with the local universities. Other initiatives for the additional five clusters are still in the planning processes and have not been put into action.

**Section 4.2.5 Quality of County Business Environment**

*Section 4.2.5.1: Factor Conditions*

The quality of the workforce that a business environment produces and attracts can be a significant contributor to how competitive a business environment can be. However, Spokane County has not traditionally produced or attracted a strong workforce in regards to promoting strong economic clusters. The majority of college educated workers from Spokane County received their degrees in a business or management services area, education, or health services. For example, Eastern Washington University, the county’s largest public institution, had 19% of its graduates in business, 11% in education and 10% in health services in 2011 (EWU). The workforce that Spokane County produces helps support the service industries and local businesses. Also, as of April 2012, Spokane County is currently at an unemployment level of approximately 8.9% (U.S. Bureau of Labor Statistics).
For the limited quality workforce that is created, it is difficult for Spokane County to retain these employees due to the lower salaries offered. When compared with King County (Seattle area), Spokane County offers a significantly lower rate of pay. On average in the private sector industry of science and technology, Spokane County pays engineers in all fields 30% lower pay when compared to King County salaries (Industry Trends). This reduction of pay compared to more competitive regions does not allow Spokane County to attain and/or retain a quality workforce.

Section 4.2.5.2: Demand Conditions

Spokane County’s demand for high quality consumer goods has decreased during recent years. In 2009, according to retail GAP analysis conduction by the Nielsen Corporation, Spokane County over-supplied itself with retail goods in accordance to the demand of the county by $816,659,665 (Developing Spokane). This large surplus of goods demonstrates the decline of discretionary income used to purchase goods within the county. Also, Spokane County was identified as having a per capita income of $33,810 in 2009 according the Spokane Journal of Business Fact Book, which is only 86% of the average per capita income for all American metropolitan areas. The decline in demand and low levels of income (when compared to U.S. averages) demonstrates that the Spokane County population has a low ability level of producing sophisticated demand.

Section 4.2.5.3: Supporting Industries

As stated earlier, manufacturing has played a long role in the development of the Spokane County economy. However, the majority of manufacturing and production of goods are produced for local companies and industries. Manufacturing for the aerospace industry is involved in exporting their goods to larger companies and their assembly plants, such as Boeing Inc. located in western Washington State. A challenge for the development of more supporting industries is the
lack of inflow of high quality workers, such as engineers, and the capital investment to create these industries.

Section 4.2.5.4 Context of Firm Strategy and Rivalry

The leading component of attracting more business and investment is Spokane County’s tax system and its ability to foster competition in small businesses. Washington State’s tax system does not impose an income tax on its workers or corporations. The lack of an income tax allows a company to generate and manage more capital within its business and operations. Also, 85% of all Spokane businesses have ten employees or less. A large amount of small businesses competing against each other creates an environment of rivalry and innovation if there are other factors that promote growth, such as capital and demand.

Section 5.0: Recommendations

There are several recommendations for improving the state of the business environment for Spokane and the State of Washington. Washington State from the top down should help to create a more conducive business environment by not specifically creating incentives to particular industries and in some cases, specific companies. This can be achieved by overhauling the regulatory environment so that SME’s can enter the market in Washington without daunting costs. Some of those costs are hire/fire costs, having greater flexibility in how to apply their workforce without costly labor union intervention, and overhauling the zoning regulations so that businesses are not hedged into areas that are either not conducive to their particular business or come with high costs due to environmental regulations working in tandem with zoning regulations.

Finally, the State should consider overhauling the tax code as it is rather unfriendly to businesses. By having a centralized tax system dictated by the capital, local MSA’s cannot leverage tax incentives and thereby work to attract new industries/companies, which is a significant problem for Spokane proper.


Eastern Washington University. (2012) www.ewu.edu


Greater Spokane Incorporated (GSI), (6/1/2012), "Comprehensive Economic Development Strategic for the Spokane Region."

http://hondajet.honda.com/news/article.aspx?ArticleType=pressrelease&CatType=news_detail_44.xml&bhcp=1


Institute for Public Policy and Economic Analysis (IPPEA), (2012), Community Indicators Initiative of Spokane,. Available from: Eastern Washington University, : [Accessed: June 1, 2012].


http://www.novationinc.net/


http://www.ofm.wa.gov/pop/april1/default.asp


http://www.triumphgroup.com/capabilities/overview


http://www.governor.wa.gov/boards/profiles/7082595.asp

Washington State Department of Revenue (WSDR), (2012), Local Sales and Use Tax Rates by City, Department of Revenue.