

Ideas and Strategies for Growth in the US

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Summary

Although we do not know with certainty how and why some economies grow faster than others, research has identified a number of factors as crucial for creating economic growth, including accumulation of production factors (labor and capital) and increased productivity. In determining what causes increased productivity, researchers over the last decades have agreed that innovation and increase in human capital are important. At the same time, policy makers as well as private organizations and think tanks are trying to create strategies and policies with the objective to create increased growth and development. On the regional and local level in the U.S., the term *economic development* is often used instead of *economic growth*. It essentially means the same thing, although *economic development* has a somewhat broader meaning.

This report presents an overview of the growth related debate and strategies in the USA, with examples of U.S. growth policy on the federal level and in two states: California and Iowa. The purpose of the study is to give input to the Swedish debate on economic growth and to inspire primarily Swedish policymakers, both regional and national, to new ideas in their work with growth policies.

The realm of the federal government in the USA is limited. The two areas of policy that are exclusively federal are foreign policy and security policy. However, the federal government can influence other areas of policy by financing certain programs and passing legislation.

The national debate about economic growth policy in the USA can be divided into two broad themes: improving the business climate and making the USA more innovative. Improving the business climate focuses mainly on reducing costs of doing business. The main method of doing this is to lower the taxes, which the incumbent president has done. Another issue around the cost of doing business is the excessive costs for frivolous lawsuits, in which companies frequently get sued and pay out large monetary rewards. The other issue is the cost of health care. Since most Americans have health insurance through their employer, the rising costs of health care are a financial burden on many businesses. President Bush has launched Health Savings Accounts, where individuals can deposit money before tax is paid on it and then withdraw the money tax-free for qualified medical expenses, as a way to curb rising health care expenditures.

The other strand in the debate is the effort to make the USA more innovative. It focuses on increasing the innovative capacity by increasing R&D financing and improving K-12 (*grund- och gymnasieskola*) education. This debate also stresses the difficulties foreign students and researchers encounter in obtaining visas to the USA. Since American universities depend on a large percentage of foreign researchers, this is considered a potential threat to the scientific leadership of the USA.

Iowa, the first state studied in this report, is a landlocked state in the Midwest with a population of 2.9 million people. Iowa is well known for its agriculture, but Iowa also has a large manufacturing sector. The economy is, for the moment, strong, with a low unemployment rate. However, the regional income per capita is below the national average, and therefore Iowa's growth strategy focuses as much on creating high-paying jobs as on fostering economic growth.”

There is a common understanding in Iowa that employment in agriculture and traditional manufacturing will decrease. Iowa has a strong research base, with two prestigious research universities that are especially strong in the area of agricultural related sciences. Therefore, bioscience is considered a keystone to building Iowa's future. The Iowa Department of Economic Development (IDED) is the government agency that is responsible for exercising economic development policies in Iowa. IDED has been instrumental in creating the Iowa Value Fund (IVF). The IVF has more than \$500 million in resources and has the aim of growing Iowa's economy and creating high-paying jobs. In addition, the IDED also produces elaborate statistics and uses this to benchmark Iowa and to provide guidelines for policymakers. Iowa also uses the tax system to foster economic growth, offering several tax incentives to invest in small businesses and start-ups and tax breaks for companies that want to invest and expand in Iowa.

California, the second state studied in this report, is in many senses more like a large European country than a state. It has a population of 36 million people and is slightly smaller in size than Sweden. California is home to a number of world-class universities and is usually awarded at least one annual Nobel Prize. Some of the most innovative and advanced companies in the world are headquartered in California, and almost 50 percent of all U.S. venture capital is invested in California.

However, California's dynamic economy is faced with several problems. A common complaint is the high cost of living. A majority of Californian households can not afford to buy a house in the metropolitan areas. This makes it difficult for many companies and universities to recruit. It also drives companies out of California, primarily to the neighboring states. Another problem is the insufficient infrastructure in California. In addition to the traffic problem—Californians spend a lot of time in their cars—it also slows goods transportation. And while the Californian universities are world-class, the public schools, the so-called K-12 education, are among the lowest performing in the nation.

A large and diverse state like California has, of course, a large number of programs and initiatives that address economic development. The large cities and regions in California are equipped for extensive economic development programs themselves. The incumbent governor has promised not to raise any taxes to finance needed investments in California. In 2006, Californians voted yes in a ballot to borrow \$40 billion to invest in schools, infrastructure,

homeland security, and housing. Another effort to boost long term growth is the generous tax benefits for R&D, which has fueled innovation.

One could claim that the biggest economic development program in California is the University of California system. Although most of the R&D is not financed through the state coffers, the taxpayers of California are contributing billions of dollars to the system. Furthermore, California views itself as home to science and technology breakthroughs, and its economy relies on a steady flow of these and of new fast-growing companies, which are fueled by an inflow of entrepreneurial immigrants, world-class research, and an abundance of venture capital. Strict environmental regulation is often pointed to as an important driver for technology development in California, but this is rather to be considered a means to solve environmental problems than one to boost economic growth.

Some of the key elements in creating economic growth are common knowledge; differences in policies are often more a question of priorities. The newly elected government in Sweden has announced changes in priorities, but they have not yet been enacted. The understanding of what drives economic growth is similar in Sweden and the USA. One significant difference in the growth debate between Sweden and the USA is the strong focus on K-12 education in the USA. This is something that virtually everyone in the US debate seems to agree upon. The excellence of U.S. R&D is in part upheld by an immigration of talented individuals, and a significant number of the fast-growing companies in the USA are founded by immigrants, so immigration is also a part of the growth debate.

One of the main tools for economic development in the U.S. is taxation. Besides being lower in the U.S. than in Sweden, the U.S. taxes are aggressively used a tool to promote activities and behavior that foster economic growth. Most states struggle with creating venture capital industry, which is seen as essential for creating fast-growing companies. Unemployment is not perceived as a problem in the U.S.; instead, economic growth policies are aimed at creating high-paying jobs. Globalization and technology development have taken a toll on the U.S. manufacturing industry. The USA see their role as being the place for breakthrough technologies and innovations, and the economic and scientific influence of the USA put it in a good position to become that.

1 Introduction

The riddle of economic growth is not yet solved. Although we do not know with certainty how and why some economies grow faster than others, research has identified a number of factors as crucial for creating economic growth, including accumulation of production factors (labor and capital) and increased productivity. Productivity increase is the only factor that in the long run expands an economy. So, when talking about economic growth we are in reality talking about increased productivity. The opportunity for achieving economic growth through increasing the supply of production factors is limited, since there is an absolute maximum of output of labor supply.¹ However, the productivity concept is of limited use when it comes to creating a policy to spur economic growth. In order to make policy relevant, it is necessary to understand the factors that cause productivity to increase.

Only in the last years has “economic growth policy” become a popular term in the debate on economic growth. Previously, economic growth was often seen as being in the domain of economic policy. The more complex view on economic growth that has evolved during the last years (see discussion on institutional growth theory in Chapter 2) has implied that in order to create economic growth, all types of policy must be involved. The term “growth policy” reflects this and includes all types of policies that affect economic growth.

The purpose of this report is to: (1) give input on the Swedish debate on economic growth; (2) inspire primarily Swedish policymakers, both regional and national, to new ideas in their work with growth policies; and (3) present an overview of the growth policy and the debate in the USA, with examples of U.S. growth policy on the federal and state level

The growth strategies of Sweden are scattered in several documents and policies. The main ones so far have been the Swedish Innovation Strategy (Näringsdepartementet, 2004) and the annual Government Budget Bills (Budgetpropositionen). While the former was a long-term promotion of growth in the Swedish economy formulated by the former, Social democratic government, the second is the government’s annual budget proposal and has a wider scope than just fostering economic growth. Besides these official government documents, there are reports and studies within the realm of the Swedish government that address the issue of economic growth in the Swedish economy. These semi-official reports are interesting because they show the prevailing ideas among Swedish policymakers on how to foster economic growth. There is reason to believe that at least some of this thinking will eventually show up in the official growth documents. This study discusses one of the most influential and recent of these reports (see below). Moreover, different lobby organizations and interest groups also present ideas on how to foster economic growth in Sweden. These are, however, not included in this report.

Regional agencies and interest groups in Sweden produce growth strategies and blueprints for regional and local economic growth. These are not included in this study. The vast majority of important economic policy decisions are made by the national parliament, and the regional and local governments have only a small degree of freedom to conduct an economic growth policy on their own. That does not mean that the regions in Sweden are without power, but they could perhaps be compared with counties and other entities below state level in the U.S. Since the U.S. is a federation, it is sometimes compared to the EU;

¹ *There is also a maximum of the possibility to increase the amount of capital (machines).*

and the member states in the EU are compared to the states in the U.S. This comparison is misleading, since the division of power between the EU and its member states is very different from that in the U.S. A discussion of differences between the U.S. and EU is, of course, outside the scope of this paper. However, as discussed elsewhere in this report, the states in the U.S. are similar to nations in Europe. Hence, when discussing Swedish growth strategies, the most suitable objects of comparison in the U.S. are both the federal level and the state level, and consequently the regional level in Sweden is left out.

In October 2006, Sweden got a new center-right government. The new government has different priorities than the previous center-left one. In their first budget (Budgetproposition, 2006), there are significant changes. One could argue that these changes are, with a few exceptions, mainly differences in priorities, not any changes in basic understanding of the underlying economic reality. However, in the realm of economic growth policy there are some significant changes. The new policy has not yet become reality, and it is too early to describe what growth strategies Sweden will have with the new government.

One of the differences to the previous budget is the focus on the framework conditions for SMEs, and a second one is job creation in private service sector. The goal for the new government is that Sweden will be one of the countries in the world with the best business climate for entrepreneurs. Other central pillars in the growth strategy—such as the importance of R&D, innovation, and education—are shared with the previous government. Swedish politics have, over the last decades, had a strong focus on fostering economic growth, irrespective of color of government. This focus is the same for the new government.

The Swedish Innovation Strategy focused on innovation—in R&D and education, in Swedish industry, in the public sector, and in people. The strategy took its starting point in the ability to generate knowledge and to translate it into innovation and new jobs. As a continuation of the Innovation Strategy, there has been a dialogue between the government and the business sector. This dialogue has focused on six areas:

- IT and Telecom
- Metallurgy
- Forest-products industry
- Aerospace industry
- Automotive industry
- Pharmaceuticals, biotechnology, and medical technology

These six sectors were considered by the former government to be the most important sectors for Sweden, and their success is of crucial importance for the long-term economic growth in Sweden. It is worthwhile to note that the focus is on manufacturing, and the service sector is only included when it is adjacent to manufacturing and, to some extent, IT.

A more recent report is *Framtidens Näringsliv* (2006), which is a joint project by The Swedish Agency for Economic and Regional Growth (Nutek) and The Royal Swedish Academy of Engineering Sciences (IVA). The report outlines challenges for the Swedish Industry and gives nine policy proposals on how to improve the competitiveness of the Swedish industry (Nutek and IVA, 2006):

- More resources for lifelong learning, including both vocational training and training to pursue a second career
- Increase government-financed civilian R&D to 1 percent of GDP
- Promote growth and job creation in labor-intensive services, through changes in regulatory framework
- Increase the opportunities for entrepreneurship in the health care sector and thereby increase productivity and cost-efficiency
- Facilitate the internationalization of the Swedish service sector through changes in national and EU regulatory frameworks
- Review the tax system and make it internationally competitive
- Increase the flexibility on the Swedish labor market, without losing individual security
- Find a long-term solution to providing reliable energy
- Establish a Swedish Globalization Council, consisting of policymakers and representatives from business, unions, and academia, to analyze how to improve the competitiveness of the Swedish industry

The report from Nutek and IVA is a joint effort by representatives from industry, unions, and academia in Sweden. No politicians or policymakers were involved in the project. The project is, despite this, of semi-official character, since it was administered and published by a Swedish government agency. The report puts more emphasis on the service sector than “Innovative Sweden”, and it actually explicitly criticizes the official innovation strategy as having an outdated view of what constitutes the business sector and innovation. In sum, this report is a good summary of what the important interest groups—such as unions and business organizations—see as challenges for Sweden.

1.1 Method

This study combines a number of methods. The survey of the economic growth research and the debate on economic growth policy is based on academic articles and newspaper/magazine articles, respectively. The information in the three cases of growth policies is taken from the press, official documents, speeches, reports, and a number of interviews with policymakers, researchers, and think tank representatives.

Nowadays, when transcripts of a politician’s public speeches are available on his or her web site, it is as easy to quote from speeches as from written statements. However, this report prefers written sources and only quotes from speeches when there is no appropriate written source. Statements and initiatives only referred to in speeches are excluded. In order to access these, the network of ITPS/Swedish Office of Science and Technology was used extensively.

The starting point in all cases is the official growth strategies, if there are any. Otherwise, the documents that best outline the ideas for fostering long-term economic growth are used. Those documents usually are a mix of long-term economic growth policy and short-

term economic policy, mixed with an ideological agenda.² This study tries to separate out the policies and their implementation, which actually promote economic growth.

There is extensive literature on how economic growth in the U.S. was created.³ This backward-looking literature is, with a few exceptions, excluded in this study. The focus is instead on how the USA is planning to continue to grow its economy and sustain its scientific and technological leadership.

In the USA, where the states to a large extent are free to map their own way through an economy of globalization and rapid technological change, it is essential to understand growth policy on the state level in order to understand it on the federal level. Therefore, this report compares growth policies in two states: California and Iowa. These states were chosen because they represent two different types of economic situation and are facing different structural challenges.

California is the largest economy in the U.S. and is similar to a large European nation. California is often considered to have a progressive, innovative policy, and many initiatives in California have spread nationwide. Due to its size, California often sets the standard in a lot of areas and is home to many scientific breakthroughs.

Iowa is a Midwestern state with a population below the national average; it has, to a large extent, an agriculture-based economy. Iowa also has a vast manufacturing sector. The agricultural sector is doing well, but in terms of employment it is not growing. The manufacturing sector—all over the U.S., and especially in the Midwest—is feeling the heightened foreign competition, and Iowa has been struck by a steady decline in manufacturing employment. A more extensive discussion of the characteristics of the California and Iowa economies can be found in Chapters 4 and 5, respectively. The Iowa chapter was written in 2005, and it ignores economic development initiatives after 2005. The purpose of the Iowa chapter is not to give an up-to-date description and analysis of economic growth policy in Iowa, but to show how a small agriculture- and manufacturing-based economy fosters economic growth, and how it navigates in a global economy. Thus, Iowa is an example.

This report is written for primarily Swedish readers and secondarily European readers, aiming to increase the understanding on US policy and growth issues since the US is often regarded a very important benchmark for these issues.

1.2 How the U.S. Is Organized

In order to understand policy in the U.S., it is necessary to be aware of the federal structure of the U.S. Besides the federal (national) level, there are three additional administrative levels: state, county, and city.⁴ The states have a large degree of independence and have more similarities to the nations in the EU than to the regions within the nations.

All of these administrative levels have the right of taxation—not only the right to decide the level of taxation, but also what should be taxed and how it should be taxed. An

² *A policy for fostering economic growth is in itself an ideological statement, however nowadays not a very controversial one.*

³ *Excellent exemplified by Hughes (2005) and Landes (1999).*

⁴ *In Sweden all land belongs to a municipality, but in the U.S. there are plenty of unincorporated areas, i.e., land that does not belong to any city. This land is administrated by the county.*

example of this is that some states have sales tax, and some do not; some states have different level of sales tax on different items, while some have a flat sales tax.⁵ Further, the states can make laws and are fully in charge of their education system, including the universities (if they are not private). The federal government's main responsibility is foreign policy and homeland security. They also finance or co-finance programs (for instance, research, education, and infrastructure), and this limits to some extent the degree of independence for the states.

It is also important to know that their members of Congress are more independent than, for instance, Swedish MPs. Congress members are elected by their constituencies, and their chances of being reelected depend upon voting as the constituency wants. It is therefore common that not all Congress members vote with the majority of their party, i.e. their loyalty is often to their constituency more than to their party.

1.3 Terminology of Economic Growth

Some terminology occurs frequently in the reports and documents referred to in this study, the more important of which are discussed below. It is worthwhile to note that some of the terminology is used in a slightly different way in Europe than in the U.S.

Productivity⁶

To understand *productivity* is necessary for understanding economic growth. However, productivity is an elusive concept. There are several different types of productivity. The one most commonly referred to in media is *labor productivity*. It is defined as the ratio between production output (defined as value-added) and labor input (usually defined as hours worked). When productivity in the U.S. is discussed, it is usually labor productivity.

Another type of productivity is the less-known *capital productivity*. In order to release the potential in increased labor productivity, it is necessary to invest in capital, i.e., machinery. Capital productivity is the ratio of output of goods and services to the input of physical capital. How effectively this capital is employed affects the economic growth and the potential for economic growth in a nation.

Multifactor Productivity (MFP) or Total Factor Productivity is a measure of the efficiency of the production process that takes into account more than one input (factor). It is expressed as a ratio of output to a combined measure of two or more factor inputs (e.g., capital and labor). However, it also measures the residual, which are the factors that are not included in the labor productivity and the capital productivity. MFP is designed to measure the joint influences on economic growth of technological change, reallocation of resources, efficiency improvements, and other factors. MFP captures better than labor productivity the efficiency of the production inputs used. The drawback is that it is more difficult to measure MFP than labor productivity.

Economic Development

⁵ For an overview of the U.S. tax system in English, see Steuerle (2004), and in Swedish, see Zackrisson (2004).

⁶ This section is based on Mandel (2004) and Barro and Sala-i-Martin (2003).

A term that is frequently used in the U.S. is *economic development*. A mainstream definition of economic development is the one the International Council of Economic Development uses: “a program, group of policies, or activity that seeks to improve the economic well-being and quality of life for a community, by creating and/or retaining jobs that facilitate growth and provide a stable tax base.”⁷ As the definition above alludes, it is mainly used when referring to economic growth on a local or regional level. While economic growth is a quantitative change, economic development also includes a qualitative component. It refers not only to an increase in Gross Regional Product; economic development often also includes other factors, such as higher wages, more jobs, improved business climate, or even sustainable development (Malizia and Feser, 1999).

On local/regional (city/county) and state levels, there is usually an agency or a non-profit corporation with responsibility for economic development.⁸ They may do everything from recruiting investments to suggesting new tax policies that could increase economic growth. The economic development organizations are often partnerships of private and public stakeholders.

For public officials, economic development often means job creation: Economic development programs have in common an attempt to reduce some sort of business costs (Bartik, 1991). In summary, programs and initiatives that are aiming to create economic growth are often, on the regional and local level, labelled *economic development*, whereas on federal level it is usually referred to as *economic growth*. This report uses both terms.

Innovation and Innovation Policy

Innovation policy has become a fashionable term and is frequently used among policymakers and pundits when talking about economic growth. It is seldom defined. Most definitions of innovation go back to Schumpeter (1934: Chapter 2), where an innovation is (1) the introduction of a new good; (2) the introduction of a new method of production; (3) the opening of a new market; (4) use of a new source of supply; and (5) carrying out of the new organization of any industry. This definition is wide, and sometimes innovation is limited to point one and two.⁹

Innovation policy should therefore be a policy that facilitates innovation. It differs from R&D policy or Science Policy by also including the commercialization of R&D. The more widespread term *technology policy* is sometimes used as a synonym to *innovation policy*, but it has a focus on technology, i.e. it excludes non-technological innovations. The term *innovation policy* is seldom defined but is used in policy contexts in a similar way in both Sweden and the U.S.—sometimes almost as a synonym to economic growth policy.

In Europe and in Sweden, the concept of *systems of innovation* is frequently used as a tool in economic growth policies.¹⁰ This concept seems to be absent in the U.S. debate, which is evident in the research literature, where the majority of the systems of innovation research

⁷ www.iedconline.org/?p=FAQs (accessed July 17, 2005)

⁸ These organizations usually have names like Los Angeles County Economic Development Cooperation and Iowa Department of Economic Development.

⁹ See, for instance, OECD (2005).

¹⁰ “Systems of Innovation” is usually labeled not a theory, but a theoretical framework or concept (Edquist, 1997).

is done in Europe by European researchers.¹¹ However, the concept of clusters seems to be in use on both sides of the Atlantic Ocean.

Entrepreneurship and Entrepreneurship policy

The term *entrepreneurship* has gained popularity in the last years all over the western world; to be entrepreneurial is a positive feature for individuals, companies, cities, regions, and nations. It has been used so much that the definition has blurred nearly beyond recognition. Because of this, there is no consensus on how to define entrepreneurship. A broad definition of entrepreneurship usually states that entrepreneurship is a mindset focusing on problem solutions. This type of definition includes all sorts of entrepreneurs, including so-called *social entrepreneurs* and *intrapreneurs*. A more narrow definition of entrepreneurship is “the process of starting and continuing to expand new businesses” (Hart, 2003: 5).¹² This report uses the more narrow definition, unless otherwise stated.

In comparison to a small-businesses owner, the entrepreneur wants not just to replace income from traditional employment but also to create substantial wealth. Sometimes, also, the involvement of innovation is included in the entrepreneurial ventures, and it sets the entrepreneur apart from the small-business owner. The distinction between small business and entrepreneurs is sometimes vague. *Small business* is, as the name indicates, focused on the size of the company, often in terms of number of employees. *Entrepreneurship* is less focused on size and more on the nature of the activities (for an overview, see Lundström and Stevenson 2002: 9-48; Hart, 2003).

A term that has not gained as much popularity as *entrepreneurship* is *entrepreneurship policy*. A Google search shows that the term *entrepreneurship policy* is more common in Europe than in the U.S. However, as the Harvard economist D.M. Hart states, “Entrepreneurship policy is a concept and a phrase whose time seems to have come” (Hart, 2003: 4). In one of the most exhaustive works on entrepreneurship policy, it is defined as a “measure intended to directly influence the level of entrepreneurial activity in a country or region” (Lundström and Stevenson, 2002: 13). Hart (2003: 4) points out that it includes “activities at several levels of government from local to national (and perhaps beyond).”

A related concept to entrepreneurship policy is *small-business policy*. While the general goal of entrepreneurship policy is to encourage individuals to start companies and create an entrepreneurial culture, small-business policy is primarily focused on existing companies (Lundström and Stevenson, 2002; Hart, 2003).

Gross Domestic Product (GDP)

The ranking of nations’ economic level is often measured in Gross Domestic Product (GDP)¹³—a reasonably good measure of the size of the economic activities in a nation. However, the problems with GDP as a measure are several. A textbook critique against

¹¹ A review of any of the databases for economic research (for instance, www.econlit.org or <http://ideas.repec.org/>) reveals that the research on systems of innovation is dominated by European researchers.

¹² This definition is similar to the classical definition of the entrepreneur by Kirzner (1979).

¹³ Sometimes Gross National Product (GNP) is used. It is GDP plus the income accruing to domestic residents as a result of investments abroad, minus the income earned in domestic markets accruing to foreigners abroad.

GDP as a measure for wealth is that it does not consider what a nation produces (food versus weapons) or how it is distributed (rich versus poor); and it excludes all non-pecuniary activities. It also excludes other variables that affect the well-being of humans: pollution, access to health care, social security, etc. There are several alternative measures on well-being, but most (though not all) of them yield similar international rankings to GDP per head (OECD, 2006).¹⁴

Despite the shortcomings of GDP as a measure of wealth, it is handy to use as a proxy for economic wealth. Few would disagree that in today's world, nations with a high GDP in general provide a better life than nations with low GDP. Further, it could be argued that a high GDP provides more freedom of choice for politicians/nations/people. Thus, a nation with a high GDP has better possibilities to choose its own destiny than a nation with a low GDP, *ceteris paribus*, provided it has some type of democracy. (The relationship between economic growth and democracy is interesting and needs to be further explored, but it is outside the scope of this report.) The bottom line of this discussion is that GDP as a measure of economic growth is not perfect, but as a tool it is useful. It follows that prolonged differences in growth rates produce dramatic differences in living standard/real income per capita. Economic growth is measured by the rate of change of real income per capita. Real income per capita is often used as a rough measure of a country's standard of living.

Competitiveness¹⁵

A term that is frequently used among policy makers is competitiveness. The definition is vague but it refers to the ability and performance of a region or a country to sell and supply goods and/or services in a given market. As is argued in Krugman (1994) the concept of competitiveness is wrong since nations are not competing with each other. Nevertheless, it is a popular term. In practice it seems to refer to a nation's or region's ability to foster economic growth.

2 Economic Growth Policies: A Theoretical Framework

While economic growth has long been considered a question for economists, we can now see research about economic growth in an array of academic disciplines. It is outside the scope of this report to summarize the state of the economic growth research, but this chapter gives a brief overview of different schools of thought on economic growth and different types of research that are influencing the current economic growth policy in the U.S.

¹⁴ For a discussion on GDP and its weaknesses as a measure on well-being and as a measure on economic activities, see, for instance, OECD (2006).

¹⁵ This section is based on Krugman (1994) and Choo & Moon (2000).

2.1 Economics and Economic Growth Research

The amount of research on economic growth research has increased dramatically in the last decades (Calmfors and Persson, 1999). As with most economic research, economic growth research can be traced back to Adam Smith. In *The Wealth of Nation* (1776/2003), he discussed how division of labour can enrich a nation. Forty years later, the British economist David Ricardo showed how value is created by international trade (Ricardo, 1817/1996). Smith and Ricardo took our understanding of how economic growth is created a large leap forward.

With the emergence of neoclassical economic theory in the end of the 19th century, the interest in economic growth took a step back, and it was not until the 1950s that economic growth theory took a leap forward again. Stanford economist Robert Solow published a study that showed that the changes in the size of the workforce, human capital, and physical capital only explained half of the increase in economic growth (Solow, 1956). Until Solow published his article, increase in labor and capital were considered the main causes of economic growth. The other unexplained half is usually called the residual, and this is where the effect of technology and innovation shows up. However, technology was still to a large extent treated as exogenous in the economic models, i.e. the models did not explain how and why innovation occurs.

Solow's seminal article also originated sources-of-growth accounting, which is used to estimate the separate effects on economic growth of labor, capital, and technological change. The following decades produced many studies that tried to estimate the relative importance of the production inputs. These studies all came to the conclusion that the residual is high and that new technology is an import driver of economic growth. So still, "the growth theory remained predominantly a theory of exogenous technological change" (Helpman, 2004: 36).

In the 1980s, the "new growth theory" developed. It tried to incorporate knowledge into the growth model, i.e. make technological change endogenous (Romer, 1986).¹⁶ It emphasized that the ability to grow the economy by increasing knowledge rather than labor and capital.¹⁷ It elegantly included knowledge in the mathematical models to estimate economic growth. However, "the empirical basis of these new growth models is still very thin" (Rensman and Kuper, 1999: 3). Further, it leaves out aspects like the role of entrepreneurship and geography (Acs and Varga, 2005).

This research has, over the last years, spurred a lot of statistical analysis in which a variety of variable influences on economic growth are studied, e.g. taxation, macroeconomic stability, unemployment insurances, industrial structure. Among all the variables studied, accumulation of human capital, i.e. more education, seems to be a variable with a large explanatory power for differences in growth rates.

Some (neoclassical) economists also point to the importance of international trade. They found that economic growth and increased international trade are correlated (O'Rourke and Williamson, 1999). However, different studies on openness and economic growth have

¹⁶ *The difference between Solow's growth theory and the "New Growth Theory" (NGT) can also be expressed in more technical terms; the NGT does not assume diminishing marginal utility of production inputs, as Solow's growth theory did (for a further discussion on this matter see, for instance, Barro and Sala-i-Martin, 2003).*

¹⁷ *It also changed the assumption of marginal productivity. For a brief non-technical overview, see Helpman (2004: 19-54).*

found different results (Helpman, 2004; Alesina, Spolaore, and Wacziarg, 2003). The studies also indicate that smaller economies gain relatively more on openness than larger economies, and that it varies over time. Although in theory free trade can sometimes discourage growth in income *per capita*, the majority of economists firmly believe that free trade in the long run on average raises the income per capita (Grossman and Helpman, 1991).¹⁸ For an overview on recent research on foreign trade and economic growth, see Helpman (2004: Chapter 5).

2.2 Institutional Approaches to Economic Growth

A vast body of literature emphasizes the importance of institutions¹⁹ for economic growth. This school of thought is represented by an array of scholars with different academic backgrounds and theoretical inclinations. Well-known names are the economic historians Douglas North and Nathan Rosenberg, as well as several “non-traditional economists” such as J.A. Schumpeter and the more modern Hernando de Soto.

While the neoclassical growth theory is a macro-based theory, the institutional approach is more of a micro-based theory.²⁰ The potential for growth in an economy is, according to institutional economists, a result of the institutional setup. Institutions give individuals incentives, and individuals respond to those incentives. If individuals are not engaging in growth-enhancing activities, the institutional setup is wrong.

Representatives for the institutional theory are less prone to use mathematical/statistical models. The institutional approach often criticizes the neoclassical growth theory for ignoring things that cannot be quantified in the economical models (Carlsson, 2002). However, the last decades of economic research have been able to quantify many “soft variables”²¹ and sometimes it can be difficult to distinguish between institutional theory and neoclassical theory.

Several books on the industrialization and how the Western world grew rich are written in the institutional tradition: Landes (1999), Rosenberg (1997), Mokyr (1992), and North (1976). A central theme in those is property rights and the incentives the institutional setup provides individuals: “The agent of change is the individual entrepreneur responding to the incentives embodied in the institutional framework” (North, 1990: 83).

Closely linked to the institutional approach is the evolutionary theory. The evolutionary theory is defined by a range of theoretical themes. A core in all of them is that they deal with how economies develop hence they do not study equilibrium. The evolutionary theory, as the name indicates, borrows from biology and suggests that economic

¹⁸ Although studies have found a link between free trade and economic growth, this does not mean there is a link between trade volumes and growth in income per capita.

¹⁹ A widely used definition of institution is: “Institutions are the rules of the game in a society or, more formally, are the humanly devised constraints that shape human interaction” (North, 1993: 3). North includes both formal and informal institutions; formal are laws, and informal are conventions and codes of behavior.

²⁰ The institutional theory is in reality not one theory but several theories that have in common their emphasis on the importance of institutions for understanding and explaining the economy. Therefore, institutional theory is often called institutional approach.

²¹ An example of such research is that of Persson and Tabellini (2003), in which they compare the impact of a presidential system versus a parliamentary system on economic growth.

development is a process of natural selection (Nelson and Winter, 1982).²² The evolutionary theory stresses the bounded rationality and the importance of routines in firms. One of the most well-known names in this tradition is the professor Richard Nelson. Although he is American, evolutionary theories are predominantly a European tradition.

A central figure in the non-neoclassical approach to economic growth is the Austrian economist Joseph Schumpeter. Schumpeter was the first economist who attributed growth to the entrepreneur. He also introduced the concept of “creative destruction” (Schumpeter, 1942: Chapter 7). He is usually also cited as the father of the evolutionary theory (Kelm, 1997).

If accumulation of labor and capital is important for creating economic growth, the factor that causes them to accumulate must also be important. One factor that in recent years has gotten attention is demographics. Jones (2002) shows that the age structure of the population has an affect on economic growth. This is, of course, difficult—at least in short-term—to affect with policy; it should therefore be seen as an exogenous variable. Further, another factor that affects savings and investment is the interest rate. A low interest rate enables more investments to take place, but in the long run monetary policy in and of itself has little impact on the economic growth. A monetary policy cannot by itself create productivity increases, but a bad monetary policy can hamper economic growth.

2.3 Taxes and economic growth

The influences of taxes on economic growth are debatable.²³ There is no consensus on how taxes affect the pace of economic growth (Hansson, 2000; Persson, 1999; Temple, 1999). Taxes are used to influence individuals’ and organizations’ behaviour in a variety of ways. It is common to have high taxes on alcohol and tobacco, since those items are considered to be bad. There are also environmental taxes aiming to improve the environment. On “good or necessary things” there are often low taxes, e.g. food and culture. Taxes are used as incentive to do or to not do certain activities, based on the simple assumption that the level of consumption and investment is affected by price. Thus, taxation is one of the main tools in economic growth policy.

While it is difficult to establish a link between the level of taxation and economic growth in general, this does not mean that the structure of the taxation system is not important. Since savings are necessary for investments, taxes on capital gains and savings taxes are often thought to hamper economic growth (McCaffery, 2002; Chamley, 1986).

Research and Development (R&D) plays a key role in economic growth. New technologies play a crucial role in increasing productivity, but R&D-intensive industries are also argued to create high-wage, high quality jobs, which are attractive to policymakers (Wilson, 2005). Governments (national or regional) have two ways to encourage R&D-activities: They can either finance R&D directly through universities (or research institutes) or give tax incentives to companies and institutions (OECD, 2003, and Wilson, 2005).²⁴ A number of countries in the world (including the U.S. but not yet Sweden) as well as many states in

²² *The analogy with biology should be treated with caution. The biology is more Lamarckian than Darwinian.*

²³ *When discussing taxes, it is usually the size of the government that is important.*

²⁴ *If the social return on R&D is higher than the private return, should an optimal government policy aim to bring private incentives to conduct R&D in line with the social return of R&D?*

the U.S. offer companies tax credits for doing R&D. OECD (2003) indicates that tax incentives for R&D are an efficient method to increase the amount of R&D. However, studies suggest that R&D tax credits on the state level (in the U.S.) might be a zero-sum game (Wilson, 2005). Another criticism against giving companies tax incentives is that it takes away resources from valuable public services like education that are crucial for creating economic growth (Lynch, 2004).

Reduction in taxes can also be used to give certain companies or regions a cost advantages. Many states in the U.S. offer tax incentives for companies in certain areas or regions (sometimes the whole state)—for instance, reductions in property taxes or sales tax exemptions. The purpose is to reduce the cost of doing business and hence make a certain region or state more attractive. It is also a common practice worldwide to offer tax incentives to lure foreign direct investments. Critics claim that this type of tax incentive is only a zero-sum game for the national economy (Lynch, 2004, and Middleton, 2001). However, since many states and regions offer these tax incentives, it is difficult for others not to offer them. Some would call it a race to the bottom. It is also possible to argue that tax incentives are a zero-sum game between countries. However, this has yet to be studied in depth.

2.4 Education and R&D and Effects on Economic Growth

As stated in the section above, accumulation of human capital is one of the factors that economists seem to agree is a crucial variable in explaining differences in economic growth. Few, if any, policymakers question the validity in this statement. However, in turning this into policy, the policymakers encounter several difficulties.

Education is usually treated as an investment in the research literature but not always among policymakers (OECD, 2002). The return on investment in education, in terms of increased economic growth, is long-term and thus not always a priority for politicians. The research has not agreed on what type of education promotes economic growth the most. Neither has it come to an agreement on whom to educate. A modern society needs to have a labour force with high levels of literacy and basic skills in mathematics in order that primary and secondary education are essential and not questioned. A growing economy also needs a top-notch university-trained labour force, but it might be possible to educate a too-big share of the population. While a university education might offer a high private return for students, the social benefits (return for society) are not necessarily always positive (Wolf, 2003). The criticisms of the increased investment in education concern higher education and vocational training, not the investments in primary and secondary education.

There is extensive research on education and on “education and economic growth” but little knowledge of what education policy actually works (Barrow and Rouse, 2005). There seems to be agreement that providing education for young people is a better investment than educating older people, since the former can ripen from the harvest of the education over a longer period (Björklund, 1999).

The bottom line is that education, i. e. human capital accumulation, in general is a prerequisite for economic growth, but not all investments in education are equal, and some education might even be a waste of tax money.

One of the purposes of increased investments in education is to get a more productive labour force. The other purpose is to generate researchers, who can perform high-class R&D. R&D is one of the main drivers of innovation and technological change. As is shown above, innovation/technological change is one of the most important factors in economic growth. However, if our knowledge about what types of education generate economic growth is insufficient, our knowledge about what types of R&D generate economic growth is even smaller. As discussed elsewhere in this study, excellence in research does not by itself generate successful companies, i.e. economic growth. Studies on what R&D generates economic growth has not reached conclusive results. However, there is a commonly held belief that advanced R&D and technologies provide better growth opportunities than low technologies.

One of the most influential thinkers of the last years when it comes to economic development and economic growth is Richard Florida. He has in two books (2002/2004 and 2005) outlined a theory about why some cities and regions and countries grow and why some don't. He states that "human creativity is the ultimate economic resource" (2002/2004: xiii) and introduces the concept of the creative class, which he defines as "people who add economic value through their creativity" (2002/2004:68). According to his estimates, this class includes nearly a third of the workforce. Florida supports his thesis with plenty of data. However, it does not fit into traditional economic theory.²⁵

Florida (2002/2004) shows that cities in the U.S. that have the largest concentration of creative class also have the highest economic growth. One of the biggest magnets for investments and new companies is talent. In order for cities/regions and countries to thrive it is necessary to attract these creative individuals. In Florida (2005) he extends his analysis to the global level and applies the theory of the creative class. He points out that the creative class is internationally mobile and the countries that are able to attract and keep these individuals are the winners in the international economy. In order to nourish the creative class a country (or region) must, as many already do, harness technology and talent, but Florida also stresses the importance of tolerance. The centre of those "creativity hubs" is the universities (Florida, 2002/2004: 291).

²⁵ *An attempt to include Florida's ideas in economic growth theory is Jones (forthcoming).*

3 Federal Growth Strategies in the USA

As discussed in the introduction, the realm of the federal government is limited. The two areas of policy that are exclusively federal are foreign policy and security policy. The federal government is setting the framework by providing financing and passing legislation. For instance, the federal government controls a huge R&D budget and is responsible for many of the social security programs. While it is true that many of the political programs and initiatives on the federal level originate in state policy, it also works the other way: If the Federal Government decides to eliminate or initiate certain programs, it often affects similar programs on the state level. Neither federal policy nor state policy can be understood without the other.

Some of the key elements in creating economic growth are common knowledge. No one disputes the importance of R&D, innovation, education, and a good business climate for creating economic growth. The differences are more a question of priorities. So, a discussion of differences in growth policies is a discussion of differences in focuses and priorities. With one exception (taxes – see below) this is true for the U.S. also.

3.1 The President's Growth Policy

In the U.S. these policies are spread out in different policy documents. In the beginning of 2006 the President presented the America Competitiveness Initiative (2006)²⁶, which “will promote new levels of educational achievement and economic productivity.” This policy initiative got a lot of attention in the U.S. and worldwide, but it focuses on R&D and leaves out policy areas the President otherwise underlines as important for economic growth. Therefore, this document must be read in conjunction with the earlier policy documents (see below) about economic growth.

In order to give a full view of the federal growth policy, it is necessary to include a range of documents and policy initiatives. There is an overlapping between those, and not all focus solely on economic growth, but all do include important elements for understanding the federal growth policy. This report focuses on the following policy initiatives:

- Economic Growth and Tax Relief Reconciliation Act of 2001²⁷
- Jobs and Growth Act of 2003²⁸
- Six Point Plan for the Economy (2003)²⁹
- A New Generation of American Innovation (2004)³⁰
- Ensuring America's Prosperity (2005)³¹

²⁶ www.whitehouse.gov/stateoftheunion/2006/aci/aci06-booklet.pdf (accessed June 5, 2006)

²⁷ www.whitehouse.gov/news/reports/taxplan.html (accessed August 10, 2005)

²⁸ www.whitehouse.gov/infocus/economy/act-2003.html (accessed August 10, 2005)

²⁹ www.whitehouse.gov/news/releases/2003/09/20030904-3.html (accessed August 10, 2005)

³⁰ www.whitehouse.gov/infocus/technology/economic_policy200404/toc.html (accessed June 5, 2006)

³¹ www.whitehouse.gov/news/releases/2005/02/20050208-2.html (accessed August 10, 2005)

- Agenda for Job Creation and Economic Opportunity (2006)³²

Those initiatives, together with the America Competitiveness Initiative, give a good overview of the incumbent President's growth policy. However, these plans and strategies address both long-term structural and short-term economic issues. These two aspects of economic growth are often difficult to separate. For instance, the tax reforms are said to be "adding fuel to an economic recovery"³³ and promoting long-term growth. This study tries to sort out the long-term policies from the short-term and find the core of the President's growth policies. The ideas and plans for fostering economic growth in the USA are presented in no particular order.

Tax Cuts

The incumbent President has a firm belief in the importance of tax cuts for creating economic growth: "lower income taxes for all [...] is a formula for continuing the prosperity we've enjoyed."³⁴ In 2001, President Bush signed into law one of the most sweeping changes of the U.S. tax legislation in years (Economic Growth and Tax Relief Reconciliation Act of 2001). This act was later supplemented by the "Jobs and Growth Tax Relief Reconciliation Act of 2003." The most noticeable changes were lowering the federal income tax and reducing the number of tax brackets. Instead of six brackets (15%-39.6%) there are now four brackets (10%-33%). Further, it eliminates the capital income tax for low-income households and reduces it for middle- and high-income households.³⁵ Most small businesses pay no corporate income tax, but instead profits from the businesses are taxed by the owners (so called pass-through taxation). Therefore, a reduction in personal income tax is a tax relief for small businesses. These acts also eliminated the double taxation on corporate income by allowing individuals to exclude dividends from their tax return.³⁶ In order to encourage investments and reduce the tax burden for small businesses, the tax cuts also allowed small businesses to immediately expense investments instead of deducting them over a longer period.

The tax reductions were to be phased in, and the Jobs and Growth Act of 2003 accelerated the phase-ins. To make it more complicated, these reductions, or "sunsets," are in the year 2011 going to revert to the provision that existed before they were passed, unless they are extended or made permanent by Congress.

The thinking behind these tax reductions is to let business owners and individuals keep more of the money they make and encourage them to invest in their or someone else's business—and this will foster economic growth. The tax cuts are "a victory for [...] American investors and American entrepreneurs and small businesses."³⁷ President Bush

³² www.whitehouse.gov/news/releases/2006/01/20060106-2.html (accessed March 21, 2006)

³³ www.whitehouse.gov/infocus/achievement/chap5.html (accessed 8th of August, 2005)

³⁴ www.whitehouse.gov/news/reports/taxplan.html (accessed August 1, 2006)

³⁵ *The capital gains tax will be reduced in steps and reach zero percent for low-income tax payers in 2008.*

³⁶ *For a brief overview in Swedish, see Zackrisson (2004).*

³⁷ www.whitehouse.gov/news/releases/2003/07/20030724.html (accessed August 8, 2005)

also created a bipartisan panel that advised on how to reform the tax code to make it simpler, more fair, and more pro-growth.³⁸

In the President's policy for "Ensuring America's Prosperity" the President wants to make the temporary tax reductions that were passed in the "Economic Growth and Tax Relief Reconciliation Act of 2001" and "Jobs and Growth Act of 2003" permanent.³⁹ Since 1981 there has been a temporary 20 percent tax credit for incremental R&D expenditure.⁴⁰ That means that the federal corporate income tax was lowered equal to 20 percent of the R&D expenses.⁴¹ In ACI (2006) President Bush wants to make the R&D tax credit permanent.

Reducing the Lawsuit Burden on the U.S. Economy

A recurring theme in the President's speeches on the economy is the burden of "junk" lawsuits. The American legal system has in the last years seen a surge in costs for lawsuits. The popular definition of "junk" or frivolous lawsuits is when an outcome of a case far exceeds what most people consider reasonable. The President wants to reduce the number of lawsuits and also reduce the monetary award. The settlements following these lawsuits and/or the insurances against these lawsuits are, according to the President, a "financial burden on our economy."⁴² Small business especially suffer from this system and, Bush says, "We need to protect [small business] from needless regulation and the burden of junk lawsuits."⁴³

President Bush wants to reform the legal system and make it more difficult for trial lawyers to shop "for a favourable court" and to "ensure that, in a class action lawsuit, most of the benefits of a settlement will actually go to the people who were injured, rather than into the pockets of trial lawyers."⁴⁴

Some lawsuits are legitimate, but some have the sole purpose of extracting money, rather than to compensate for legitimate claims. Protecting small businesses from these lawsuits would allow them to save money and time that could be invested in their business. The President is determined "to prevent frivolous lawsuits from diverting money from job creation into legal battles."⁴⁵

Lower the cost of health care

No country in the world is paying as much for their health care as the USA; 15 percent of GDP is health care costs. This should be compared to the OECD average of 8.5 percent of GDP.⁴⁶ A thorough discussion of the U.S. health care system is outside the scope of this report but the rising health care cost is considered by Americans to be one of the country's largest problems. In polls, the cost of health care usually ranks among the top issues that

³⁸ www.taxreformpanel.gov (accessed August 8, 2005)

³⁹ *It is common that reductions and increases in taxes are temporary.*

⁴⁰ *In fact, the R&D tax credit is called the Research and Experimentation tax credit.*

⁴¹ *For an overview of the tax credits for R&D see Zackrisson (2004) and Weltman (2006).*

⁴² www.whitehouse.gov/news/releases/2003/10/20031030-3.html (accessed August 25, 2005)

⁴³ www.whitehouse.gov/news/releases/2005/04/20050427-3.html (accessed August 10, 2005)

⁴⁴ www.whitehouse.gov/news/releases/2003/10/20031030-3.html (accessed August 10, 2005)

⁴⁵ www.treasury.gov/press/releases/js1115.htm (accessed August 10, 2006)

⁴⁶ www.who.int/countries/usa/en/ (accessed June 12, 2006)

Americans are concerned about.⁴⁷ Since the U.S. does not have a national health insurance program, most Americans are insured either through their employers or private companies. About 15 percent of Americans are at any given moment without health insurance.⁴⁸

Larger companies usually offer their employees health insurance, although more companies require large co-payments from the employees. Small businesses often do not offer their employees health insurance, since it is too costly. And the small businesses that do offer health insurance have to cope with rising costs. With this as a background, President Bush wants to lower the cost of health care for small businesses, to enable more of them to offer health insurance for their employees and reduce the cost for the small businesses that already offer these benefits.

Part of the President's pro-growth economic agenda is to curb the cost of health care and make it "more affordable and available."⁴⁹ The President wants to allow small businesses to pool together to purchase health coverage for workers at lower rates and to allow tax-favoured health savings and medical savings accounts.⁵⁰ Health care is one of the areas that the President sees as having "the greater effect on the future of economic growth."⁵¹ Another part of the costs in health care are the frivolous lawsuits, thus reducing the cost of health care will also require a medical liability reform that will reduce the cost of frivolous lawsuits.

One of the key elements of the President's policy to reduce the cost of health care is to expand the use of Health Savings Accounts (HSAs). HSAs are tax-advantaged savings plans available to cover current and future medical expenses. They allow citizens to deposit money before tax is paid on it and then to withdraw the money tax-free for qualified medical expenses. The President argues that by spending their own money (in contrast to the employers' or the governments) patients are more likely to choose more wisely, and thus help keep down rising health-care costs.

Education and Training

According to the President, education is "the bedrock of America's competitiveness."⁵² The centrepiece of the President's policy to strengthen the education system is the No Child Left Behind Act (NCLB). NCLB is a bipartisan education reform that passed into law January 2002. In short, NCLB requires schools to do annual testing for all students (9-14 years) and requires reading proficiency at age 9. President Bush wants to expand this reform to high school, i.e. 15-18 years. He has initiated new programs and strengthened several existing programs, which should ensure that every student leaves high school with the skills "needed to succeed in college and a globally competitive workforce."⁵³

⁴⁷ See, for instance, www.ourfuture.org/docUploads/lake_poll_july/2005.pdf (accessed September 5, 2005).

⁴⁸ www.nchc.org/facts/coverage.shtml (accessed June 12, 2006)

⁴⁹ www.whitehouse.gov/news/releases/2006/05/20060505.html (accessed June 19, 2006)

⁵⁰ *Medical savings accounts and health savings accounts are tax-deferred accounts that allow you to save money for medical expenses. They are similar but differ when it comes to taxation (for further information see Fuchs and James, 2005).*

⁵¹ www.whitehouse.gov/news/releases/2005/08/20050809-3.html (accessed August 10, 2005)

⁵² www.whitehouse.gov/stateoftheunion/2006/aci/ (accessed June 21, 2006)

⁵³ www.whitehouse.gov/news/releases/2005/02/20050203-11.html (accessed August 10, 2005)

In response to the increase in the college tuition rates, the President has announced an increase in grants for students from low-income households (Pell Grants). However, this increase in Pell Grants is lower than what the President earlier promised. There are several federal student financial aid programs, and it is difficult to determine the total value of these.⁵⁴

President Bush wants to increase and reform workforce training programs and increase the number of people served, because “America’s growing and transitioning economy requires new skills and new technologies.”⁵⁵ In 2004, he announced that \$120 million in grants should be available for Community Colleges⁵⁶ to enhance workforce training. In 2005, the President initiated a grant program that will provide \$250 million for training in community and technical colleges.⁵⁷ To receive this funding, Community Colleges must create training programs in collaboration with employers.

Opening Up New Markets for American Products

The USA and Republican Party have a tradition of promoting free trade, and the incumbent President intends to continue to do that: “The United States [...] supports free trade because a world that trades in freedom will grow in prosperity and in security.”⁵⁸ During this presidency, several free trade agreements have been signed, and the most important/controversial is the signing of the Central American Free Trade Agreement (CAFTA). The President wants to level the playing field for American products and “continue to work to open new markets to American products.”⁵⁹

Fixing the Current Social Security System

In the realm of domestic policy, the President has two cornerstones: creating an “Ownership Society” and tax cuts.⁶⁰ The basic idea of an Ownership Society is that people should fund their own retirement, health care insurance, disability insurance, etc. (and the role of the government could be to enforce withholding a portion of their earnings until they are needed). The implementation of the Ownership Society would reduce the citizens’

⁵⁴ <http://studentaid.ed.gov> (accessed June 21, 2006). Besides those, there are also state and local student financial aid programs.

⁵⁵ www.whitehouse.gov/infocus/economy/ (accessed August 10, 2005).

⁵⁶ *In the early 20th century the need for more education and training were imminent. High schools had expanded and often added a teacher institute or vocational education to their usual program. At the same time small private colleges had developed a model for higher education based on small classes and close student-faculty relations. From these two traditions evolved the Community Colleges (CC). There were both private and public. During the depression years in the 1930s, the CCs expanded their workforce training. After World War II, the CCs expanded as a result of the education need for the returning soldier. Today, the CCs offer both workforce training and undergraduate degrees. More than half of all undergraduate students are educated by CCs. The CC plays a crucial role in the transforming of the economy by offering training of the workforce who have a high school degree and maybe even an academic degree but need to upgrade their skills or retrain.*

⁵⁷ www.doleta.gov/comcol/ (accessed August 11, 2005)

⁵⁸ www.whitehouse.gov/news/releases/2003/10/20031020-3.html (accessed August 11, 2005)

⁵⁹ www.whitehouse.gov/news/releases/2003/09/20030904-3.html (accessed August 11, 2005)

⁶⁰ *The term Ownership Society was first used by the President in 2003. The term was frequent in the presidential debates of 2004 but has been used less in 2005-2006. Although the terminology might change, the concept of the “Ownership Society” runs deep within the Republican Party, and as long as there is a Republican President there will be a policy consistent with the Ownership Society.”*

dependence on the government.⁶¹ President Bush's vision of an "Ownership Society" is expressed in reforming the social security system. The President's proposal is to encourage, through tax cuts and tax incentives, individuals to save money so they can pay themselves for what was earlier paid through taxes.

One of President Bush's main missions this term is to transform the social security system. He stated on the Republican Convent 2004 that "the tax code, health coverage, pension plans, worker training – were created for the world of yesterday, not tomorrow. We will transform these systems."⁶² Although the main argument for the transformation is to save the system from a future collapse, the transformations are also seen as a way to increase competitiveness.

The president's tax cuts of 2001 and 2003 are part of the strategy for creating an "Ownership Society." It is also consistent with the Republican idea of having a small government. The President's ideas on how to foster economic growth also complement the Ownership Society and the Tax cuts.

President Bush wants to replace the social security program that was established during the New Deal in the 1930s. These programs are popular, and the President has encountered fierce resistance among the public and even among some Republican politicians for changing these popular programs. As President Bush has noted, "There seems to be a diminished appetite" among the public to change these programs.⁶³ There is no doubt that President Bush and the Republican Party would like to see these New Deal programs changed, but it does not seem to be politically possible for the moment.

Technology and R&D Policy

A frequent critique against the President's growth policy has been the lack of focus on R&D.⁶⁴ In January 2006, the President presented the abovementioned America Competitiveness Initiative (ACI), which outlines how the USA will "remain a leader in science and technology." In order to do this, the ACI commits \$5.9 billion in fiscal year 2007 to "increase investments in research and development, strengthen education, and encourage entrepreneurship." Over ten years, the ACI commits \$59 billion to R&D funding and R&D tax credits. The core of the ACI is increased investment in R&D. This is supported by:

- An education system that provides students with a world-class education.
- A system of workforce training that provides workers with training "necessary to improve their skills and better compete in the 21st century."
- An immigration policy that enables the U.S. to attract the best and brightest minds.
- Intellectual property laws that protect results from public and private R&D.
- An environment that stimulates and encourages entrepreneurship.

It is worth noting that the ACI does not include any reduction in taxes (except an R&D tax credit). The ACI does not discuss what type of R&D will be conducted. However, this was

⁶¹ *Whether this is good or bad is, of course, a matter of political preference.*

⁶² www.presidentialrhetoric.com/campaign/speeches/bush_sept10.html (accessed August 8, 2005)

⁶³ www.whitehouse.gov/news/releases/2005/10/20051004-1.html (accessed August 11, 2006)

⁶⁴ *See for instance* www.aip.org/fyi/2005/015.html (accessed June 21, 2006).

also done in A New Generation of American Innovation (NGAI) (2004). The NGAI report presents a series of measures that will "inspire a new generation of American innovation." It focuses on three areas: hydrogen fuel technology, transforming health care, and broadband technology. This report linked those measures to increased productivity. However, it did not allocate large sums of money for these programs.

The ACI is providing new funding for R&D, but in the other plans and documents studied above, R&D is seldom mentioned in connection to economic growth. In speeches about research, the President usually emphasizes the importance of R&D, but not in connection to economic growth. The President's decision to restrict financing of stem cell research has gotten a lot of attention. However, the President has increased the federal R&D budget and it now represents the greatest share of GDP in over 10 years; but critics claim it is not enough for the U.S. to retain its economic and scientific leadership (see below).

Other Issues

Several other policy areas are mentioned in the President's speeches and documents in connection to economic growth. However, these are less frequently mentioned, and they seem to primarily serve other purposes than to foster economic growth. In 2005, the President announced an energy plan that will, among other things, encourage energy efficiency, promote alternative energy sources, and reduce the USA's dependence on foreign sources of energy. One of the arguments for the energy plan is that "Economic growth requires reliable and affordable energy."⁶⁵ Otherwise, in the speeches and documents energy policy is usually not linked to economic growth.

One of the most debated political issues in 2005 and 2006 was illegal immigration. The USA is estimated to have 10-15 million illegal immigrants.⁶⁶ During the last decades the USA has granted amnesty for illegal immigrants several times. The amnesties have attracted more illegal immigrants in hope of a new amnesty. While a majority of the Americans want to stop illegal immigration (and some even wants to send illegal immigrants back), the federal politicians seem to be divided in the issue. The debate on immigration has, during 2006, become intense and polarized. The different aspects on the immigration debate are outside the scope of this report, but there are basically two opposing camps: One wants to encourage the illegal immigrants to return to their home countries by enforcing existing laws that state that it is a crime to employ illegal immigrants. The other camp wants to offer the illegal immigrant in the USA a road to citizenship. President Bush is in the latter camp, but the Republican Party is divided. President Bush wants an "immigration policy that "serves America's economy by matching a willing worker with a willing employer when no American is willing to fill the job."⁶⁷ Many sectors of U.S. industry would have difficulty finding workers if illegal immigration ceased. The debate about illegal immigration is as much about ethics as it is about economic prosperity.

Bush Growth Proposal

The cornerstone in President Bush's growth policy is the tax cuts; by reducing the taxes, there will be a stronger incentive to save and invest. Among the President's backers for

⁶⁵ www.whitehouse.gov/news/releases/2002/02/20020223.html (accessed August 11, 2005)

⁶⁶ *It is possible for illegal immigrants in the U.S. both to pay taxes and own real estate.*

⁶⁷ www.whitehouse.gov/stateoftheunion/2005/ (accessed August 11, 2005).

this policy is the majority of corporate America, including the majority of small-business owners, who have benefited from the tax cuts. The increased competition from globalization has evoked protectionism in the USA. However, President Bush has in the last years been persistent regarding free trade. In the past year (2006), R&D has gotten increased attention. Several of the initiatives included in the President's R&D package have not yet been passed by Congress. A prominent player in the President's growth policy is education. Besides the improvements to primary and secondary education, the President also stresses the importance of improving workforce training in collaboration with industry.

3.2 The Democrats' Growth Policy

The party system in the USA is not like the Swedish and most European ones, where MPs from one party usually vote the same. In the USA, elected representatives have more loyalty to their constituencies than to their party. The political parties do not, unlike their European equivalents, have a political program, and they are not usually generators of new ideas and policy initiatives. This role is often played by think tanks. Therefore, the best sources for an overview of the Democratic Party's ideas about economic growth are think tanks with connections to the Democratic Party, speeches of individual Democratic politicians, and what was said during the presidential campaign of 2004.

Few, if any, Democratic politicians sympathize fully with Bush's tax cuts. Many Democrats support the reductions of taxes but want to limit them to middle-class tax cuts.⁶⁸ They also want "to provide over \$32 billion in tax relief for small business."⁶⁹ In general, the Democrats favour more targeted tax relief than the Republicans.

The Democrats' view of small businesses is similar to the Republican; both view small businesses' role as crucial. John Kerry stated during his presidential campaign, "Small businesses are the engine of the American economy."⁷⁰ President Bush used to declare that small business is the backbone of the American economy. However, the Democrats' views on free trade and globalization differ. They are by tradition more protectionist than the Republican Party. Some Democratic politicians foster the idea of giving tax incentives to U.S. companies that do not outsource production. Former Democratic Senate leader Tom Daschle acknowledged the threat to U.S. leadership in science and technology: "For all our past successes, there are disturbing signs that America's dominant position in the scientific world is being shaken" (Davidson, 2004). Daschle also argues that President Bush is weakening the nation's science base by failing to provide enough money for cutting-edge research. However, the Democrats' main critique against the incumbent President's growth policy is around tax reductions and insufficient R&D funding.

⁶⁸ *Several Democratic governors have in the past year lowered state income taxes, even for high-income individuals (for instance, New Mexico, Oklahoma, and Rhode Island).*

⁶⁹ www.democrats.house.gov/bigpicture/jobs_and_economy/issue.cfm?level2id=24 (accessed August 23, 2005)

⁷⁰ www.johnkerry.com/issues/smallbiz (accessed October 3, 2004)

3.3 The Growth Policy of Others

The amount of books, newspaper articles, research papers, and reports about economic growth in the U.S. is enormous. To give a complete overview of the debate is, of course, impossible. However, after reading through a lot of what has been written about promoting economic growth in the USA, two broad themes emerge: (1) Make the USA more innovative; and (2) Improve the business climate. These two categories are discussed below.

The scope of this paper only allows room for some examples of the federal growth debate in the U.S. The researchers, news outlets, and think tanks presented here have been selected based on their influence and their amount of writing about economic growth. Also, they also represent different tracks in the debate. In order to give an up-to-date view on the growth debate, the cited articles and reports are from 2004 to 2006.

3.3.1 Making the U.S. More Innovative

The U.S. has, for a long time, seen itself as the world's powerhouse of innovation and science, which is evident in everything from number of Nobel laureates to university rankings. Nevertheless, many argue that the U.S. is about to lose its leadership in science and technology. This is often exemplified by the percentage of scientific papers written by Americans, which has fallen since its peak in the 1980s; and also by the fact that both China and India are graduating more engineers than the USA.

A common theme in this line of reasoning is globalization. Globalization has hit the U.S. harder than it has Europe. Due to its size and relative geographical isolation, the U.S. has had a feeling of invulnerability. Due to improved communications, reduced barriers to trade, and the rise of the Chinese and Indian economies, the effects of globalization have hit the U.S. hard. The threats from China and India are a subject of much discussion (Europe and Japan are seldom mentioned in this context). "The United States has started to lose its worldwide dominance in critical areas of science and innovation," according to *The New York Times* (3rd of August, 2005). Below are three examples of the "Make the USA more innovative school" discussed.

Better Education and More Science Education

Business Week (BW) is a weekly general business magazine that is focused on business trends and headline news, and it is one of the most read and respected business magazine in the USA. It focuses on business and economics, but covers politics as well. *BW* writes a lot about economic growth, and *BW*'s chief economist, Michael Mandel, is a frequent and avid writer on economic growth. *BW* was one of the first national news outlets to draw attention to the phenomenon of job outsourcing to India (*BW*, Feb 3rd, 2003). The increased competition from primarily India and China is a recurring theme in *BW*. They see "Americas dominance challenged" (*BW*, Aug 22nd, 2005).

Like many others, *BW* is concerned about the state of American science. They point out that both China and India graduate more engineers than the U.S., and the R&D capacity of those countries is growing fast. In order for the U.S. to thrive in a world in which China and India are going to account for half of the world's economy, the U.S. "must renew its commitment to innovation" (*BW*, August 22, 2005) and urge Washington to craft fresh strategies to meet this challenges. *BW* suggests that U.S. schools introduce more "rigorous

standards for instruction in such key subjects as science and math, where Asian students consistently outperform” (*BW*, Aug 22nd, 2005). But this would take years to pay off. So, the U.S. government, *BW* suggests, should also “rethink visa changes that, since the September 11 attacks, have made it more difficult for foreign students majoring in technology fields to attend college or graduate schools in the U.S.” (*BW*, Aug 22nd, 2005). *BW*’s chief economist writes that the USA needs more funding for R&D and graduate education in science and engineering (Mandel, 2004).

Beside the needed improvements in science education and funding for R&D, *BW* also stresses the importance of learning foreign languages: “Americans must become more proficient in local languages” (*BW*, Aug 22nd, 2005). The rise of East Asian economies and the growth in trade with those countries makes knowledge of foreign languages important and since only 9 percent of Americans speak a foreign language this is an important area for improvement. *BW* is fully devoted to free trade and recommends that the perceived threat from the rising economies in China and India must not be met by protectionism; instead, U.S. companies must engage in trade with those countries and continue to invest, otherwise “America risks [becoming] the next Old Europe” (*BW*, Aug 22nd, 2005)!

One of the best-selling non-fiction books of 2005 is an overview of globalization by the renowned journalist Thomas Friedman. He does not write explicitly about economic growth, but he writes about the effect globalization and the rise of the Chinese and Indian economies have had and are going to have on the USA. He does not provide policy conclusions, but the message in the book is similar to that of *BW*, that the USA needs to improve science education in schools and provide more funding to research and development (Friedman, 2005).

The Importance of The Creative Class for Economic Development

As discussed in chapter 2, an influential thinker when it comes to competitiveness and economic growth is Professor Richard Florida. His focus is on individuals and their creative potential. In his best-selling books, he claims that economic growth is driven by creative people, by which he means scientists, engineers, managers, professionals and other knowledge workers who have had a huge impact on economic growth policies (economic development) in cities and regions in the USA. The more creative individuals there are, the more economic growth there will be. He states that “The key factor of the global economy is no longer goods, services, or flows of capital but the competition for people” (Florida, 2004:16). Hence, it is not enough to offer a favourable business climate; there must be cultural and recreational amenities as well.

Florida attributes the economic success of the USA to its openness to new ideas and calls the U.S. the winner in the global competition for talents. In fact, he states that the inflow of talented individuals to the U.S. has harnessed the innovative capacity of the Americans themselves. He sees “the closing of America” as one of the biggest threats to continuing economic growth in the USA; the U.S. education system is also declining as fewer foreign students choose to come to the U.S. to study and do research. The latter is partly explained by the high economic growth within China and India (which have traditionally been the main “exporters” of talent to the U.S.), but also by stricter visa policy in the USA and, according to Florida, a changed attitude towards foreigners. Florida accuses the USA of becoming less open and tolerant. He points out that other Anglo-Saxon and Scandinavian countries are attracting more foreign students and becoming more open, and he sees those countries as competitors to the USA. He states that “America must continue to attract the

world's sharpest and most creative minds" (Florida, 2004:4). But it is, according to Florida, not enough to tap foreign talent: "The USA must also tap into the indigenous talent it already has" (Florida, 2004:17). He states that "Expanding education in [the USA] is not only a matter of basic human rights; it is an economic imperative" (Florida, 2004:254).

Florida wants to increase the investments not only in R&D but also in other types of creative capital like arts and culture, which encourage innovation and creativity and, according to Florida, can be growth sectors themselves (Florida, 2004:250-251). He differs from many others in the debate, dismissing China and India as economic leaders of the future; he says they rank too low on the creativity index and claims they do not have a tolerant society that will attract the best and brightest. In order to make the investments in education and research pay off, the USA must, according to Florida, "Reduce barriers for entrepreneurship and encourage even more new company formation" (Florida, 2004:250).

The Big Newspaper

The New York Times (TNYT) is often said to be the best newspaper in the world." Although TNYT is not the most read newspaper in the USA, it is considered to be the most influential. TNYT has a liberal slant and usually backs the Democrats politically. TNYT is home to columns from world-renowned economists like Paul Krugman and the abovementioned writer/journalist Thomas Friedman. However, business and economics are not the strength of the TNYT (see for instance Raines, 2004).⁷¹ Discussion of economic growth is not common on its editorial pages, other than in connection to R&D and science.⁷² They state that "the pool of trained scientists and engineers in this country will shrink, and the shortfalls may harm economic growth and the technical underpinnings of national security" (TNYT, 2004). And the solution to this is "The administration should ease the security-driven visa restrictions that keep away foreign students and scientists. Most important, the decline in the number of Americans training to become scientists and engineers suggests the need to reinvigorate science education in the public schools" (TNYT, 2004). To the extent TNYT discusses taxes, they are critical to the tax policy of President Bush.

Council of Competitiveness – A Broad Agenda for Growth

An organization that in many ways bridges the two themes, making the USA more innovative and improving the business climate, is the Council of Competitiveness (CoComp). CoComp is an organization consisting of leaders from corporate America, university presidents, and labour leaders. CoComp is aiming to "set an action agenda to drive U.S. economic competitiveness and leadership in world markets in order to raise the standards of living for all Americans" (2006: 96). It is headquartered in Washington, D.C. CoComp produces analysis and policy recommendations on how the U.S. economy can be more innovative and competitive.

In the report *Innovate America* (2005), CoComp outlines an innovation agenda. The agenda is centered around three pillars: talent, investment, and infrastructure. The talent pillar focuses on nurturing scientific and technical knowledge and stimulating creativity to

⁷¹ The New York Times is the newspaper in USA and probably the world that best covers international politics, but the Washington Post is considered by many to have the best coverage of U.S. politics. The Wall Street Journal is the newspaper for corporate America, with a focus on financial markets and economic issues.

⁷² This refers to the period October 2004-July 2006.

“catalyze the next generation of American innovators” (2005: 11). CoComp includes both increased public investment in R&D and promotion of long-term risk-taking in the industry. The third pillar is infrastructure –not in the traditional sense (transportation), but rather an innovation infrastructure. They stress the importance of a national innovation strategy and a better understanding of how to manage innovation and, further, introduce more innovation in manufacturing and health care. CoComp has a broad agenda for improving America’s competitiveness, straddling both the make-USA-more-innovative camp and the improve-the business-climate camp.

3.3.2 Improving the Business Climate in the USA

The business climate in the U.S. is subject to a lot of debate. On one hand, U.S. businesses are maybe the most competitive in the world, and few countries have so many entrepreneurs and fast-growing companies as the U.S. Further, taxes are among the lowest in the industrialized world. But on the other hand, the USA has an extremely complicated tax system, and since the fifty states have a large degree of independence—a patchwork with fifty different systems of rules and regulation above the federal rules—the administrative burden is high. While one theme of the growth debate focuses on U.S. innovative capacity by increasing the R&D capacity, another theme in the growth debate is focused on how to grow the U.S. companies faster by reducing costs and regulations. The proponents of improved business climate do of course recognize the importance of R&D and education, but it is rather a matter of priorities and focus.

Corporate America’s Agendas for Growth

The largest organization for American business is the Chamber of Commerce (CoC). Its members include both small and large companies of all sectors and could be said to represent the mainstream of American business. In three reports, CoC suggests how to improve the competitiveness of the U.S. economy (CoC, 2004; CoC, 2005; and CoC, 2006); below is a synthesis of these three reports. CoC points out the danger with a prevailing attitude among U.S. policymakers, the public and media that “takes economic growth for granted.” Therefore, they urge all candidates for Congress to embrace “policies that unleash the job-creating potential for U.S. businesses by adopting an agenda that supports workers, encourages workplace flexibility, respects open competition, advances education and training, and endorses regulatory fairness” (CoC, 2004:1). In these reports, the U.S. Chamber “calls on the national political parties to promote policies and individuals who will champion pro-growth laws and regulations” (CoC, 2004). They have eight rather detailed suggestions on how to make the U.S. economy more competitive. They are below presented in the order they are presented by the CoC (2006).

- **Workforce**
In order for U.S. companies to thrive, they need access to a skilled and diverse workforce. CoC stresses “the need for additional taxpayers” and therefore wants to expand the workforce by provide better opportunities for the disabled to participate in the workforce, provide seniors with more options for remaining in the workforce, and increase legal immigration (2006: 14). Lawmakers must also establish a pathway for illegal aliens to become legal residents.

- **The Workplace**

The rules regarding workplaces is “a patchwork of laws and different enforcement structures” often developed in an ad hoc manner (CoC, 2004:3). CoC calls for a reform of these confusing regulations.

- **Education and Training**
CoC is concerned that “fewer and fewer Americans are entering the scientific and technical field” (2004: 3). CoC supports legislation that builds on local and regional initiatives to improve education. Further, CoC wants more funding for job training and more involvement of local business. CoC has, together with several other business organizations, started an initiative with the goal of doubling the number of graduates in science and technology by 2015.⁷³
- **Regulations**
CoC wants an overview of existing regulations and a cost-benefit analysis of new regulations. CoC also calls for improved methods of measuring the effects of regulations. In the field of intellectual property rights there needs to be stricter legislation and it need to be enforced, especially globally.
- **Technology**
CoC states that “the nation’s position as a leader in technology and innovation depends upon the establishment of a clearly defined version, coupled with a commitment by both the public and private sectors, to invest in future infrastructure and applications of broadband technologies” (CoC, 2004:5). They want to ensure the USA’s leadership in technology and innovation by adding tax incentives and preventing regulation that could hinder the growth and development of technology.
- **Energy**
The consumption of energy in the U.S. has increased much faster than production. CoC wants to increase the production of energy in the USA to reduce dependence on foreign sources. Energy is, according to the CoC, “the lifeblood of the economy” (CoC, 2004:5). CoC also supports trading of emission credits as a method to provide “flexibility in meeting environmental laws” (CoC, 2005:16).
- **Tax reform**
CoC “strongly supports” the tax reform (see above) the Bush administration has passed (2006: 27). They also support reforms that will simplify the tax code. CoC wants a tax system that encourages savings and investments, “which are drivers of future [economic] growth” (CoC, 2005:3). To improve the competitiveness of U.S. businesses, certain tax credits, such as the Research and Development tax credit, should be made permanent.
- **Corporate Governance and the tort system**
Nearly 90 percent of American businesses are faced with some type of litigation (2006: 8). The increasing costs of litigation are adding extra costs to American business. CoC wants the Senate to pass legislation that reduces the risk of

⁷³ www.businessroundtable.org (accessed August 13, 2006)

frivolous lawsuits. Further, CoC wants public-controlled pension funds to operate by the same standards as public companies.⁷⁴

Conservative Think Tanks

Think tanks are influential in the USA partly because they are one of the main sources of new political ideas, but also because many in the presidential and congressional staff have backgrounds in the think tanks and vice versa. President Bush's tax cuts are partly the brainchild of conservative think tanks. The current growth policy is widely popular among the conservatives, but there is criticism against the high budget deficit. Heritage Foundation writes: "How does the U.S. maintain superior growth in the face of this spending binge?" (Kane, 2004) and answers thus: "Lower spending is the only solution to the deficit problem that doesn't sacrifice strong economic growth" (Kane, 2004).

The Cato Institute accuses the Republican leadership for not supporting a culture of spending restraints. Cato Institute urges Republican leaders to curb the culture of spending, with the thinking that conservatives ought to favour not only tax cuts but also spending cuts (Edwards, 2005). The influential conservative think tanks are all proponents of free trade. The President has, so far in his second term in office, promoted a free trade policy, and it appears he will continue to do so.

U.S. High-tech Industry

Everybody agrees that in order to grow, the U.S. economy needs successful and innovative companies. American Entrepreneurs for Economic Growth (AEEG) is an organization that represents these types of companies. It is the nation's largest organization for emerging growth companies and works in close collaboration with the National Venture Capital Association. AEEG is not the most influential organization in Washington, but they do represent the opinions held by high-technology companies and those who favour a technology-based economic growth. Another representative for the U.S. high-tech industry is AeA.⁷⁵ AeA is an organization that represents all segments of the technology industry by lobbying governments at the state, federal, and international levels. AeA and AEEG together represent the view of the technology industry on economic growth policy.

One of the main issues for AEEG has been the expense of stock options. Awarding stock options to employees has been common among small start-ups that cannot offer high salaries. The USA had allowed companies to book stock options awarded to employees as investments. In the aftermath of corporate scandals where stock options were involved, these rules changed, and stock options now have to be booked as expenses. Several competing nations allow companies to expense options, and this "puts American companies at a disadvantage when competing with foreign companies that can offer this incentive package" (AeA, 2004: 27).

In the aftermath of the corporate scandals in 2001-2002, stricter regulations on financial reporting and auditing were introduced, with the Sarbanes-Oxley Act. Small companies experience rising cost in complying with these new rules. Both the AEEG and AeA want

⁷⁴ *Some public controlled pension funds are applying more strict governance rules than they are required to by law.*

⁷⁵ *AeA was formerly known as American electronic Association.*

an overview of how these rules affect small and venture-backed companies, to find a “balance between accountability and bureaucracy” (AeA, 2005: 27).

There is among the high-technology industry firm support for free trade and elimination of trade barriers. However, there is a concern that intellectual property rights are not well-protected, and they would like to see stronger enforcement of intellectual property protection worldwide.

The high-tech industry in the U.S. has benefited from the high skilled immigration to the U.S. and wants to expand the possibilities for foreigners to get H-1B visas, i.e., working visas. AeA suggests that all foreign students receiving a master’s degree or doctorate should automatically get a green card, or residence permit.

The technology industry in the U.S. is, of course, in favour of increased federal funding for research and development in science. They are also in favour of the President’s proposal to make the R&D tax credit permanent. AeA also wants to improve the science and math training in U.S. schools and “alter the attitudes of young people towards careers in high-tech” (AeA, 2005:25). AeA sees a parallel to the situation in the 1950s, when the launch of the Sputnik was in the U.S. followed by a national program to improve math and science. The situation is similar now, and the U.S. needs a new national summit around these issues.

3.4 Federal Growth Policy in the USA – Some Comments

The growth debate in the U.S. is focused around two themes: making the USA more innovative, and improving the business climate. These two themes are, of course, not mutually exclusive; but it is evident that the participants in the growth debate tend to emphasize one of the categories over the other. It is possible to find a political difference: The Republican Party tends to favour the business climate school, while the Democrats tend to be in the innovation camp. This difference should not be overemphasized. Moreover, the party system in the USA is not as “rigid” as the Swedish one. Members of Congress often vote against the party line. The senators’ loyalty is to their constituency more than to their party affiliations. Therefore, it is sometimes difficult to discern a party line in an issue.

An aspect of the tax reduction that seldom is discussed is from where the money is taken and for what it is used. Lynch (2004) argues that the debate on the U.S. business climate misses the discussion of what services/investments have to be reduced in order to finance the tax cuts. Tax cuts could be an efficient way to increase efficiency in the government, thus a discussion on tax cuts (and tax increases) has to include this aspect.

Another aspect of the growth debate that is worth mentioning is the focus on small businesses. The business climate debate is focusing on improving the climate for small businesses. The notion that big companies do not create any new jobs is widely accepted. Some even want to impose an extra tax on companies that use resources offshore, which mainly would apply to big companies.

As interesting as it is to discuss the growth debate itself, it can be just as enlightening to see what is not discussed. Although the USA is one of the largest recipients in the world of Foreign Direct Investments (FDI), it is seldom mentioned in the growth debate.⁷⁶ In fact,

⁷⁶ www.bea.doc.gov/bea/di/di1fdibal.htm (accessed August 25, 2005)

the President hardly mentions FDI. Nor is any leading Democrat politician discussing FDI in connection with economic growth. In Sweden there is a debate and almost a political consensus for increasing the labour force participation; such a debate does not exist in the USA. Part of the explanation might be that the USA has a more favourable age structure than Sweden.

4 Growth Policy in Iowa

Iowa is a landlocked state in the Midwest, squeezed in between Minnesota, Wisconsin, Illinois, Missouri, Nebraska, and South Dakota; and it's bordered on its east and west sides by the Mississippi and Missouri rivers. Iowa has a population of 2.9 million and is by size the 26th largest state in the USA. Des Moines (population 200,000) is its biggest city and the state capitol. Des Moines is also the commercial and industrial capitol of Iowa. Unlike many other states, Iowa is ethnically homogenous: 95 percent are white, and 94 percent have English as their first language.

Economic Profile of Iowa

Iowa is known as an agricultural state. However, only a small percentage (6 percent) of the Iowa population derives their personal income directly from agriculture; even that is almost twice the national average.⁷⁷ But indirectly, agriculture-generated dollars are very important for the state economy. Iowa is the leading producer and exporter of many agricultural products. However, the main export commodities from Iowa are machinery, vehicles, and meat (in that order). In most advanced economies services are the most important sector; so too in Iowa. Another characteristic of the Iowan economy is the high concentration of insurance companies. Des Moines has the second highest concentration of insurance companies in the USA.⁷⁸

Iowa has an unemployment rate that in the last years has been below the national average. The *per capita* income in Iowa is slightly less than the national average, but since the living expenses are lower (especially real estate), the adjusted income per capita is about the same as the national average.⁷⁹ Iowa also has a tax burden for individuals that are below the national average (Moody and Hodge, 2004).⁸⁰ In 2004 Iowa had the highest economic growth of all states (8.1 percent) (*Des Moines Register*, June 24, 2005). The dependence on agriculture in Iowa makes the growth to some degree correlated with the size of the harvest, and 2004 produced a good harvest.⁸¹

By number of students the two biggest and the main research universities in Iowa are University of Iowa (UofI) in Iowa City and Iowa State University (ISU) in Ames. A third, smaller, public university is the University of Northern Iowa in Cedar Falls. These three universities are called the Regent Institutions. The biggest private university is Drake University, and it is located in Des Moines. Both UofI and ISU are ranked among the top

⁷⁷ Calculations from <http://stats.bls.gov/eag/eag.ia.htm> (accessed July 25, 2005)

⁷⁸ www.iadg.com/UserDocs/Information_and_Services_Industries.pdf (accessed February 26, 2005)

⁷⁹ <http://gatton.uky.edu/CBER/Downloads/btab2fram.htm> and ICIG (accessed July 17, 2005)

⁸⁰ www.taxfoundation.org/sr129.pdf (accessed April 12, 2005)

⁸¹ For a critical comment on these numbers, see the *Des Moines Register* (July 17, 2005).

100 universities in the nation.⁸² Their strengths are in agricultural-related sciences and in medicine.

Among the states, Iowa ranks sixth place in academic R&D dollars per capita but come out lower if all types of research are included. Moreover, Iowa ranks high in its number of science and engineering doctorates: awarded to 1 million residents. However, Iowa performs average when it comes to patents per capita and employment in high-technology sectors.

Iowa has an emerging high-tech sector, in large part driven by the two main research universities: UofI and ISU. The growth of the biotech sector is above the national average in terms of number employed and rate of salary increase. Iowa's strength in biotechnology lies primarily within agricultural-related areas of bioscience. However, Iowa has a lack of venture capital. Iowa ranks 45th among the states in venture capital investments and 47th in venture capital investments per capita (ICIG, 2004). Iowa ranks low on entrepreneurial activity (35th), although they rank high on entrepreneurial climate (17th) (Goetz and Freshwater, 2001).⁸³

Several government bodies and organizations are engaged in the economic development and growth policy in Iowa. However, the Iowa Department of Economic Development (IDED) is the agency on the state level that is responsible for exercising the economic development policies in Iowa. IDED also conducts studies on the Iowan economy and coordinates and initiates the marketing of Iowa. IDED is organizationally placed directly under the state governor, and has a staff of 11 and a budget of \$20 million. Its mission is to: "improve the economic well-being of the State of Iowa by working with businesses and communities to strengthen their foundations for growth in the New Economy."⁸⁴

4.1 How Iowa Is Planning to Grow Its Economy

Iowa has a strategic plan for state economic growth (IDED, 2004). This document is not widely spread, but it constitutes a base for the growth policy in Iowa and serves as a guideline for IDED. There is also a document, Iowa 2010 (2000), that outlines a vision for development of Iowa and how to create economic growth. This document is the result of a joint effort by several taskforces consisting of citizens, businesses, and organizations around Iowa together with the governor's Strategic Planning Council. The strategic growth plan and the Iowa 2010 provide a fairly unanimous picture of how growth should be created in Iowa. The growth plan set up four goals. These goals are not ranked and are below presented in the order they appear in the growth plan.

1. Iowa Will Grow in Diversity of Population and Workforce

Iowa is one of the states with negative netto migration i.e. the state has more people leaving than coming. However, the state population has increased, due to a high birth rate. In order to facilitate economic growth, this trend must be reversed. The Growth Plan does not state how this should be done, but the Iowa 2010 suggests that "the state must open its

⁸² *There are several university rankings in the USA. One of the most cited and respected is the one done by the news magazine U.S. News and World Report.*

⁸³ *This ranking is a couple of years old, and a lot may have changed since then, but no nationwide comprehensive ranking have taken place since then.*

⁸⁴ *www.iowalifechanging.com/mission.html (accessed July 25, 2005)*

doors to those from other countries who seek the opportunities offered here” (Better Iowa, 2000:9) and they are aiming to request that Immigration and Naturalization Service⁸⁵ speed up the process for immigrants wanting to relocate to Iowa. Iowa will also try to “encourage former Iowans to return, particularly college graduates” (Better Iowa, 2000: 11). A public-private partnership, which is primarily a marketing vehicle, was established to recruit skilled people to Iowa.⁸⁶

The growth plan also stresses the importance of increasing tourism to Iowa by upping marketing efforts and creating new tourist-oriented attractions. This should partly be financed through private donations, for which there are specially designed tax credits.

2. The IDED Will Create New Sources of Wealth

The growth plan states that the economic development work in Iowa must improve technology commercialization and support entrepreneurship. The measure to do this recommends that the number of successful start-ups should be increased and the Iowa main universities’ patents should generate more start-ups. Further, the economic development activities in Iowa should increase the amount of loan and credit guarantees to qualified businesses not eligible for conventional loans. Another target for creating new sources of wealth is to expand into global markets. In order to make this happen, the participation of Iowa companies in international trade shows should increase year by year.

The tax-financed investment fund The Iowa Values Fund (IVF) (see below) should show a positive Return on Investments (ROI). The measure for a positive ROI is that the average earnings per job created should exceed the average earning in the upper Midwest. Further, the permitting process for business should be more efficient and timely, and the state performance (measured through annual studies by external agents) should show an improvement every year. This should enable businesses to make investment decisions faster and devote more time to running their business and less time to arranging permits.

3. IDED Will Strategically Invest its Development Resources and Programs

This goal is concerned about improving the quality of jobs in Iowa in terms of payment. By June 2008, 50,000 high-paying jobs should be created in Iowa, increasing the number of jobs in advanced manufacturing that pay at least \$35,000 a year.⁸⁷

To fulfil the bioscience plan (see below), Iowa has set up a goal to create 100 new bioscience companies during the period 2004-2009. The IVF should have a 10 percent annual increase in application from companies generated from the Regent institutions, i.e. university spin-offs.

4. The IDED Will Promote and Empower Regional Economic Development Success

⁸⁵ *Immigration and Naturalization Service (INS) are the equivalent of the Swedish Migration Board (Migrationsverket).*

⁸⁶ *www.smartcareermove.com*

⁸⁷ *In the USA salaries and wages are usually expressed on a yearly basis.*

In order to spread the economic growth to rural areas, several of the measures are aiming to spread the use of the funds available from IDED to non-metropolitan areas in Iowa; also, they will promote the development of high-speed Internet in rural areas and devote financial resources to business development resources in rural Iowa.

These four goals are divided into sub goals for different government bodies. In addition to the growth plan there are three fundamental projects that are essential to create economic growth in Iowa: Iowa Bioscience Pathway, Iowa Values Fund, and Iowa Fund of Funds, each described below. The Iowa Values Fund is in financial terms a huge investment for Iowa, and its future and direction have been lively debated in Iowa. The Iowa Bioscience pathway is, according to state Governor Tom Vilsack, “a blueprint for Iowa’s future.”⁸⁸ About Iowa Fund of Funds, Governor Vilsack said, “[It’s] another critical step in transforming our state’s economy. I am particularly pleased that the first investment is in the life sciences.”⁸⁹

Iowa’s Bioscience Pathway

As mentioned in section 4.1, Iowa is relatively strong in science and especially agricultural-related sciences. One of their main focus areas for economic development in terms of science is bioscience. Like many other states, Iowa has a plan to develop a biotechnology industry. According to Governor Vilsack, “The biosciences industry is the keystone to building Iowa’s future.”⁹⁰ Iowa’s Bioscience Pathway for Development (2004) presents a strategy for driving bioscience growth in Iowa. The strategy identifies six areas (or platforms) of bioscience that could generate successful companies. Four of these areas are directly linked to research connected to the agricultural sector. The strategy points out four key gaps that need to be filled:

- Improve the research capacity within the six areas of bioscience.
- Encourage and facilitate the commercialization of the bioscience research.
- Foster a business environment that supports, sustains, and encourages the growth and sustainability of bioscience firms in Iowa.
- Develop a workforce or talent pool that can provide the bioscience firms with adequate employees.

Technology-led economic development must have an awareness and knowledge of these issues on a high policymaking level. The strategy therefore proposes an establishment of a senior bioscience advocate within the state government. IDED is responsible for implementing and coordinating the bioscience strategy. One of the purposes of creating and expanding the bioscience sector is to find new outlets for agricultural products.

Iowa Values Fund

⁸⁸ www.governor.state.ia.us/news/2004/august/august0304_3.html (accessed June 5, 2005).

⁸⁹ www.sitiworks.com/index.asp?NewsId=236 (viewed July 24, 2005).

⁹⁰ www.governor.state.ia.us/news/2004/august/august0304_3.html (accessed July 24, 2005).

Iowa Values Fund (IVF) was established in 2003 by the Governor and has funds in the arena of \$503 million.⁹¹ The IVF is comprised of five main components: Business Development and Assistance, University Research and Development, Workforce Training, Quality of Life, and School Infrastructure. This fund aims to grow Iowa's economy and to create high-paying jobs in Iowa. The largest part of the fund has so far gone toward providing financing to companies that wanted to expand in Iowa, modernize their production facilities and business start-ups. The majority of these companies were either in life science or in advanced manufacturing.

IVF also finances university R&D in Iowa, primarily related to life science, agriculture, and advanced manufacturing. Moreover, the fund finances workforce training and cultural programs that should boost the attractiveness of Iowa. The IVF has been criticized for paying out too much to larger corporations that threaten to take their investment dollars somewhere else if they do not get a payout for doing the investments. These handouts have been criticized for being subsidies that have dubious effects on the Iowan economy (Swenson, 2005).

Another critique is that the money spent on IVF could be better used in improving business climate; for instance, lowering the taxes for business. According to IDED, the IVF during its first two years has created 15,000 jobs at an average annual wage of \$37,500. The IVF has a lot of support, and the criticism against it is mainly on how it is functioning, not the fund itself. No evaluation of the IVF has yet been published.

Iowa Fund of Funds⁹²

In order to increase the amount of venture capital in Iowa, the Iowa Fund of Funds (IFoF) was authorized in 2002. It is a \$100 million venture capital development program that invests in companies that agree to establish a physical presence in Iowa and invest in companies active in Iowa. The purpose of the fund is to provide capital for "emerging, expanding, and restructuring enterprises in Iowa" with an emphasis on life science, advanced manufacturing, information technology, and value-added agriculture. The first investment took place in 2005. Individuals can invest in IFoF and under certain conditions receive tax credits for such an investment.

4.2 Economic Development Programs in Iowa

Besides the growth plan, Iowa has several incentive programs that are aiming to improve the business climate and facilitate economic growth in Iowa. Iowa Department of Economic Development (IDED) presents five "competitive advantages" for Iowa. These advantages are marketed as a reason to start a company in Iowa or for companies to relocate and expand in Iowa: Business Climate, Workforce, Quality of Life, Location, and Tax Advantages.⁹³

Business Climate and Tax Advantages

⁹¹ *The fund expired after two years, but a new similar, larger but bigger fund is in the works.*

⁹² *www.legis.state.ia.us/IACODE/2003/15E/65.html and www.investiowa.com (accessed August 14, 2006)*

⁹³ *www.iowalifechanging.com/business/advantages.html (accessed July 18, 2006)*

Iowa has, according to one study, the sixth-lowest business costs in the nation (Economy.com Inc., 2003). Moreover, workers in Iowa are above national average in productivity, and costs for hiring workers are below average (ICIG, 2004). Further, IDED stresses the high quality of Iowa's primary education and the high ranking the public universities in Iowa receive (see below).

Besides the business climate in general, Iowa is offering companies tax advantages. The tax system in the USA differs in many aspects from the Swedish and European systems (Zackrisson, 2004). The states offer a whole range of tax incentives, and so does Iowa. The most significant and/or the most innovative tax advantages can be summarized in the following points:⁹⁴

- A company that increases its R&D gets a tax credit on the corporate income tax equivalent to 6.5 percent of the expenditure for the R&D. Designated areas (i.e. Enterprise Zones) can give additional tax credits.
- Everything that is purchased is subject to a sales tax.⁹⁵ However, the purchase of equipment to be used in manufacturing or to process data in financial and insurance industries is exempted from sales tax in Iowa. Also, the purchase of electricity and gas to be used in manufacturing processes are exempted from Iowa sales tax. The sales tax in Iowa is 5 percent.⁹⁶
- In order to increase the amount of venture capital, Iowa also offers a tax credit for investing in community-based seed capital funds in Iowa. These credits can be claimed both against state personal income tax and state corporate income tax.
- There is also a tax credit offered to companies that create new jobs. In order to get these credits the companies must create jobs that have a wage above median.⁹⁷
- The New Jobs and Income Program offers companies that make capital investments of \$12.1 million minimum and create a minimum of 50 new jobs with a median salary at least 130 percent of the average county wage, a tax credit on sales tax, property tax, and corporate income tax.
- The New Jobs Tax Credit offers companies that increase their Iowa workforce by at least 10 percent a tax credit on the corporate income tax to up to \$,200 per new employee.
- The corporate income tax in Iowa is based on sales in Iowa. It means that all out-of-state as well as all export sales are not included in the state corporate income tax.
- Individuals that invest in a qualifying Iowa business can receive a tax credit equal to 20 percent of the taxpayer equity investment.

⁹⁴ This information is provided by Iowa Department of Economic Development: www.iowalifechanging.com/endowiowa/taxcredits.html (accessed August 14, 2006).

⁹⁵ A sales tax is only levied on sales to end user in contrast to value-added tax (VAT) that is levied at each stage of the production. So, as products move through the various stages of production and distribution, a company pays taxes on only the value it adds. For a brief overview of sales tax versus value-added tax see Zackrisson, 2004.

⁹⁶ In addition to the state sales tax there might be local (county or city) sales tax.

⁹⁷ www.iowalifechanging.com/business/downloads/taxincentiveprograms.pdf (accessed April 5, 2005)

- In order to get more growing small businesses, start-ups can defer tax payment the first three years of existence.

All states (and counties and cities) in the USA offer some type of tax incentives for businesses and individuals. Though these tax incentives offered in Iowa are not unique, they are one of the main tools for economic development policy in Iowa.

Workforce

As stated in the beginning, Iowa has one of the best systems for primary education in the nation. It ranks at the top on most of the rankings for primary education (ICIG, 2003). As stated above, Iowa is also home to two good research universities and several other educational institutions. The state also ranks high on worker productivity (16th) (ICIG, 2004).⁹⁸ In order to maintain and increase productivity, Iowa's Department of Economic Development Workforce Development Initiative offers, with some restrictions, companies in Iowa free employee training.

- Iowa New Jobs Training Program assists businesses that are creating new positions with new employee training. In order to receive this free training, the companies must pay state tax in Iowa, and the company must not have downsized in the past six months. Employees qualifying for training services must be in newly created positions.
- Another program is the Iowa Jobs Training Program. It is similar to Iowa's New Jobs Training Program, but it is available for any employee if it will enhance the performance of the company.

These programs are possible due to the close collaboration between the community colleges (CC)⁹⁹ and the industry. Iowa is home to 18 community colleges, and they are spread out over the state. The state level provides financing, but the type of training needed is a decision the company, the employee, and the CC make together. The independent and locally controlled CCs guarantee that they provide relevant training and education.

Quality of Life¹⁰⁰

Part of the marketing of Iowa is the high quality of life: good schools, low crime rate, absence of traffic congestion (short commute), and clean air, the marketing is aiming to recruit out-of-state companies and skilled people to relocate to Iowa, as well as to increase tourism. Preserving the clean air and nature is a part of the policy for economic growth. Therefore, Iowa Department of Economic Development is engaged in environment protection and recreation development.

Location

⁹⁸ Productivity is measured as value-added per dollar.

⁹⁹ Community Colleges are semi-public institutions for training and education. They provide vocational training and preparation for university studies.

¹⁰⁰ www.iowalifechanging.com/business/qualityoflife.html (accessed July 28, 2005)

IDID emphasize two aspects of location: room to expand and the state's central location within the USA. Iowa's location in the Midwest is stressed as being convenient for transport to both the west coast and east coast. However, it is far from the big population centres in the U.S., and this location gives Iowa a cost advantage. About the only way to improve a location is to build and/or upgrade the infrastructure. The responsibility for infrastructure in the USA is shared between multiple levels of intertwined local, state, and federal agencies. Often, an infrastructure project is financed by several government bodies. It is therefore usually complicated and a long process to built new or improve existing infrastructure. Iowa Department of Transportation is responsible for infrastructure issues in Iowa. They run several programs that provide funding for expenditures on city and county highways and other types of infrastructure, to help attract new companies or to support growth within existing companies.

4.3 What Do the Others Think?

Iowa Coalition for Innovation and Growth (ICIG)

Iowa Coalition for Innovation and Growth (ICIG) is a coalition between the Iowa Business Council (IBC)¹⁰¹ and the Iowa Chamber Alliance¹⁰². Iowa Chamber Alliance has, besides ICIG, their own agenda for growth (see below). It is an important vehicle for policy debate on economic growth in Iowa. The purpose of the Iowa Coalition for Innovation and Growth (ICIG) is to establish a collaborative structure for coordinating the development and implementation of economic development activities in Iowa. This coalition will work "to competitively position Iowa as a world leader in the new economy by encouraging research, technology, business innovation, and growth." ICIG are forming "hot teams" in order to address growth issues. The subject for the teams is changing, but in 2005 four "hot teams" were created:

- **Health Care**
Iowa, like the rest of the USA, is experiencing increasing health care costs. The aim of this team is to pursue Lean Enterprise as a methodology to reduce cost and increase quality in health care. The "hot team" also addresses issues such as reducing malpractice insurance and consumer education.
- **Entrepreneurial Formation**
ICIG work with entrepreneurship is canalized through Iowa Entrepreneurial Network (IEN). Its goal is "to create a critical mass of talent to accelerate the growth of Iowa business and career opportunities."¹⁰³ IEN is providing information resources for entrepreneurs, and they are having network events for entrepreneurs and investors.

¹⁰¹ Iowa Business Council (IBC) is composed of CEOs from the 23 largest corporations in Iowa and the presidents from the three public universities. IBC's mission is to support Iowa's economic vitality (www.iowabusinesscouncil.com).

¹⁰² Iowa Chamber Alliance is the vehicle for collaboration between the Chambers of Commerce in Iowa. The Chambers of Commerce are influential organizations that canalize the views and opinion of the American industry.

¹⁰³ www.iowaentrepreneur.com (accessed July 26, 2005)

- **Business Development and Processes**

The purpose of this “hot team” is to “benchmark and recommend a best practice state economic development program.” The “hot team” is also addressing the problem of Iowa’s low share of federal research and innovation grants and is sharing best practice for obtaining these.

- **Advanced Manufacturing Research and Collaboration Cluster¹⁰⁴**

Due to increased national and international competition, Iowa manufacturers need to become more productive and innovative. Advanced Manufacturing Research and Collaboration Cluster (AMRCC) is a partnership between IBC and Iowa’s end-product manufacturers and their Iowa suppliers. The purpose of AMRCC is to promote the use of advanced technologies and engineering; conduct collaborative research; and provide user-to-user sharing of technologies and best practices in Iowa. AMRCC is offering network opportunities and sharing best practices between manufacturing companies.

ICIG also produces a yearly benchmark study in which Iowa is compared to the other 49 states (ICIG, 2004). As ICIG primarily consists of Iowan corporations, they are focusing their agenda on issues that will improve the business climate in Iowa. They are also strong supporters of the Iowa Values Fund, and over the years they’ve been engaged in the issue of quality primary education.

Iowa Association of Business and Industry¹⁰⁵

Iowa Association of Business and Industry (IABI) is the leading organization for businesses in Iowa. IABI has 1,500 members, and these companies represent more than 300,000 employees, which is a quarter of the labour force in Iowa. IABI’s mission is to “enhance the competitiveness of Iowa business and industry by shaping a legislative and regulatory environment conducive to Iowa growth.”¹⁰⁶

IABI offers an agenda for economic growth in Iowa. It encompasses: economic development funding, tax relief, and regulatory reform.

- **Economic Development Funding**

IABI supports the Iowa Values Fund and is, in general, positive about the economic development work that is taking place in Iowa.

- **Tax Relief**

A significant source of income for Iowa is the property tax. Iowa has a property tax higher than the national average. IABI recommends that this

¹⁰⁴ www.amrcc.com (accessed July 26, 2005)

¹⁰⁵ The information in this section is from IABI’s website (www.iowaabi.org) and an interview with IABI’s president Jim Aippersbach.

¹⁰⁶ There are two different mission statements presented on the Web site. They are different in wording but similar in content.

tax be lowered. They also want to lower personal income tax and capital gains tax. IABI points out that Iowa's government size is not in proportion to its population. A leaner and more cost-efficient government would enable taxes to be lower.

- **Regulatory Reform**

IABI urges regulatory reforms in several areas: health care, the environment, safety and occupational health, and unemployment compensation. The purpose of these reforms is to drive down the cost of doing business and to reduce the administrative burden for companies.

IABI's members come from all types of industries, and therefore IABI puts a lot of focus on improving the general business climate. IABI closely follows new policy and new legislation in Iowa.

Iowa Chamber Alliance¹⁰⁷

Iowa Chamber Alliance (ICA), like IABI, consists of companies in Iowa, but the organization has fewer members than IABI. ICA has as their slogan, "A unified voice for economic growth." ICA present six suggestions that would, if they were implemented, "improve, enabling existing companies [in Iowa] to be more profitable, expand and provide more Iowans with higher income jobs" (Iowa Chamber Alliance, 2005).

- **Provide Long-term Business Incentives**

ICA supports the Iowa Values Fund and suggests that Iowa explore other incentive methods to encourage capital investments and employee training.

- **Invest in Infrastructure**

ICA wants to allocate additional resources to improving the existing road system.

- **Create Commercialization Centres for Entrepreneurs**

In order to foster growth and expansion among small businesses, ICA wants to create partially state-funded centres for entrepreneurs, where small companies can get assistance to grow. These centres should be spread out around Iowa and function as one-stop shopping for small companies that want to expand.

- **Reform Taxes to Foster Growth**

While Iowa has relatively low taxes for individuals, the corporate taxation is higher. In comparison to its neighbouring states, Iowa has the highest corporate taxes. ICA proposes a two-tier flat tax system. It will both

¹⁰⁷ www.iowachamber.net/legislative.html (accessed July 30, 2005)

simplify and make the Iowa taxes more competitive. Like IABI, they point out the problem of high property taxes.

- **Improve Iowa’s Image Through Strategic, Consistent Marketing**
A consistent and strategic marketing of Iowa would make it easier to attract investments and new residents. The message should include the core values and the major strengths of Iowa, like its well-educated workforce.
- **Improve Business Regulatory Efficiency**
ICA encourages regulatory agencies to implement efficient and cost-effective methods for business licensing and permitting. Government agencies should be encouraged to form partnerships with businesses to obtain streamlined processes.

ICA also has an agenda for federal (national) issues regarding health care costs and transportation funding. These are similar, but not identical, to the agenda of the (federal) U.S. Chamber of Commerce (see Chapter Three in this report).

Iowa Policy Project¹⁰⁸

There is an absence of trade unions in the economic growth discussion in Iowa. Besides the organizations that represent corporate Iowa and IDED, few are engaged in the debate on how Iowa can foster economic growth. However, a think tank that has a critical view on existing economic development in Iowa is Iowa Policy Project (IPP). They are not proposing their own growth agenda, but they provide critical analysis of the economic development project in Iowa.¹⁰⁹

IPP are critical of the functioning of the Iowa Values Fund. IPP would like to see the subsidies companies receive linked more closely to creating high-paying jobs. This idea is also supported by the state economist H. Siegelman: “It is a waste of money for the state to offer incentives to companies unless the wages are high.”¹¹⁰ Further, IPP are critical of the tax breaks that are offered to businesses and individuals. They argue that these tax breaks mean that the government has to cut down on something else, such as education that is critical for economic growth.

4.4 Economic Growth in Iowa—A Comment

Since economic growth for the moment is high in Iowa, and unemployment is low, the biggest challenge is not to create economic growth and new jobs but to increase the average wages and to adjust the Iowa industry for the structural change that take place and will continue in the new economy. There is a common understanding in Iowa that the employment in farming and traditional manufacturing will continue to decrease. The economic development work is therefore focused on changing the structure of the Iowan

¹⁰⁸ www.iowapolicyproject.org/

¹⁰⁹ See for instance www.iowapolicyproject.org/2002-2004_reports_press_releases/030925-ivb.pdf (accessed August 14, 2006)

¹¹⁰ State economist H. Siegelman quoted in *Quad Time* (October 5, 2002).

economy and replacing the lost jobs with higher-paid jobs. In broad terms, there is a common understanding on how to do this:

- Create a bioscience industry
- Make the manufacturing industries more advanced
- Increase the supply of capital available for entrepreneurs and companies in Iowa

The level of the bioscience research is high in Iowa. However, the competition for the best researchers in “hot” subjects like biotechnology is fierce and is probably going to increase even more. Most of the high class research in Iowa is in agricultural-related fields or derived from agricultural research. Iowa wants to exploit its status as a top agriculture state with high class research by targeting and developing bioscience businesses.

Most research funding comes from federal agencies and the competition for these funds make them difficult to acquire. It is not clear how much financing Iowa Values Fund (IVF) has provided to bioscience research, but it could be a way to increase the funding for bioscience research in Iowa. Even if Iowa manages to maintain this high level of research, the state will still be faced with the issue of commercialization of the research. As stated in the Growth Plan, the Iowa universities should generate more start-ups. Studies have shown that the single most important factor in creating successful university start-ups is to have a high quality of research (Zhang, 2005). Iowa has extensive activities to support research commercialization like science parks and entrepreneurship centres. Probably the biggest hurdle for creating successful bioscience companies is financing. Can the newly started bioscience firms obtain enough financing in Iowa? This issue is addressed by the Iowa Fund of Funds, partly by tax breaks for providing risk capital and Iowa Values Fund.

Assume the bioscience companies are up and running; do they want to expand in Iowa? In order to expand in Iowa, there must be all the “coaches” or an infrastructure of an innovative economy.¹¹¹ Does Iowa provide the legal, financial, marketing, and managerial competencies that are needed for a successful bioscience industry? This issue is partly addressed in the plans for creating a more diverse population and workforce (see above). Provide enough financing is, in policy terms, often the easier part; the provision of the “innovative infrastructure” is more difficult.

The manufacturing companies in Iowa are well aware that they must become more innovative and more advanced in order to survive. The State of Iowa is offering free training of employees and tax incentives for investments. The well-developed system of Community Colleges is a big advantage for providing the employee of the manufacturing industry with training. The tax incentives, as pointed out by the IPP, run the risk of undermining the financing of the education system, which is one of Iowa’s competitive advantages. Iowa has a lot of manufacturing-related agriculture. There are probably some economies of scope between agricultural-related manufacturing and agricultural-related bioscience, at least in terms of markets.

Iowa also needs to have high-paid jobs outside the sectors of bioscience and advanced manufacturing. The Growth Plan focuses on increasing the tourism industry in Iowa. A majority of Iowans live in rural areas, where agriculture must be supplemented by another industry. The manufacturing industry in Iowa is geographically spread out, and

¹¹¹ In Lee et al (2000) the surrounding community such as lawyers, accountants, and executive search firms are called the “coaches” of Silicon Valley. They are considered necessary to create a successful industrial cluster.

development toward a more advanced manufacturing might cause a geographic concentration, which makes the development of the tourism industry more important.

A big issue on both the state and federal level is administrative burden for companies (and individuals). This issue is brought up by business organizations as an impediment for economic growth. While it is unlikely that an individual will refrain from starting a business because of administrative burdens, it forces small-business owners to be doing paperwork instead of developing their businesses. This problem is addressed in the Growth Plan concerning starting a business and construction permits.

A factor that many states, and so too Iowa, put forward as a competitive advantage is the state's quality of life. The Midwestern countryside charm and the beauty Iowa offers are also offered by most other Midwestern states. The few places that can not offer beautiful nature and countryside charm usually have urban settings (which many consider a better quality of life). A quality-of-life argument linked to scenic beauty is usually without merit, since most regions can offer some kind of beauty. (Few people move to a place just because it is beautiful; they might go on vacation there, but that's usually the extent of it.) The quality-of-life argument—in terms of scenic beauty, low crime rate, lower housing cost, and no traffic congestion—is valid if you compete with urban centres, i.e., Chicago, New York, or Los Angeles, but in most cases Iowa is competing with the neighbouring states: South Dakota, North Dakota, Illinois, and Nebraska. It is therefore important to focus on the factors that differentiate Iowa from these states. In Iowa's case it is the education system and the level of research.

In the debate on economic growth in Iowa, no one mentions lack of entrepreneurship. However, it takes place; most universities have some type of entrepreneurship centre. It is worth noting that the programs in place to encourage small business are focused on providing more financing, to help them grow and to provide them with information on how to start a business. There seems to be less focus on creating a positive attitude toward entrepreneurship. Interviews indicate that Iowans are entrepreneurial (like Americans in general) and have a positive attitude toward starting their own business. Thus, there is no big need to teach them to be entrepreneurs; instead, the focus is on providing them with adequate skills for becoming successful entrepreneurs.

The issue of infrastructure is usually not placed high on the list in the growth debate in Iowa. Iowa has no international airport, but there is no plan to expand any of the existing airports. The infrastructure in terms of roads is already of high quality. Voices regarding improving or constructing new roads and freeways are seldom heard in the growth debate.

4.5 Summary of Interesting Policy Ideas for Iowa

- **Benchmarking**

As is evident for readers of this chapter, there are rankings for most indicators connected to economic growth in Iowa. These are usually done on a yearly basis, which makes it easy to follow their development. A critique against rankings is that they do not show absolute improvement, only relative. It is therefore necessary to use other measures to complement the ranking. There is an ongoing

scientific debate on the methods and relevance of this type of rankings (see, for instance, Chapple *et al*, 2004, and Fischer, 2005). If properly used, rankings constitute a good tool for evaluation.

- **Focus on high-paying jobs**

The financial resources devoted to economic development in Iowa is best put to work if they create high-paying jobs. The focus in the Iowa growth policy on creating jobs with a wage above median (although critics claim that this is not always done) is worth more attention.

- **Set achievable and evaluable goals**

Most of the goals in the Growth Plan are numerically expressed; this facilitates evaluations. If the goals are numerically expressed, it is easier to hold the executing agency accountable.

- **Use the tax system for growth purposes**

As discussed earlier, there is an ongoing debate about the merits of tax breaks. The discussion on taxes is not only about how high/low they should be but also what should be taxed and how. This widens the taxation debate and makes taxation central in the debate about economic growth. Iowa's Growth Plan set up clear and achievable goals and the tax system is one of the tools used to achieve them.

- **Centralize the responsibility for growth issues**

The responsibility for issues regarding economic growth is gathered in the Iowa Department of Economic Development (IDED). Although some issues are handled by other departments, IDED has the coordinating responsibility. IDEDs function as one-stop shop for all issues regarding economic growth in Iowa.

5 Growth Policy in California

California is more like a nation than a state. Its population of 36 million is comparable to that of a big European country. California has the seventh largest economy in the world and encompasses 410,000 km² which is slightly smaller than Sweden. California's population is concentrated in four metro regions: San Diego, Greater Los Angeles Area, the Bay Area,¹¹² and Sacramento. About 80 percent of the population lives in one of those regions. As usual in the U.S., the state capital is not the biggest city in the state; Sacramento is the seventh biggest city in California.

California is known for its sunny weather. It is sometimes said to be one of California's biggest competitive advantages. The seemingly ever-growing California has an ubiquitous risk of earthquakes. However, this seems not to discourage people from moving to and investing in California. It is one of the most ethnically diverse states, with no ethnic majority. California is also home to two of the busiest ports (Los Angeles and Long Beach)¹¹³ and airports (Los Angeles and San Francisco)¹¹⁴ in the world. This makes California an important hub for international trade.

Economic Profile of California

Besides having the largest economy of all 50 states, California also has one of the most diversified economies. It is home to the U.S. high-technology industry as well as being the largest producer of agricultural products. The entertainment industry is located in southern California. While the big biopharmaceutical companies are headquartered in the east, California is the leading state when it comes to biotechnology (Milken Institute, 2004a). Although California is well known for its high-technology and entertainment industries, many may not know that the state has one of the largest manufacturing sectors in the U.S.

California's economy was in 2004 growing, with more than 4 percent (annual GDP-growth), which is slightly more than national GDP-growth.¹¹⁵ California has an unemployment rate that is roughly the same as the national average (5.1 percent)¹¹⁶ and an average per capita income of USD \$35,019, the twelfth highest in the nation. Although California has experienced a negative migration ratio toward other states, the high immigration rate keeps the population increasing by 2-3 percent a year.

There are several rankings of universities in the world and in the U.S. One recently published list was "Academic Ranking of World Universities."¹¹⁷ On that ranking, California has six universities among the 20 best in the world.¹¹⁸ The most well-known ranking of universities in the U.S. is the *U.S. News & World Report's* annual ranking.

¹¹² *The Bay Area consists of nine counties, and the largest cities are San Francisco, San Jose, and Oakland. Silicon Valley is located in the Bay Area.*

¹¹³ www.aapa-ports.org/pdf/WORLD_PORT_RANKINGS_2003.xls (accessed December 19, 2005)

¹¹⁴ www.airports.org/cda.xls (accessed December 19, 2005)

¹¹⁵ www.dof.ca.gov/HTML/FS_DATA/LatestEconData/FS_Income.htm (accessed November 18, 2005)

¹¹⁶ www.bls.gov/lau/home.htm (accessed November 18, 2005)

¹¹⁷ <http://ed.sjtu.edu.cn/ranking.htm> (accessed September 8, 2005)

¹¹⁸ *Stanford University, UC Berkeley, California Institute of Technology (Caltech), UC San Diego, UC Los Angeles, and UC San Francisco.*

California can pride itself with nine universities in the recent top 50.¹¹⁹ The bottom line is that California has world-class universities with world-class education and research.

Despite the high quality of its universities, the business climate in California is by many considered to be less than good. On the State Business Climate Tax Index, which primarily focuses on the tax system, California is placed 38 among the 50 states (Hodge *et al.*, 2004). The cost of doing business in California is the sixth highest among all states, according to Economy.com (2003).

California usually performs well on science and technology rankings. Rankings in absolute terms are almost always topped by California; in relative rankings California does less well, since its size and diversity make the technology sector less dominant relatively. Almost half of all venture capital investments (49 percent) in the USA are going to Californian companies, and a vast majority of this capital goes to Silicon Valley.¹²⁰ Nevertheless, Massachusetts has more venture capital investment per capita than California (National Venture Capital Association, 2005). Another study shows that California is attracting high-tech start-ups from other states (Zhang, 2005). Moreover, California is the largest recipient of federal R&D funding.¹²¹

The dominance of California when it comes to high-technology is striking. The Santa Monica-based think tank the Milken Institute ranks states according to relative position in science and technology. Despite its diverse and large economy, California is ranked second, after the small and university-packed state of Massachusetts.¹²² The technology intensity is further illustrated by numbers of patents granted. In absolute numbers, California is of course number one, but in relation to the size of its population California is ranked third.¹²³

Although California represents 13 percent of the economy, only 10 percent of Fortune 500 companies have their headquarters in the state; California is a small-business economy.¹²⁴ This is also illustrated by the lending from the Small Business Administration (SBA): California gets a larger share of the small-business loans from the federal Small Business Administration than their size of the economy represents.¹²⁵

5.1 Problems in California

It is difficult to capture a debate about problems in as diverse and populous state as California. However, it is possible to find four main problems, or categories of problem, that are frequently discussed among the politicians, the Media, and the public.

¹¹⁹ www.usnews.com/usnews/edu/college/rankings/brief/natudoc/tier1/t1natudoc_brief.php (accessed October 8, 2005)

¹²⁰ www.pwcmoneytree.com/moneytree/nav.jsp?page=region (accessed December 22, 2005)

¹²¹ www.aaas.org/spp/rd/states02b.pdf (accessed October 11, 2005)

¹²² *Massachusetts is a state with a population of only 6.4 million, but it has several of the best universities in the USA: Harvard University, Massachusetts Institute of Technology (MIT), The University of Massachusetts system with six campuses, Boston University, and Tufts University.*

¹²³ *Calculations from www.uspto.gov/web/offices/ac/ido/oeip/taf/st_co_04.htm (accessed December 4, 2005).*

¹²⁴ *Fortune 500 is an annual published list of the 500 largest public corporations in the U.S., see www.fortune500.com.*

¹²⁵ www.sba.gov/adv/research/sbl_study.pdf (accessed October 11, 2005)

- Traffic congestion

The traffic situation in California, especially in southern California, is infamous. The amount of time Los Angeles drivers spend in their cars is more than in any city in the U.S. (Schrank and Lomax, 2005), and the time stuck in traffic is going up in California (and in the U.S.).¹²⁶ The situation in California is worsened by the fast population growth and insufficient road maintenance. The impact this has and is going to have on economic growth is illustrated by The Road Information Program (2001). Due to its fast-growing population and Californians' love for cars, the state's infrastructure is in big need of an upgrade and expansion (TRIP, 2005).¹²⁷ Anecdotal evidence shows that a short commute is something many people who has moved out of California State as one of the biggest benefits of the move.

- Budget deficit

The State of California has in the past years had a huge budget deficit, and Governor Schwarzenegger came to power in 2004 in part because of the financial difficulties. To what extent a budget deficit is hampering economic growth is uncertain.¹²⁸ However, it (and the debts) has been perceived as a big problem among the Californians and the Californian policymakers. The deficit has shrunk a little the last two years, but its size is still worrisome. Since the taxes in California are above average in the U.S., and the cost of doing business is high (see below), a dramatic increase in taxes is not seen as a possibility; at least some reduction in state spending is therefore considered necessary. There is a division between those who do not want to raise taxes at all and those who want to raise taxes for high-income earners.

- Energy

In 2001, California experienced an energy crisis. There were rolling blackouts, and prices were high. The reason for this was linked by many to the deregulation of the energy market that took place in 1998.¹²⁹ Even today, the energy system is unstable. Local blackouts still occur. The energy costs in California are among the highest in the nation (Milken Institute, 2004c). Other than the budget deficit, the energy crisis was the number-one factor that ousted Governor Gray Davis and brought Arnold Schwarzenegger to Sacramento as the new governor.

- Schools

¹²⁶ *San Francisco and San Diego are also among the top-ten most congested cities in the U.S.*

¹²⁷ See also <http://cpr.ca.gov/report/cprprt/issrec/inf/inf36.htm> (accessed December 4, 2005).

¹²⁸ *The federal budget deficit may in reality not be as big a problem as it is often perceived (see Reynolds [2004] for further discussion). There is reason to believe that the budget deficit on the state level is more problematic. However, it is perceived as a big problem among Californians and Californian policymakers.*

¹²⁹ *For a discussion on the cause of the Californian energy crisis, see Clarke and Bradshaw (2004).*

California has maybe the best university system in the world. However, the public schools, the so-called K-12 education, in California are among the lowest-performing in the nation.¹³⁰ California scores below average on both percentage completing high school and on reading and math tests.¹³¹ This is partly caused by the high immigration and the large number of non-native English speakers among the students in California, but insufficient funding and badly organized school districts are also responsible. The quality of the universities is maintained by a large influx of foreign students and researchers, and the share of students from the California school system is going down.

- Cost of housing

California has experienced an enormous increase in real estate prices. In the past five years, housing prices increased annually by 10-20 percent.¹³² The soaring house prices exist all over the state, but the metropolitan areas have seen the largest increases. Statistics show that a vast majority of Californian households can no longer afford a house in the state's metropolitan areas.¹³³ A similar development is also evident in the rental market.¹³⁴ This makes it difficult for many companies to recruit. They cannot afford to pay the salaries that are needed for buying or renting a house. The issue of affordable housing is on the political agenda. The governor said, in the State of the State address, "I will propose legislation that eliminates regulatory and legal hurdles that [...] increase the costs of new housing."¹³⁵ On one hand, the increase in real estate prices creates a boom in the construction industry, but on the other hand fewer people can afford to move to California, which creates recruitment problems for Californian universities and businesses. Fewer people can afford the American dream of owning their own house.

Some would also call the business climate a problem in California. While it is true that the cost of doing business in California is high compared to in other states, this is to some extent caused by the high real estate prices. The real estate prices are due primarily to the economic success of California and, to a lesser extent, to regulation within the construction sector. California also has one of the most regulated economies in the U.S., which drags down the business climate. However, the business climate in California is strengthened by a very highly educated work force and world-class research. So it is difficult to characterize the business climate in California as either bad or good. It is therefore left out of this discussion on problems in California.

¹³⁰ *Primary education and secondary education is usually referred to as K-12 education (5-18 years old) in the United States.*

¹³¹ *http://nationsreportcard.gov/reading_math_2005/s0021.asp? (accessed October 24, 2005)*

¹³² *This statistics is taken from www.dqnews.com (accessed December 19, 2005)*

¹³³ *www.car.org/index.php?id=MzU2MzU=(accessed December 19, 2005)*

¹³⁴ *www.nlihc.org/oor2005 (accessed December 23, 2005)*

¹³⁵ *Quote from State of the State address January 5, 2005. All the governor's speeches can be found at www.governor.ca.gov.*

5.2 Existing Economic Development Programs in California¹³⁶

Most other states have a certain agency that is responsible for economic development, but California does not. What usually is labelled as economic development is spread out over several state agencies. Due to their sizes, many cities and counties in California have their own well-developed agencies for economic development.

California had, until 2004, an agency called Technology, Trade and Commerce (TTC). It was responsible for policy recommendations and economic development initiatives but closed in 2004 due to the California budget crisis. Since then, there is no state agency with the overall responsibility for economic development in California. However, the Commerce and Economic Development Program has taken over many of TTC's programs and roles.

A big state like California has, of course, many economic development programs. As stated in Chapter One, many programs have multiple purposes, and some programs have vaguely defined purposes. It is therefore difficult to determine if the programs' primary focus is to foster economic growth. California is divided into 58 counties and 478 cities. Most of these entities have their own economic development programs. However, only programs on the state level are included here. These economic development programs can be, according to how they are financed, divided into two broad categories: tax incentives or direct funding (budget line expenditures).

There are hundreds of programs that in different aspects aim to promote economic growth in California. It is, of course, not possible to describe them all in detail.¹³⁷ However, the existing economic development programs can be divided into seven main categories:

Developing Products and Improving Manufacturing Processes

California, along with the rest of the USA and the Western world, has seen a decline in employment in the manufacturing sector. This is explained by productivity increases and competition from low-cost countries. The high cost of doing business in California is giving the state an additional disadvantage in comparison with many other states. Since manufacturing is usually offering better wages than the service sector, keeping the manufacturing sector alive and successful is considered important. Therefore, several policy initiatives are in place to offset the high cost of doing business in California.

- **Manufacturing Technology Program**
This program provides small and medium-size manufacturers with a wide range of inexpensive business assistance, including technical consultative services, workforce training, and professional development.
- **Tax incentives for the manufacturing sector**
The State of California offers several tax incentives for manufacturing companies operating in California. These programs are designed to provide

¹³⁶ This section is based upon California Budget Project (2002), <http://commerce.ca.gov> (accessed October 24, 2005), and interviews.

¹³⁷ See (http://commerce.ca.gov/state/ttca/ttca_investment_display.jsp) for an overview of just investment incentives programs (accessed October 25, 2005).

incentive to expand and relocate to California; they offer a tax rebate on property taxes and 6 percent tax credit on corporate income tax to high-tech manufacturing companies. There is also a tax credit for acquiring and constructing property that will be used in manufacturing. Tax exemption is given for purchases of equipment that are going to be used in film production or post-production.

Promoting Research and Development

The main vehicle for promoting R&D in California is the public University of California (UC) system.¹³⁸ The UC system spends more than \$3 billion a year on R&D and is the world's largest research university. The majority of this funding does not come from the State of California's coffers but from federal agencies, research grants, and contract research from corporations. Although tuition fees and federal research funding are important sources of financing for the UC system, the State of California also contributes in various ways to its financing. The impact the UC system has on the Californian economy and its growth is huge; the high-technology industry in California (and in the world) would not look like it does today without the UC system (University of California, 2003). Besides the UC and the Cal State systems, the State of California has several other programs for promoting research and development:

- The State of California is promoting R&D through the stem cell initiative.¹³⁹ In 2004, it was decided that \$3 billion should be invested in stem cell research over a ten-year period. All research and development being financed must be in California. There is an expectation that stem cell researchers and stem cell companies will relocate to California. Other states in the USA also provide state financing for stem cell research, but not on the same scale as in California.
- In 2000, California governor Gray Davis announced that the State of California should invest in four Institutes of Science and Innovation.¹⁴⁰ The institutes are private-public partnerships, where each tax dollar is matched by two dollars from the California industry. The State of California is planning to invest \$100 million in each of these centres. These institutions are still under construction and are jointly governed by different UC campuses. They are planned to be in full effect during 2006. The purpose with the institute is to "lay the foundation for the 'next New Economy.'"¹⁴¹ These centres are designed to facilitate commercialization of research.

¹³⁸ The University of California system consists of 10 campuses, of which Berkeley and Los Angeles probably are the most well known. See www.ucop.edu for more information about the UC system (accessed October 31, 2005).

¹³⁹ For more information see www.cirm.ca.gov (accessed November 18, 2005).

¹⁴⁰ The four centers are: California Institute for Quantitative Biomedical Research, California Institute for Telecommunication and Information Technology, California Nano Systems Institute, and Center for Information Technology Research in the Interest of Society.

¹⁴¹ www.ucop.edu/california-institutes/about/about.htm (accessed August 11, 2005).

- The State of California offers tax credit to all companies that conduct R&D in California. For basic research, the tax credit equals 24 percent, and for other types of research its 12 percent tax credit on the state corporate income tax.¹⁴²

Developing Local Economies

In contrast to Europe, downtowns (city centres) in U.S. cities are usually plagued with social problems, and many of the affluent inhabitants leave for the suburbs.¹⁴³ The last years have seen a revival of the type of life a well-functioning downtown could offer. It is a widespread belief in the U.S. that cities that offer a downtown with street life, culture, and nightlife attract the type of people that encourage economic development.¹⁴⁴ So, in order to become an attractive city, it has become *comme il faut* to start downtown revitalization programs. The same type of program is also offered in other economically disadvantaged areas, e.g. rural areas.

- The State of California provides the local communities (cities and counties) with grants to revitalize urban downtowns and to enhance commercial districts in urban downtowns. There are also favourable loans to cities for improving infrastructure and public transportation in urban downtowns and other areas.
- Several state programs provide financing for economic development in rural areas and poor regions. However, these programs are primarily aiming to eliminate poverty and provide work opportunities in these less developed areas.
- Important tools in local and regional economic development in the U.S. are Enterprise Zones (EZ). However, EZs are implemented differently in different states. In California, companies located within an EZ get reduced sales tax, favourable deduction on manufacturing equipment, tax credits from hiring individuals, and favourable terms on loss carryovers. Similar programs are also available for reuse of closed military facilities and for regions that suffer from chronically high unemployment.
- None of the programs for developing local economies specifically target the dynamic regions in California, e.g., Silicon Valley. No tax incentives are given to certain areas to promote a high-tech industry.

Support for Business

As stated earlier in this chapter, California has a regulatory burden that is above average in the nation. There is ongoing work reducing the regulatory burden for businesses in California. Besides the cost of complying with the regulations, the high cost of doing business in California is putting Californian companies at a disadvantage. However, there is several tax breaks offered to companies in California.

- Tax exemptions and tax reductions are offered to companies in a number of different sectors. A lot of these are intended not primarily to foster economic

¹⁴² As usual, the tax credit comes with several provisions. For an overview, see www.ftb.ca.gov/forms/misc/1082.pdf (accessed 21st of December, 2005).

¹⁴³ One of the few exceptions are New York and San Francisco.

¹⁴⁴ This idea has best been articulated by Florida (2002) and Florida (2005). See Chapter 2 for a further discussion.

growth but to support weak industries, e.g., fishing and farming. The California film and TV industries get several tax exemptions and can also get some cost reimbursements. The high costs of doing business in California are seen by some as a threat to the film and TV industries in California. These incentives should be seen as a way of keeping movie and television production in the state.

- There are tax breaks for new small businesses operating in California. In their two first years of operation, they are exempt from the minimum franchise tax.¹⁴⁵ The State of California offers a business entity (S-corporation) that allows small businesses to pay a reduced corporate income tax.¹⁴⁶

Developing a Skilled Workforce

The main tool for developing a skilled workforce is through the two state-controlled university systems: the aforementioned University of California system and the 22-campus California State University system.¹⁴⁷ Besides these two systems, there is also the public California Community College system, with more than 100 campuses spread around California.¹⁴⁸ All these systems offer, in addition to academic degrees, different types of continuing and vocational training.¹⁴⁹

- The state of California administrates several programs with the purpose of improving the skills of the Californian workforce. The California Department of Education —Adult Education Program has as its purpose to provide “lifelong educational opportunities [...] to all adults.” However, the focus is to provide training and education to individuals that are unemployed or risk being unemployed. California, like most states, offers different types of incentives for adult education. Public high schools and Community Colleges offer training classes in various subjects for free or for a reduced price. Many of these programs focus on dislocated workers. These programs often work in conjunction with federal programs.
- An employer in California gets tax credits on the state corporate income tax for reimbursements (up to a certain amount) for an employee’s expenses in attaining a graduate degree. There are also federal tax credits (for instance, Lifetime Learning Credit) for education and training. These credits mainly target low- and middle-income individuals/households.

Business Capital and Funding

¹⁴⁵ *The Minimum Franchise Tax is a tax all corporations in California must pay, regardless of size. In 2005 it was \$800.*

¹⁴⁶ *In fact, S-corporations are exempted from corporate income tax, the income pass-through, and are taxed as capital income by the owners, i.e. no double taxation. For a brief overview in Swedish of the available business structures in the U.S., see Zackrisson (2004).*

¹⁴⁷ *The difference between the University of California (UC) and California State University (Cal State) is that only UC is granted the right to award PhDs and do research (with a few exceptions). UC is also more selective than Cal State in accepting students.*

¹⁴⁸ *Community Colleges do not have an equivalent in Sweden. They are providing both vocational training and undergraduate university classes.*

¹⁴⁹ *University of California offers, through its UC extension, a full range of courses that should serve the current needs of the general public. (See www.uclaextension.edu for further information.)*

Although California has more venture capital than any other state, there are several programs that aim to increase the amount of capital for Californian small businesses.

- In order to encourage investments in small businesses, under certain conditions 50 percent of any gains from sale of small-business stocks is exempted from state corporate income tax.
- The CalTIP program matches federal funding for research and development. This program is focusing on R&D and commercialization in high-tech industries, life sciences, and energy.¹⁵⁰ The program was put on hold in 2003 due to the budget crisis.
- There are also state programs for promoting Californian companies to engage in export.
- The federal Small Business Administration (SBA) offers loan guarantees to small businesses. The State of California has a program that is similar to SBA's and works in conjunction with those programs.

5.3 How California Is Planning to Grow its Economy¹⁵¹

California shows similarities to the federal level. In a lot of aspects, it behaves more like a nation than a state. But unlike at the federal level, California has a strategic document for how to promote economic growth: its Strategic Growth Plan.¹⁵² Moreover, before Arnold Schwarzenegger became Governor he presented a “plan to rescue the economy in California” that will help California to regain its status as a high-octane growth economy.” This plan is mainly concerned with how to fix California's dire financial condition and consists of four sets of policies. A summary of these two documents' ideas and their implementation are below.

- **Taxes**

To fix California's budget deficit, Governor Schwarzenegger wants to, instead of raising taxes, reduce them to make California more competitive. As mentioned above, California has a tax burden that is above national average and has been accused by many of having a bad business climate —so the Governor has ruled out a raise in taxes.

- **Restrain government outlays**

According to Governor Schwarzenegger “California does not have a taxing problem, it has a spending problem.” He proposed to introduce spending limits. In the fall of 2005 he took the issue of a spending limit to a popular vote, but it was rejected by the Californians.

- **Reform workers' compensation system**

Workers' compensation (workers' comp) is a compulsory insurance paid by employers to cover employees' work injuries.¹⁵³ Employers in California pay more

¹⁵⁰ <http://commerce.ca.gov> (accessed December 23, 2005)

¹⁵¹ Unless otherwise stated, all quotes in this section are from Schwarzenegger (2003).

¹⁵² www.strategicgrowthplan.com/ (accessed August 17, 2006)

¹⁵³ Somewhat similar to “Arbetsgivaravgift” in Sweden.

in workers' comp than in other states. The purpose of this reform was to reduce the cost of doing business in California. In 2005, this reform was complete, and costs for employers were reduced by 15-20 percent.¹⁵⁴

- **School reform**

To solve the problems with California's "permanent" underperforming schools, Governor Schwarzenegger wants to bring "school authority and spending closer to students, parents, and local taxpayers and away from bureaucrats in Sacramento." One part of the reform of the California education school system was to improve the quality of the teachers, i.e. make it easier to fire "bad" teachers. This was in 2005 rejected by the Californian electorate. The aforementioned ballot also included a measure that will grant \$10.4 billion to education/schools. The majority will go to improve existing facilities and construct new schools and facilities.

- **Infrastructure**

The Strategic Growth Plan emphasizes the importance for California of investments in infrastructure. In a speech, the Governor stated that "A champion state cannot have a weak and aging infrastructure."¹⁵⁵ Governor Schwarzenegger has put forward several propositions that will improve the infrastructure in California. In November 2006, a \$20 billion investment in California infrastructure will be on the ballot.¹⁵⁶ Related to the infrastructure propositions is the initiative on the Hydrogen Highways Network, the goal of which "is to support and catalyze a rapid transition to a clean, hydrogen transportation economy in California" (Schwarzenegger, 2005). The purpose of the program for fuel cells is to reduce air pollution, increase energy efficiency, and reduce the dependence on foreign oil.¹⁵⁷

In the Governor's speeches it is possible to extract two additional themes/areas, which are discussed in conjunction with economic growth: the aforementioned Stem Cell Initiative and improvement of the Californian infrastructure, i.e. more and better roads.

Stem cell research is an emerging field in medical research. A stem cell is a special kind of cell that has a unique capacity to renew itself and to give rise to specialized cell types. It is still in an early research phase, and its potential is still unknown, but eventually, the stem cell proponents hope, stem cells will be able to replace cells and tissues that are damaged or diseased. Big hopes are put into stem cell research, both for finding medical cures and for creating economic development. "[Stem cell research] is going to recharge the biotech sector and improve the state's economy" (*Sacramento Bee*, 2004).

In a 2004 referendum, Californian voters approved a \$3 billion investment of tax dollars in embryonic stem cell research in California during a ten-year period. This is unique both because it is the biggest investment in stem cell research in the world but also because federal funding for stem cell research has so far been very restricted.

¹⁵⁴ <http://wcirbonline.org/index2.asp?section=5&subsection=0> (accessed August 18, 2006)

¹⁵⁵ Remarks by Governor Schwarzenegger at May Budget Review May 13, 2005.

¹⁵⁶ The ballot in November will also include a transportation funding protection which is a constitutional amendment to protect gas tax revenues from being used for purposes other than transportation. This will also increase the funding for infrastructure investments.

¹⁵⁷ www.fuelcellpartnership.org (accessed December 23, 2005)

Both the Internet and biotechnology were born in California. Californians' image of their state is that it is the birthplace of new technologies and the birthplace of the future. Governor Schwarzenegger said that "I am, of course, a supporter of stem cell research. [California] daringly led the way for the high-tech industry and...we lead the way for the bio-tech industry. The creativity and resources are right here in California. We are the world's bio-tech leader."¹⁵⁸

It is, in general, difficult to find popular support for large tax-financed programs in California. Nevertheless, Californians approved the \$3 billion stem cell initiative. Californians realize that the future of the state is not in traditional manufacturing but in R&D and knowledge-intensive manufacturing.

5.4 What Do the Others Think?

Milken Institute

Milken Institute (MI) is one of the leading think tanks in California. It is non-partisan and is usually labelled centrist. MI is best known for doing studies of the effect and performance of science and technology, although they do studies in a range of other subjects.

As discussed above, in their biannual *State Technology Index* they rank states according to their "technology and science assets that can be leveraged to promote economic development" (MI, 2004b: 2). The index is comprised of 75 indicators, ranging from research funding to number of households with computers and Internet access.¹⁵⁹ The index has a strong explanatory power on variation in per capita income (MI, 2004b: 7).

In the latest ranking (2004), California ranked second after Massachusetts. The MI (2004a) further elaborates California's position in science and technology. Based on this index, MI has the following policy recommendations:

- MI points out that other states have made it a top priority to attract more research funding to their state universities. California ranks high when it comes to industrial R&D spending per capita, but the state does less well in academic R&D dollars per capita. Since California universities are among the best in the nation and in the world, there should be possibility for improvements. Therefore, MI urges the governor to sell Californian "research prowess of our top public and private universities to federal, industry and other R&D funding sources" (MI, 2004a).
- The world-dominating Californian science and technology industry and world-class R&D are to a large extent dependent on the influx of foreign students and foreign researchers. MI stresses the importance for California to "instil a passion in science and technology" (MI, 2004: 7) among Californian K-12 students.¹⁶⁰ They

¹⁵⁸ http://yeson71.com/news_rel_1018.php (accessed December 4, 2005)

¹⁵⁹ Both MI (2004a) and MI (2004b) have appendixes with explanations of the variables included in the index.

¹⁶⁰ For explanation of K-12 see note in section 5.1.

also point to the changing demographic structure—with a growing Latino population—and the importance of attracting them to science and engineering.

- The MI Science and Technology Index shows that the Californian labour force is becoming relatively less knowledge-based vis-à-vis other states, for instance, the proportion of adults with a bachelor degree or higher is decreasing. MI therefore suggests enacting innovative programs to improve enrolment in public universities.

California Manufacturer & Technology Association and JobsPAC

The California Manufacturer and Technology Association (CMTA) ¹⁶¹ is an organization that informs Californian manufacturers and the technology industry about legislative issues and economic development in California. CMTA presents “Public Policy Principles” that outline how CMTA wants to improve the economic policy in California.

CMTA, together with the Californian Chamber of Commerce,¹⁶² in 1992 formed JobsPAC¹⁶³. JobsPAC’s agenda is to restore California’s economy as a foundation for prosperity. JobsPAC has as its top priority to support “projob candidates.” By this they mean candidates “of both parties who have consistently stood with the business community on key issues.”¹⁶⁴ JobsPAC presents an agenda for California that will create a “strong and vibrant economy in California” and “restore California’s business climate to create jobs.”¹⁶⁵ This agenda is similar the CMTA’s Public Policy Principles. These two policy agendas are a good reflection of the stance of the California business community.

Both agendas stress the importance of a tax policy that encourages business growth. CMTA’s principles also point to the importance of having a balanced budget. As discussed earlier in the chapter, California businesses have had problems with high cost for workers’ compensation, and the implemented reforms were high on the agenda for the Californian business community. California rules for employment and workplace safety requirements must permit companies to compete with non-Californian employers. Further, the principles state that California must have an educational system that is committed to “creating and maintaining a literate and trained workforce.” Both agendas also put an emphasis on the importance of evaluation of both teachers and students. Further, they want education policies that “promote teaching as an honored, respected and well paid profession.” The CMTA’s and JobsPAC’s agendas are to see improvements in the Californian infrastructure. Further, they are addressing the need for reliable and affordable energy in California, and they encourage competition within the energy sector.

The California Council on Science and Technology¹⁶⁶

¹⁶¹ www.cmta.net (accessed December 4, 2005)

¹⁶² www.calchamber.com (accessed December 4, 2005)

¹⁶³ www.jobspac.com (accessed August 25, 2005)

¹⁶⁴ Quote from www.jobspac.com/page.asp?g=JOBSPAC&content=Agenda&parent=JOBSPAC (accessed December 4, 2005)

¹⁶⁵ This section is based on information from the JobsPAC’s Web site and interviews.

¹⁶⁶ This section is based upon CCST’s Web site and interviews. All quotes in this section are from www.ccst.us.

The California Council on Science and Technology (CCST) ¹⁶⁷ is an independent not-for-profit corporation, established by the state legislation in 1988. CCST is governed by researchers from sponsoring Californian universities and representatives from the business and philanthropic community in California. CCST is designed to offer its expertise to the Government of California in science- and technology-related issues.

CCST has created a top-ten list of technological and scientific challenges that face California.¹⁶⁸ While some of the challenges are not directly related to economic growth policy, the following three questions/issues have a direct impact on the growth policy on California.

One critical factor for keeping the California economy competitive is to have a “pool of employees with solid technical training.” This requires high-quality science and mathematics teachers from kindergarten to the postgraduate level. A large percentage of those teachers await retirement and consequently must be replaced. How can California’s government, industry, and higher education system remedy this problem?

CCST acknowledge that California’s status as a world-leading location for innovation and science is due to the state having been a magnet for the world’s most “creative scientific and technological innovators.” However, many other states and nations are imitating and catching up on California’s success, especially within the field of innovation. So how can California maintain its leadership position?

Like others, CCST points out the problem of congested traffic in California. CCST sees an opportunity to use technology to improve traffic management. And they ask how California can promote the most appropriate technologies, and how or if these efforts should be coordinated with the federal efforts.

5.5 Economic Growth in California —A Comment

The technology trajectory California “chooses” often becomes the dominant trajectory of the world. Few places, if any, have the money, the research, and the political will to dominate all new technologies. No other state in the U.S. can compete when it comes to population, venture capital, and research. As shown earlier, Massachusetts might have more top universities and venture capital *per capita*, but when it comes to sheer volume California outperforms Massachusetts. The other contestant is Texas. It is the second most populous state. It is also home to several of the top universities in the USA, but it does not attract nearly as much venture capital as California. Moreover, California has large minorities of Chinese, Indians, and Latin Americans. As these economies grow, California is in good position to be a bridge for trade between these country’s economies and the U.S.

On the federal level, reducing cost for doing business is a topic in the growth policy debate. This is not a significant track in the Californian growth debate. Instead, the state has a focus on science, technology, and education.

The governor’s education policy has been and is criticized from various sides, mainly for not delivering what it has promised. The funding for Californian schools is, through Proposition 98, stated to be a certain percentage of the state budget, and the governor has promised to live up to that despite harsh financial strains. The California Teachers

¹⁶⁷ www.ccst.us (accessed December 4, 2005)

¹⁶⁸ www.ccst.us/ccst/home/st/stA.html (accessed December 4, 2005)

Association states that “The governor has broken that promise, further harming Californian’s school children.” The vivid debate on education and the importance of education for California’s (economic) future is closely watched by others. “California is an important state... When things happen there, they have a tendency to echo in other places.”¹⁶⁹

The described Economic Development Programs in this chapter are not central to the growth debate, and they are neither heavily criticized nor endorsed. In comparison with other states, the economic development programs in California are neither innovative nor large in size. Rather, they give an impression of being defensive in character, i.e., helping existing businesses survive rather than creating new growth industries and companies. The strengths in California are the world-class universities and world-class research (both academic and corporate). Another factor that was not mentioned in the material included for this study is the cultural and ethnic diversity in California and how it attracts foreign students and researchers. No matter what your ethnic and cultural background, you fit into California, and this makes California an even more attractive place to move to. Few places in the world have such pull on talented researchers as California does. It then becomes a virtuous circle.

It is also worth noting that California does not have an immediate proximity to its main markets. California is surrounded by sparsely populated states (Arizona, Nevada, and Oregon) and a poor country (Mexico). The main export market for Californian companies is Mexico; but in second and third place are Japan and Canada, both far away. The main domestic markets are the populous states on the East Coast and in the Midwest. California is not “exporting” heavy goods like cars and steel but instead is specializing in products that have close to zero transportation costs (digital products) or are high value-added, like high-technology. California itself is, of course, a big (but not huge) market, but it shows that not being close to big markets does not need to constitute a disadvantage.

5.6 California and Sweden —A Discussion

“As California goes, so goes the nation” is a well-known saying in the USA. The scientific and financial resources, in combination with the determination of California to be a technological leader, put California in a good position to be a dominator in the world economy for many years. So, by studying the development in California, we may be able to get a glimpse of the future.

Although California is four times larger than Sweden, it has only ten public research universities (the University of California system)¹⁷⁰ and three private.¹⁷¹ This is probably

¹⁶⁹ Edward J. McElroy, president of the Teachers Federation, quoted in the *Los Angeles Times*, July 31, 2005.

¹⁷⁰ *University of California is one university with ten campuses.*

¹⁷¹ *California has 12 research universities and a population of 36 million. This means that California has roughly one research university per 3 million inhabitants. If we apply the same ratio to Sweden, Sweden should have three research universities!*

one of the factors that have contributed to making science in California so successful.¹⁷² This should be compared to Sweden's 10-12 research universities.¹⁷³

California may not be the place to look for innovative economic development programs. Innovative policies can, however, be found in other policy areas such as environmental policy and education policy (which, of course, have indirect implication on economic growth). Instead, it is important to look to California for its ability to create new technological paradigms: It is often setting world standards. This is also evident in California's ambition to be a technological and scientific leader. The Californian investments in R&D are usually targeting general purpose technologies in order to create the new paradigms.

From a policy viewpoint, the most pro-growth policy in California is the public University of California system and the systematic and successful investments in nascent technologies, such as, for instance, in nanotechnology and stem cell research. The focus of the R&D policy is on general-purpose technologies, which have a variety of applications and could be a base for new companies in several sectors.

California does have, besides its sunny weather, several natural resources, for instance oil, these are of significant economic importance. However, these are seldom assigned any wide importance for California's economic future. This should be compared to the salient feature the raw material-based industries (metallurgy and forest products) have in the Innovative Sweden documents.¹⁷⁴

California has lost many headquarters of large companies, and the majority of headquarters in California today are high-technology companies and younger businesses (*Fortune*, 2006).¹⁷⁵ That this is a problem is seldom discussed in California. The focus is instead on creating new companies and new employers, rather than on keeping the old.

6 What can Sweden learn from the USA?

In both Sweden and the U.S., issues related to economic growth are high on the political agenda. The Swedish and American growth policies do have similarities both in terms of priorities and the way they are carried out. However, this chapter aims to discuss and illuminate differences in the Swedish and U.S. growth agendas.

The discussion on the *role of education* is central in the U.S. as well as in Sweden. While both Sweden and the U.S. point out the importance of education, there is a significant difference in how this priority is enacted. In the Swedish Budget Bill as well as in the former government's Innovation Strategy and the current government's strategic agenda, the important role of education and its importance for increasing Sweden's competitiveness

¹⁷² Besides the universities there are several research institutes, for instance the Salk Institute and The Scripps Research Institute.

¹⁷³ This suggests that Sweden is, in comparison with California, spreading R&D resources too thin. In order to compare the available resources for R&D and the use of them in California and Sweden, a more elaborate analysis is, of course, needed.

¹⁷⁴ A back-of-the-envelope calculation shows that California has almost as much raw material-based industries as Sweden.

¹⁷⁵ The average age of Californian Fortune 500 companies are younger than the national average (own calculation from www.fortune500.com).

is stressed. This line of reasoning is similar to what is described in Chapter 3 (Federal Growth Strategies). Although U.S. schools perform on or above average in most international comparisons, the state of math and science education in K-12 is a big concern. A central pillar in the U.S. education policy and debate is improving test results. In Sweden, the focus has been on higher education and, for a long time, mainly focused on quantity. The new Swedish government has, however, stated that improvement in the K-12 education is a high priority.

Even though the U.S. has the best universities in the world, these are increasingly dependent on *foreign students*. This partly explains the generous immigration policy. The vast majority of these students pay tuition fees to study in the U.S., and this brings not only brains but also dollars to the U.S. In fact, foreign students bring more money to the U.S. than U.S. weapon export!¹⁷⁶ However, the visa policy has been stricter after the terrorist attacks in 2001; and since the economic development in places like China and India offers more opportunities for students in those countries, there are fewer incentives to study in the U.S. Moreover, countries like Canada, the U.K., and Australia have stepped up their effort in recruiting talented international students.

As discussed in section 3.2, there is bipartisan agreement in the U.S. that small businesses are the backbone or engine of the American economy. Although there are many organizations and agencies in the U.S. that support entrepreneurs and small businesses, there are fewer that encourage entrepreneurship. Instead, the level of *entrepreneurship is regarded as a given*, and there are seldom any voices raised for an increased amount of entrepreneurship. The focuses are on improving the business climate. Hence, one of the crucial differences between the U.S. and Sweden is the discussion on the need for increased levels of entrepreneurship

On the federal level in the U.S., the issue of *reducing costs for doing business* is high on the agenda. A reduction in *taxes* is often seen as a way to reduce the costs of doing business. This, on one hand leaves more money in the pocket of businesses and business owners, which can be reinvested, but on the other hand a reduction in taxes might reduce the amount of capital available for investments in education and infrastructure, the growth policy in the U.S. is balancing between these two aspects.

Taxes are also actively used to promote activities that foster economic growth. There are for instance tax incentives to do research, to invest in small businesses, to create high paying jobs and to educate employees. On the downside, this creates a complex tax system, but the objective is to give incentives to companies and individuals to engage in activities that actually foster economic growth.

A hot topic in the U.S. is the *immigration debate*, which is more closely connected to growth issues in the U.S. than in Swedish case. One strand of the debate is the issue of illegal immigration (mainly from Latin America). On one hand, some industries depend on those illegal immigrants' labour, and on the other hand illegal immigration is putting a downward pressure on wages.¹⁷⁷ The other strand of the immigration debate is concerned

¹⁷⁶ For a discussion and links see

www.ppionline.org/ppi_ci.cfm?contentid=253141&knlgAreaID=108&subsecid=900003 (accessed March 6, 2006).

¹⁷⁷ *Illegal immigrants usually do not pay taxes. However, it is possible to be an illegal immigrant in the U.S. and still pay taxes, and many do, since it is easier to obtain legal status if they can prove that they have paid taxes for a long period of time.*

about the difficulties students, researchers, and other qualified individuals encounter in entering the U.S. As discussed above, the U.S. universities are dependent on foreign students and researchers. The stricter immigration policy has made it more difficult for these individuals to study and work in the U.S. Influential debaters and thinkers in the U.S. point to this as a crucial issue for the U.S. to consider, in order to maintain its economic and technological leadership (Friedman, 2005; Florida, 2005). Florida argues that immigration should be seen as a talent-attraction function, and not as a gate-keeping function (Florida, 2005). Further, studies show that many entrepreneurs in the high-tech industries are immigrants (Saxenian, 2006).

As the studies in this report show, *benchmarking*, especially between states, is an important tool in the U.S. growth policy. We have seen examples of this also in Sweden and on EU level, but a more elaborated, annual systematic comparison would track even smaller changes over time and might be a tool to identify weaknesses and strengths in the Swedish economy.

In U.S. there are worries that the U.S. *role as a technological leader* is threatened. To be a leading nation is part of the character or soul of the U.S. This can have positive effects, for instance in the case of the Sputnik crisis (i.e. when U.S. realized that they were not a world leader in space technology). When the role of the nation is under threat, there will be a national gathering. A similar crisis is the one the U.S. is going through right now with the competition from Asia. It is evident that globalization is seen as a threat/challenge to U.S.'s dominant role in the world. This is the background for great investments in research in new areas like stem cells and nanotechnology. The U.S. wants to find new general purpose technologies and can, like no other country, allocate resources for such research. While it is of course impossible for a small country like Sweden to compete with the U.S. on a general level, Sweden could benefit by finding niches in the technological trajectories that are shaped there.

Finally, on the state and local level the issue of *attracting out-of-state investments* is a big thing for economic development. A discussion is emerging that questions the benefits of spending tax money on attracting these types of investments. It is argued that the money spent on attracting new investments should instead be spent on things like education and infrastructure. The Iowan approach of only chasing investments that create jobs with a wage above median is innovative. Further, there are tax incentives for out-of-state export in Iowa and several other states.

Tendencies and the Future of Economic Growth Policy

In the debate in the U.S. it is possible to discern a number of issues that may turn into policy in the future and would affect Sweden and the Swedish industry. One prediction is that we will see a stronger enforcement of intellectual property rights from the U.S. trade representatives. Since Sweden already respects intellectual property rights, it would not be a policy that directly affects Sweden. However, Sweden should be prepared that this might be an important issue on the U.S. trade agenda in the coming years.

Another issue that could directly affect Sweden is the increased competition for top students and scientists. Europe is already today a net exporter of scientists to the U.S. Despite the issues of homeland security, it is a reasonable prediction that U.S. universities will step up their efforts to recruit the best and brightest from Europe, Asia, and elsewhere.

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