Team #290

M3 Challenge Runner Up; Magna Cum Laude Team Prize of $15,000

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SUMMARY

After careful analysis and testing of the viability of the $787 billion bailout, our team concluded that the areas of the package that are most likely to directly create new jobs are those that involve construction labor. Four of the most important elements of the stimulus package with regards to creating new jobs are as follows:

1) Providing money for highways and bridges,
2) Cleaning up sites formerly used by the Defense Department,
3) Providing additional money to the Army Corps of Engineers,
4) Repairing and improving facilities on public lands and parks.

Based on calculations using the above elements of the stimulus package, we evaluated the stimulus package as a whole in relation to trends found in these elements. In total, we calculated that the stimulus package will create between 1,493,629 and 3,732,458 new jobs.

By using graphs projecting the economic turnaround based on the data above, we determined that a near-complete economic recovery may be achieved by June of 2015. We identified several indicators that will show if the economy is recovering. These indicators include:

1) The stabilization of the oil markets. Oil demand and in turn oil prices are directly related to the strength of the economy.
2) Stabilization in the stock market. This concept is shown by having a small variance from the mean of the function over time. The smaller the variance from the mean, the more stable the market.
3) A decrease in home foreclosures along with an increase in auto sales. This will show that the loan market has recovered and that the economy is prepared to take on a new, more manageable debt.
4) Most importantly, a visible decrease in the unemployment rate.

We also concluded that if none of the economic recovery signs listed above is present, then a second bailout may be required to achieve economic stabilization. To this end, we proposed a second bailout package amounting to $260 billion. It is structured to provide long-term relief and stability instead of bailing out failing companies that are inevitably doomed to collapse. It focuses on education, the development of technology, and the prevention of job outsourcing.

We also found another alternative to the bailout package; however, we do not believe it to be socially viable. We hypothesized that reducing or eliminating government regulations (especially those regarding safety and the environment) would free up a substantial portion of the economic market that was previously spent on regulations.

In conclusion, we believe that the $787 billion bailout will yield a turnaround in the economy by 2015. The bailout will create numerous jobs in various sectors, thus bringing stability to a fluctuating economic market.

Introduction

Our team was asked to study the effects of the recent $787 billion stimulus package. First, we were asked to study its effect on the job market and how it would improve the employment rate. Second, we were asked to determine how quickly we would be able to see results from the stimulus. In addition, we were asked to determine how we will know if the stimulus package is "working." Finally, we were asked to structure a second stimulus package and offer alternative ways to stimulate the economy and increase employment.

Our studies, models, calculations, and conclusions follow.

Part 1: Elements Most Likely to Produce Greatest Improvements in Employment

A. Assumptions

1. It is assumed that the number of jobs created by the stimulus package cannot be calculated exactly; therefore, a rough estimate must be acceptable.
2. It is assumed that no jobs created by the stimulus package will be either especially high-paying or especially low-paying.
3. It is assumed that the number of jobs created per billion dollars spent (in areas that directly create jobs) is, on the whole, constant.
4. It is assumed that the four selected stimulus package elements will provide a representative average number of jobs created for the stimulus package as a whole.
5. The cost of materials within construction-based projects will not create new jobs in the manufacturing fields; rather, it will simply maintain the jobs already present.
6. It is assumed that all jobs will last the maximum number of years allotted: three.

B. Analysis and Justification

To determine which elements of the stimulus package might most increase the employment rate in the United States, one must first determine which elements directly benefit employment by creating jobs. Our team determined that approximately $189.86 billion was spent on services that directly created jobs, as will be shown below. Of those services, four stuck out as especially direct in their approach to creating jobs; thus, they were selected for analysis to determine approximately how many jobs were created per billion dollars spent. By using that value in correlation with the amount of money determined to have been spent on services directly related to job creation, we determined the approximate number of jobs created by the stimulus package as a whole.

C. Calculations and Model Design

The first step in calculating the benefits of the $787 billion stimulus package to the national job market involves selecting the elements of the package which most directly translate money into jobs. Our group determined via logic that stimulus package elements involving construction labor had the most direct relationship between money spent and jobs created. Thus, we selected four of the highest-cost programs from the package that fulfilled this requirement. Our selections included the following programs:

1. Provide money for highways and bridges ($27.5 billion)
2. Clean up sites formerly used by the Defense Department ($6.0 billion)
3. Provide additional money to the Army Corps of Engineers ($4.6 billion)
4. Repair and improve facilities on public lands and parks ($3.1 billion) (Hossain, et. al)

Within each of these elements, our group broke down the number of new jobs which would be created. The number of jobs created by each of these individual programs can be determined by the following equation:

$J \approx \frac{MW}{Ay}$, where J is the number of jobs created (rounded to the nearest whole number), M is the money (in dollars) provided by the stimulus package, W is the percentage of stimulus money

going directly to paid workers in new jobs (as opposed as to costs of materials or overhead costs), *A* is the mean annual salary of a worker in the appropriate field, and the constant *y* is the length of the job, three years.

In other words, the number of jobs created equals the percentage of the money of the stimulus package element divided by the cost of one worker; the cost of one worker, in turn, is defined as the annual salary for that worker (in dollars per year) times the amount of time that he or she works (in years).

The first project, the $27.5 billion plan to provide money for highways and bridges, is defined by the following variables:

M = $27.5 billion
W = 66.67% (National Park Financial Problems)
A = $31,690 per year (Bureau of Labor Statistics Data)
y = 3 years (see Assumptions)

Plugging these figures into the equation from above yields the following:

$$J \approx \frac{MW}{Ay} \cup \frac{(\$27{,}500{,}000{,}000 \cdot .6667)}{(\frac{\$31{,}690}{year} \cdot 3 years)} \cup 192{,}840\ jobs$$

However, this is only the low estimate figure. Interestingly, each dollar spent by the government via the stimulus package has the ability to have a higher dollar-impact per dollar spent over the course of several economic quarters. While the minimum multiplying factor for each element of the stimulus package is 1.0x, the maximum is a whopping 2.5x (Elmendorf). Thus, the high estimate figure for the number of jobs created by the first project, the $27.5 billion plan to provide money for highways and bridges, is the low figure multiplied by 2.5. This is represented in equation form as follows:

$H \approx 2.5J$, where *H* is the high estimate figure based on the 2.5x multiplying factor (rounded to the nearest whole number) and *J* is the low estimate figure obtained via the previous equation.

Thus, the high estimate figure for this $27.5 billion element of the stimulus package is:

$$H \approx 2.5J \approx 2.5(192{,}840\ jobs) \approx 482{,}100\ jobs$$

In review, the number of jobs created by this element of the stimulus package will range from approximately 192,840 jobs to approximately 482,100 jobs. The jobs created by the other projects can be calculated in much the same way.

The second selected element of the stimulus package, the $6.0 billion dollar portion dedicated to cleaning up sites formerly used by the Defense Department, uses the same two equations as above and is defined by the following variables:

M = $6.0 billion
W = 85% (National Park Financial Problems)
A = $31,907 per year (Bureau of Labor Statistics Data)
y = 3 years (see Assumptions)

Plugging these figures into the equation from above yields the following:

$$J \approx \frac{MW}{Ay} \approx \frac{(\$6{,}500{,}000{,}000 * .85)}{(\frac{\$31{,}907}{year} * 3 years)} \approx 53{,}280\, jobs$$

Furthermore, this low estimate figure is used in the multiplying factor equation to determine the high estimate figure. Thus, the high estimate figure for this $6.0 billion element of the stimulus package is:

$$H \approx 2.5J \approx 2.5(53{,}280\, jobs) \approx 133{,}200\, jobs$$

In review, the number of jobs created by this element of the stimulus package will range from approximately 53,280 jobs to approximately 133,200 jobs.

The third selected element of the stimulus package, the $4.6 billion amount that provides additional money to the Army Corps of Engineers, has several subelements. Approximately $2.0 billion will be used for general construction projects; another $2.0 billion will be used for maintenance projects; and the remaining $500 million will be used for river/dam construction projects. Thus, we must determine the individual *J* values for each subelement, then add them together to determine the *J* value for the $4.6 billion element as a whole.

The first subelement, the $2.0 billion being used for general construction projects, is defined by the following variables:

M = $2.0 billion
W = 66.67% (National Park Financial Problems)
A = $31,690 per year (Bureau of Labor Statistics Data)
y = 3 years (see Assumptions)

Plugging these figures into the equation from above yields the following:

$$J_1 \approx \frac{MW}{Ay} \approx \frac{(\$2{,}000{,}000{,}000 * .6667)}{(\frac{\$31{,}690}{year} * 3 years)} \approx 14{,}025\, jobs$$

The second subelement, the $2.0 billion being used for maintenance projects, is defined by the following variables:

M = $2.0 billion
W = 85% (National Park Financial Problems)
A = $31,907 per year (Bureau of Labor Statistics Data)
y = 3 years (see Assumptions)

Plugging these figures into the equation from above yields the following:

$$J_2 \approx \frac{MW}{Ay} \approx \frac{(\$2{,}000{,}000{,}000 * .85)}{(\frac{\$31{,}907}{year} * 3 years)} \approx 17{,}760\, jobs$$

The third and final subelement, the $500 million being used for river and dam construction, is defined by the following variables:

M = $500 million
W = 66.67% (National Park Financial Problems)
A = $33,430 per year (Bureau of Labor Statistics Data)
y = 3 years (see Assumptions)

Plugging these figures into the equation from above yields the following:

$$J_3 \approx \frac{MW}{Ay} \approx \frac{(\$500{,}000{,}000 * .6667)}{(\frac{\$33{,}430}{year} * 3 years)} \approx 3{,}324\, jobs$$

To obtain our final J value, we must simply add together the previously calculated values from the three subelements:

$$J = J_1 + J_2 + J_3 = 14{,}025\, jobs + 17{,}760\, jobs + 3{,}324\, jobs = 35{,}109\, jobs$$

Furthermore, this low estimate figure is used in the multiplying factor equation to determine the high estimate figure. Thus, the high estimate figure for this $4.6 billion element of the stimulus package is:

$$H \approx 2.5J \approx 2.5(35{,}109\, jobs) \approx 87{,}773\, jobs$$

In review, the number of jobs created by this element of the stimulus package will range from approximately 35,109 jobs to approximately 87,773 jobs.

The fourth and final selected element of the stimulus package, the $3.1 billion dollar portion dedicated to repairing and improving facilities on public lands and parks, uses the same two basic equations as demonstrated previously and is defined by the following variables:

M = $3.1 billion
W = 85% (National Park Financial Problems)
A = $20,470 per year (Bureau of Labor Statistics Data)
y = 3 years (see Assumptions)

Plugging these figures into the equation from above yields the following:

$$J \approx \frac{MW}{Ay} \approx \frac{(\$3{,}100{,}000{,}000 * .85)}{(\frac{\$20{,}470}{year} * 3 years)} \approx 42{,}908\, jobs$$

Furthermore, this low estimate figure is used in the multiplying factor equation to determine the high estimate figure. Thus, the high estimate figure for this $3.1 billion element of the stimulus package is:

$$H \approx 2.5J \approx 2.5(42{,}908\,jobs) \approx 107{,}271\,jobs$$

In review, the number of jobs created by this element of the stimulus package will range from approximately 42,908 jobs to approximately 107,271 jobs.

The total amount spent on these four selected elements of the stimulus package can be found by adding the government spending in each element together:

Provide money for highways and bridges	$27.5 billion
Clean up sites formerly used by the Defense Department	$6.0 billion
Provide additional money to the Army Corps of Engineers	$4.6 billion
Repair and improve facilities on public lands and parks	+ $3.1 billion
	$41.2 billion

Similarly, the total amount of jobs (low estimate) can be found by adding the *J* value from each element together:

Provide money for highways and bridges	192,840 jobs
Clean up sites formerly used by the Defense Department	53,280 jobs
Provide additional money to the Army Corps of Engineers	35,109 jobs
Repair and improve facilities on public lands and parks	+ 42,908 jobs
	324,137 jobs

To obtain the total amount of jobs (high estimate), we can simply use this calculated figure of 324,137 jobs as the *J* value in the multiplying factor equation:

$$H \approx 2.5J \cup 2.5(324{,}137\,jobs) \cup 810{,}343\,jobs$$

These figures are valuable; however, they only tell us the number of jobs created by these four elements, not by the stimulus package as a whole. Because of the incredible complexity of the economy, it is impossible to determine the number of jobs indirectly created as a result of increased consumer confidence due to reduced debt. (Much of the stimulus package is dedicated to doing just that and will not actually directly create jobs.) However, there are still many elements of the stimulus package which aim to directly create jobs.

To obtain a closer estimate of the number of jobs that will be created, we can assume that, on average, a certain number of jobs will be created per billion dollars spent in programs that directly create jobs. We can obtain that whole-number figure by dividing the amount of money spent in the four selected programs discussed above into the total number of jobs created by those four selected programs. We can also use our high figure and our low figure to obtain both a high estimate and low estimate of jobs-per-billion-spent.

$$Estimate_{Low} \approx \frac{324{,}137 \text{ jobs}}{\$41.2 \text{ billion}} \approx 7{,}867 \frac{\text{jobs}}{\text{billion}}$$

$$Estimate_{High} \approx \frac{810{,}343 \text{ jobs}}{\$41.2 \text{ billion}} \approx 19{,}659 \frac{\text{jobs}}{\text{billion}}$$

Calculating the total number of jobs created, then, is easy: simply multiply this jobs-per-billion figure by the total dollar amount (in billions) spent on stimulus package elements that directly create jobs. Our group, using the best judgment possible given the information available, listed (and added the government spending value of) every element of the stimulus package that would directly (or near-directly) create jobs:

- Provide money for highways and bridges $27.5 billion
- Expand tax incentives for renewable energy facilities $14 billion
- Provide additional money to schools serving low-income children $13 billion
- Provide additional money for special education $12.2 billion
- Modernize the electric grid $11 billion
- Provide additional financing to the National Institute of Health for research and infrastructure $10.9 billion
- Invest in rail transportation $9.3 billion
- Invest in public transit $8.4 billion
- Clean up sites formerly used by the Defense Department $6.0 billion
- Finance local water projects $6.0 billion
- Provide additional money for the Army Corps of Engineers $4.6 billion
- Create a new program to expand broadband access $4.5 billion
- Provide additional financing for state and local law enforcement $4.0 billion
- Repair and modernize public housing units $4.0 billion
- Finance job training programs $4.0 billion
- Provide tax break to General Motors $3.2 billion
- Provide additional financing for the National Science Foundation $3.0 billion
- Provide additional money to the Department of Homeland Security $2.8 billion
- Conduct energy efficiency and renewable energy research $2.5 billion
- Provide additional financing to improve communication in rural areas $2.5 billion
- Help states and local governments acquire and repair low income housing $2.4 billion
- Improve Defense Department facilities related to the quality of life $2.3 billion
- Increase financing for Head Start and Early Head Start $2.1 billion
- Provide additional financing for the Office of the National Coordinator for Health Information Technology $2.0 billion
- Support battery manufacturing $2.0 billion
- Redevelop abandoned foreclosed homes $2.0 billion

• Finance renovations and technology upgrades at community health centers	$2.0 billion
• Provide additional financing for science and research at the Department of Energy	$2.0 billion
• Reduce homelessness	$1.5 billion
• Invest in local transportation projects	$1.5 billion
• Authorize more state and local bonds for energy-related purposes	$1.4 billion
• Finance rural water and waste facilities	$1.4 billion
• Invest in air transportation	$1.3 billion
• Finance national environment cleanup	$1.2 billion
• Construct and repair veterans' hospitals and cemeteries	$1.2 billion
• Compare the effectiveness of medical treatment	$1.1 billion
• Provide water to rural areas and Western areas impacted by drought	$1.0 billion
• Make grants to help prevent disease	$1.0 billion
• Provide additional financing for NASA	$1.0 billion
• Provide additional financing for Community Development Block Grants	$1.0 billion
• Expand net operating loss carry-back provision for small Businesses	$0.947 billion
• Provide additional financing for NOAA	$0.830 billion
• Repair and modernize about 4,200 Native American housing units	$0.510 billion
• Train primary health care providers, including doctors and nurses	$0.500 billion
• Train workers for careers in energy efficiency and renewable energy fields	$0.500 billion
• Improve health services to American Indians and Alaska Natives	$0.500 billion
• Provide grants to states for energy-efficient vehicles and infrastructure	$0.400 billion
• Finance improvements to agriculture department infrastructure	$0.249 billion
• Expand national service program	$0.200 billion
• Provide loans for rural businesses	$0.150 billion
• Provide loans for rural developments	$0.150 billion
• Help states provide services to homeless children	$0.070 billion
• Incentive for alternative fuel pumps	+ $0.054 billion
	$189.86 billion

(Hossain, et. al.)

By multiplying this total value for all elements of the stimulus package which directly (or near-directly) create jobs by the jobs-per-billion-spent calculated above, we can obtain a whole-number estimate of the total number of jobs created by the stimulus package.

For the low estimate:

$$7{,}867\frac{\text{jobs}}{\text{billion}} * \$189.86\,\text{billion} \approx 1{,}493{,}629\ \text{jobs}$$

For the high estimate:

$$19{,}659\frac{\text{jobs}}{\text{billion}} * \$189.86\,\text{billion} \approx 3{,}732{,}458\ \text{jobs}$$

Therefore, ultimately, our best estimate is that between 1,493,629 jobs and 3,732,458 jobs would be created by the stimulus package.

D. Testing the Model

Unfortunately, there is little way to test this before it happens. The best way to test this model would be to watch it in action: within the next three years, will we see an increase in jobs roughly equivalent to the numbers estimated above? One would also have to factor in the average annual increase of jobs in the market (due to the ever-increasing population). Finally, accurate surveys would have to be taken in the fields that these new jobs are being created in.

Part 2: Speed and Effectiveness of the Stimulus Package

A. Assumptions

1. It is assumed that the stimulus package is the only source of employment increase in America, due to the decrease in previous years.
2. It is assumed that the economy in 1999 can be considered prosperous.

B. Analysis and Justification

A timeframe for the success of the stimulus bill is twofold. A complete recovery with a healthy unemployment rate of 5% should be observed by June of 2015. This date is derived from taking the average of both the low and high projections of the time required for unemployment to reach 5% (see Figure 2). However, short-term success should be noticeable by 2011. Projecting an average decrease of 1.6935% in unemployment, a significant decrease in unemployment should be observed by 2011. Projections show that the unemployment rate should decrease to 6.966% by 2011.

There are several signs that should appear if the economy is recovering. One indicator of a recovering economy is the stabilization of the oil markets. As demonstrated in the graphs below, oil demand and in turn oil prices are directly related to the strength of the economy.

A second indicator of a recovering economy is stabilization in the stock market. This concept is shown by having a small variance from the mean of the function over time. The smaller the variance from the mean, the more stable the market. Market increase can only be achieved after a relative equilibrium is reached first.

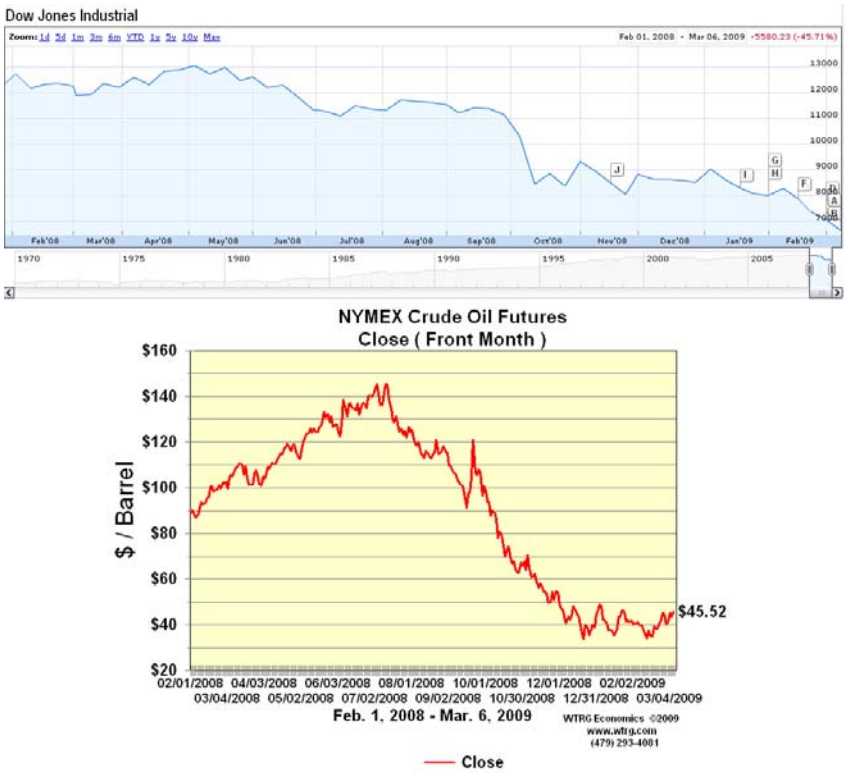


Figure 1

A third indicator that the stimulus package is effective and working is a decrease in home foreclosures along with an increase in auto sales. This will show that the loan market has recovered and that the economy is prepared to take on a new, more manageable debt.

C. Calculations and Model Design

The most important indicator that the stimulus package is truly effective is a visible decrease in the unemployment rate. This can be shown by a simple function that calculates the mean of the lowest and highest efficiencies of the bailout package. Since the package is estimated to produce results in three-year increments, the equation was evaluated by taking the total number of unemployed persons in the United States divided by 8.1% (the current unemployment percent). This allowed our team to evaluate what one percent of the unemployment rate is equal to in terms of unemployed people. This can be represented via the following equation:

$P = \frac{C_u}{U_p}$, where C_u is the number of people currently unemployed, U_p is the percent of people unemployed, and P is equivalent to one percent of the job-seeking population.

$$\frac{12{,}500{,}000}{8.1\%} = 1{,}543{,}210 = P = 1\%$$

The new jobs created calculated in the previous section for both high and low efficiencies of the stimulus package were taken into account. The following equation was used to evaluate the yearly cut in unemployment percents that the stimulus will create:

$\frac{J_l}{P} = E_l$, where J_l is jobs created with low efficiency, P is one percent of the job-seeking population, and E_l is amount employed for three years with low-efficiency execution.

$$\frac{1{,}493{,}629}{1{,}543{,}210} = .968\% = E_l$$

And:

$\frac{J}{P} = E$, where J is jobs created with high efficiency, P is one percent of the job-seeking population, and E is amount employed for three years with high efficiency execution.

$$\frac{3{,}732{,}458}{1{,}543{,}210} = 2.419\% = E$$

This E was then divided by three because the E was, as previously mentioned, determined on a three-year period. This quotient was then multiplied by the difference between current unemployment and the unemployment rate in 1999 (when the nation was generally prosperous). This yielded the number of years, under both the high- and low-efficiencies, that it would take in order to return to the 1999 unemployment rate of 4%.

$\left((U_{2009} - U_{1999}) \Big/ \frac{E}{3} \right) = Y$, where E is amount employed for three years, U_{2009} is the unemployment rate in 2009, and U_{1999} is the unemployment rate in 1999.

Low Efficiency:

$$(8.1 - 4.0) \Big/ \left(\frac{.968\%}{3} \right) \approx 13 \text{ Years}$$

High Efficiency:

$$(8.1 - 4.0) \Big/ \left(\frac{2.419\%}{3} \right) \approx 5 \text{ Years}$$

The mean of the high and low efficiencies was then taken; thus, if the stimulus plan were to unfold in an average fashion, it would take nine years to return us to the 1999 unemployment rate of 4%. This number may then be divided by the difference between the starting and targeted unemployment rates. The figure below shows the expected unemployment rate drop per year for high efficiency, low efficiency, and the average (Figure 2).

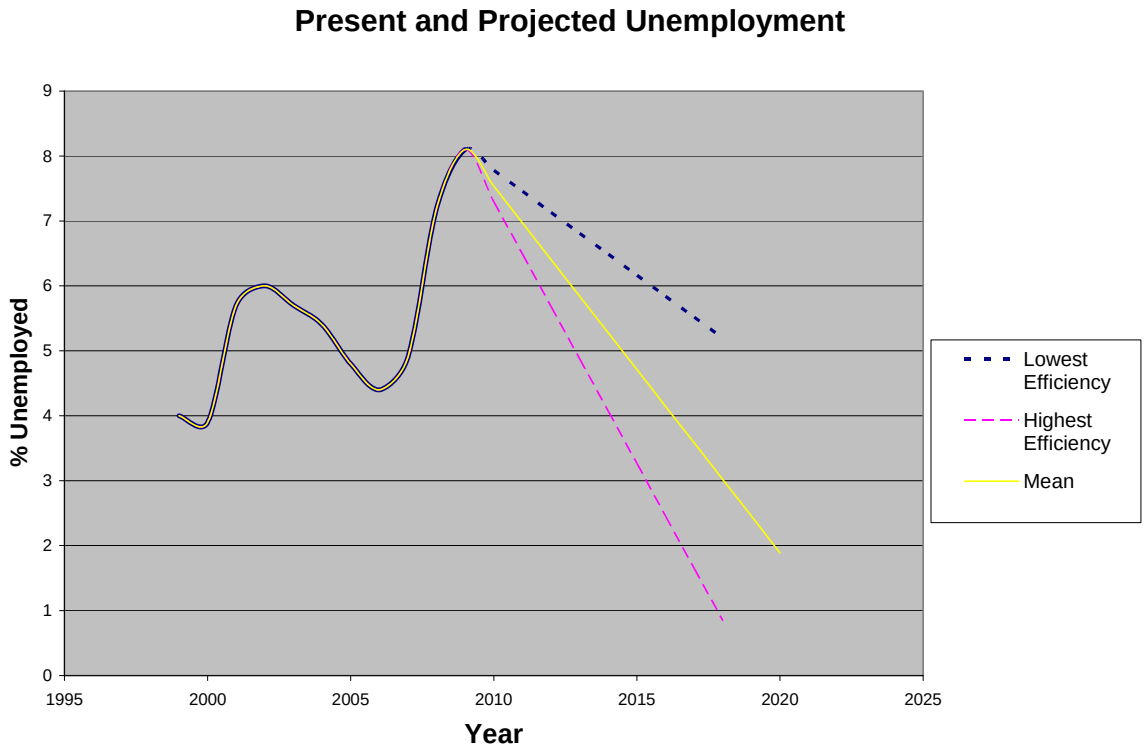


Figure 2

D. Testing the Model

In order to test the model, a more accurate depiction of the global economy as well as the United States economic future would be needed. The model can be tested through time by the evaluation of the high efficiency, low efficiency, and mean. The model can then be tested against unemployment rates.

Part 3: Necessity of Additional Stimulus

A. Assumptions

1. If the stimulus package is successful, the economy will develop in accordance with the models calculated previously.

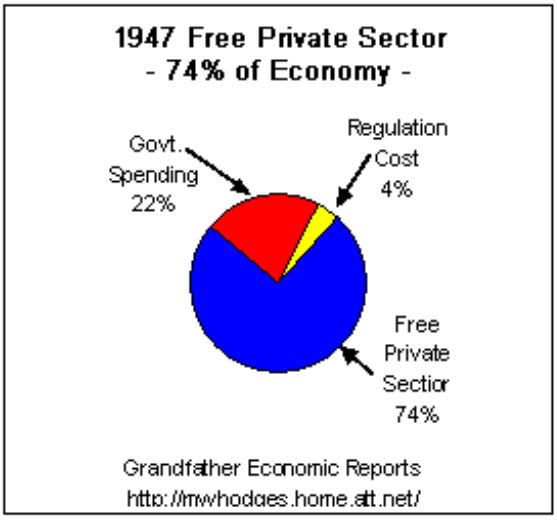
B. Analysis, Justification, Calculations, and Model Design

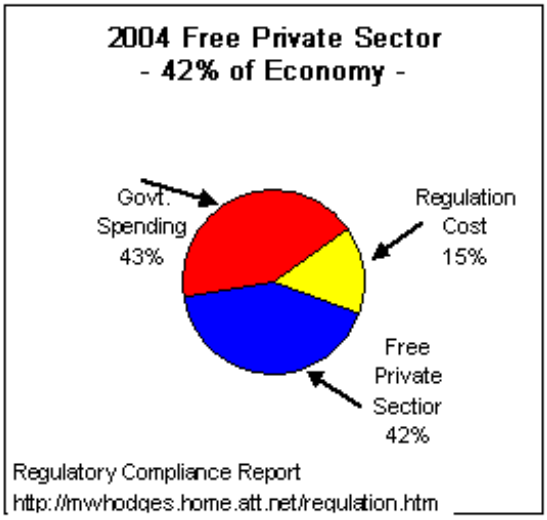
If the effects of the stimulus package are approximately the same as predicted in the models, no further stimulus will be needed. However, if the predicted effects of the package are not seen in the time frame expected (significant decrease in unemployment by 2011 and decrease of unemployment approaching 5% by 2015), a second stimulus bill may be needed.

There are alternatives to the stimulus bill that may increase employment. These methods mainly involve reducing the cost of production in order to afford to hire more workers and achieve greater productivity. This can be achieved by passing legislation that removes much of the federal regulations in place.

$1.4 trillion is spent by businesses to comply with government regulations. This is 14.9% of our national economy that is wasted and causes businesses to cut workers in order to be profitable. These expenditures are transferred to the consumer. (Grandfather Economic Report Series)

Average wage is not going up along with prices due to government regulation because this increase is not due to natural inflation or increase of Gross Domestic Product. In fact, wages earned decrease due to cuts of workers from the increased costs of production.





This requires consumers to spend a greater percentage of their salaries on everyday products, due to increased regulation driving up production costs. This serves to reduce the morale of the consumer and the incentive to buy and invest.

If we were to remove half of the government regulation that exists on products, this would liberate $700 billion for use in expansion and hiring of new workers. This is roughly equivalent to the stimulus bill and is using money that is already in the economy, but used for other purposes. This is a major benefit in that this type of stimulation will not increase the national deficit, unlike the existing stimulus bill.

Many of these regulation cuts would most likely come from emissions, safety, and production method standards.

If it is discovered that the current economic stimulus bill fails to improve employment as predicted, another stimulus package may be needed to supplement the existing bill and obtain the results desired. If another stimulus package is deemed necessary, it would be more beneficial to focus it on programs that will produce high numbers of jobs and improve the long-term outlook of the economy in the future as opposed to bailing out failing companies on their last leg.

A potential 2014 economic stimulus plan consisting of $261 billion is as follows:

- Funding for bridge/road modernization - $15.5 billion
  If $12 billion is allocated for bridges, and the average cost of a bridge is $4 million, then 30 bridges would be modernized (Building the Bridge)
  The remaining $3.5 billion would be allocated for road modernization and production. At an average cost of $1 million per mile, 3500 miles of road will be modernized or produced. (Cobin) This will provide construction and maintenance jobs as well as improving our transportation system.

- Funds for alternative energy research and production (lithium-ion, solar, nuclear energy, etc.) - $30 billion

  This will decrease pollution of the environment and decrease America's dependence on foreign oil and other nonrenewable resources. It will create jobs in both the research and production departments, and the construction of new facilities.

- Increase governmental aid to public schools - $50 billion

  This will be spent to help cover the cost of teaching salaries by 5.192%. This was calculated from dividing the total cost of teachers' salaries, $259.6 billion by the money allocated the schools, $50 billion. (Center for Education Reform) Money made available can then be used for facility improvement, supplies, or additional educators.

- Increase funding for FAFSA grants given to students pursuing the math and science fields - $28.5 billion

  This will help improve the quality of labor in the scientific fields, thus creating a solid base for technological development in the future.

- Tax breaks for companies that opt to keep jobs in the United States instead of sending them overseas - $91 billion

  This will provide incentive to keep jobs, and therefore money, in the U.S. economy.

- Tax breaks for "green" companies - $25 billion

  This provides a compensation for lost profits due to government pollution regulations and provides incentive for companies to become more aware of their environmental impact.

- Funds for medical research and medical technologies - $12 billion

  This will assist in treatment of patients, thus strengthening our health care service.

- Funds for new mass transit and railroad technology - $9 billion

  There has been an increased demand on public transportation due to high fuel prices. This is causing large cities to struggle to keep up with their current transportation systems and become congested. (Tanneeru)

C. Testing the model

This stimulus plan would need to be evaluated over a long term of 30+ years to allow the trickle-down effect to be fully realized. To test this model in the present, our group would need to be able to evaluate the economic condition at the time of its application (at the time the original stimulus package has been deemed to have failed). This would most likely be around the year 2014 as stated by our analysis.

Conclusions

Through careful examination of the 2009 Economic Stimulus Bill, our team discovered that only $189.86 billion is allocated to programs believed to directly create new jobs. It has been determined by our analysis of the stimulus bill that, if job production occurs as expected, an average of 1.2 million jobs can be produced each year. This would reduce unemployment to a healthy level of 5% by approximately June of 2015. Our group has also concluded that a possible way to stimulate the economy would be to lessen government regulations to lower the cost of production. However, these regulations are put in place to protect the consumer and unknown side-effects of removing them may occur. In the event that the stimulus bill does not produce the desired results, our group determined that it would be necessary to pass a second stimulus bill that focused on directly creating jobs that can improve the country in the long term. A fraction of the original stimulus bill, our second stimulus plan allocates more money to creating more sustainable jobs and would likely be a more viable and affordable option.

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