The U.S. is facing a cross road, the nanny state of Europe or a free market economy

For the last five years the nation has had a taste of the nanny state, giving us low growth, high unemployment and higher taxes. Obama Care is just a tip of the iceberg if we continue down this path. Technology and a free market economy can turn that around. Four emerging technologies, 3-D printing, hydraulic fracturing, driverless cars and scanning software will reshape and revitalize the U.S. economy if only the government gets out of the way.

Three D printing is now at the stage where the desktop computer was in the 80's. Its impact is already being felt in Industry where it is being used it to create high quality, high resolution prototypes and complex models. No longer will the design engineer have to send the drawings to the time consuming and costly model shop to be fabricated. But the real impact will be in the retail market. Over the next 20 years the auto parts and similar suppliers will be transformed into a distributed manufacturing facility. No longer will they have to maintain a stock of thousands of parts and items. All the customer will have to know is the part number. The part number will be entered into the 3-D printer database and the part will be manufactured at the point of sale. The implications of this technology on productivity will be enormous. Think about the impact this will have on the nation's infrastructure. The need for container ships and trucks on the roads nor the cost of maintaining the inventory required to service the retail market will be dramatically reduced. Don't be surprised that the next time you go into the dentist for a new crown that he prints it there in his office instead of sending it out to be manufactured requiring you to come back in a week.

Hydraulic fracturing, or fracking, has been used since the late 1940's making it possible for shale oil extraction to produce oil and natural gas in places where conventional recovery technologies are ineffective. Modern fracking started in 1990 when vast amounts of formerly inaccessible hydrocarbons were extracted from formerly inaccessible shale deposits. As late as 2008 the U.S. was importing up to 63% of our oil. Now as a result of fracking in 2013 we are importing less than 15%. What is more, a lot of that oil was coming from the Mideast and Venezuela. Think about all the treasure and human resources that we continue to spend keeping up the flow of oil to the free world from the Mideast. Why were we in Iraq or Afghanistan? You do not see us putting that effort in Africa.

Don't kid yourself, our economy is based upon energy and irrespective of what the environmental community says wind and solar will not replace hydrocarbons in the near future. Cheap energy will bring manufacturing back to the United States. We are already seeing the impact where companies are relocating back to the U.S.

Unfortunately all these gains have been made by drilling on private land, and the Obama administration is reluctant to open public land to fracking. Also the oil market is being distorted by the administration's policies driven by the environmentalists such as the rejection of the Keystone Pipeline with the unintended consequences of oil train derailments and explosions as well as the glut of domestic oil resulting in a price difference of from $12 to $14 between domestic and foreign oil. Since the 1970 oil embargo by the Middle Eastern country's the U.S. has prohibited the export of domestic oil.

Already the U.S. is a major shipper of refined products, gasoline and diesel, to both Europe and South America. Once the Panama Canal is widened the U.S. will also become competitive in the Asian markets.

One byproduct of fracking is cheap natural gas. As a result the price of natural gas has been falling. The Obama administration has been reluctant to authorize the building of Liquefied Natural gas or LNG terminals for export based on the fear that it would raise domestic prices.

The U.S. has the ability to become energy independent and provide the country with a cheap and abundant source of energy. Not only would it improve our balance of payments but it would free our foreign entanglements and support our allies.

The driverless car is the least mature of the four emerging technologies but will have a major impact as it becomes available. All the elements are already developed and offered on today's cars, cruise control, detection sensors, crash detection, GPS and lane change software. Google and the car manufacturers have already demonstrated operational cars on the road. The two remaining hurdles are reliability and liability. Once widely available the impact will be felt throughout the economy with reduced crashes and injuries resulting in lower insurance and medical costs as well as reduction in lost man-hours from work. Where now the commute to and from work is lost time it can now be spent on productive activities.

The baby boomers are starting to retire and as they age a large segment of the population will lose their drivers licenses significantly impacting their quality of life. Most communities have senior shuttle services for seniors but these are marginal services with financial impacts both to the senior and the community. To prevent being isolated, eventually seniors will be forced out of their homes into costly independent living facilities. The driverless car has the potential of changing this by extending the time that a senior can remain in their home maintaining their quality of life.

Scanning software has come a long way since Levi Strauss, in 2010, introduced scanning of the body to manufacture the perfect woman's jeans. The concept utilized a scanned fit system based on shape not size. In 2013 Amazon indicated that one third

of the purchases made online were returned, the most were from clothing purchases because of the wrong size. High end stores are now offering mass-customized suits in retail stores using a 3D body scanner to collect customer measurements. Soon companies will be providing scans of a person's body to match their personal measurements with clothing sizes, for online purchases.

All these technologies will eventually be implemented but the pace will depend on governmental action with lower taxes and regulations. The impact on our quality of life and productivity will be significant. Think about how these technologies will affect our way of life. Reduced congestion and faster commute times as a result of fewer trucks and accidents, eliminating the time consuming frustration of returning of ill-fitting purchased clothes and finally extending the quality of life of seniors remaining in their homes.

From an international prospective we will once again become a globally competitive manufacturer and energy independent, free from international entanglements. We will be able to support our allies with a source of energy and finally we will be able to correct our balance of payments, no longer be held hostage by our adversaries.

One unintended consequence of these technologies is the loss of jobs related to the shipping and trucking industry as well as in manufacturing. To a lesser degree will be the impact to governments relating to infrastructure, hospitals and in home health personnel. But the new technologies will open up new job opportunities for qualified workers.