Original Article
ISSN (Online): 2454-1907
International Journal of Engineering Technologies and Management Research
June 2021 8(6), 41–59

LOCAL TECHNOLOGIC CAPABILITIES DETERMINES THE ELAPSED TIME FROM IDEA TO MARKET AND PROFITABLE USAGE

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ABSTRACT

It is well-known that the actual electric light does not originate in continuous enhancements in candle technology, Harari (1981) and required completely new people to study the phenomenon and develop the technology, having appropriate knowledge, equipment and market. There are revolutionary, "disruptive" ideas that dye after patenting, mainly in USA, because local abundance of manufacturing technologies are missing and markets are unprepared to use the resulted products. This briefly may be stated that most of technologies are developed and consumed in about the same place and civilization, because in that area the population is aware of the importance of novel technologies, prepared to use, and provides all the needed resources to propel the idea to market in the shortest time, contributing to the welfare of society and its intelligent self-governance. In order to stimulate creativity and inventions, the local organizations have to provide centers for innovation that come at a cost barrier, in order to be proficient.

Received 18 May 2021
Accepted 1 June 2021
Published 30 June 2021

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DOI 10.29121/ijetmr.v8.i6.2021.962

Funding: This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

Keywords: Idea, Invention, Hub, Development Center, Market, Disruptive Technology, Patents

1. INTRODUCTION

An old saying is that one is one step in front of his peers, is considered a genius, if has two steps in advance is considered a crackpot, Baez (1998) because the society is prone to evolutionary developments, rejecting any revolutionary change as an individual DNA embedded conservativism, in many societies being correlated to IQ level.

In Table 1 is shown a split up of invention types, based on ideas to change configuration (1-4), ideas based on product offering mode (5,6) or based on previous experience (7-10) where a combination of the above may drive to inventions that changes the world for ever, and as Peter Thiel once said, "competition is for losers", meaning that in perfecting a product competition is so stiff minor improvements being hard to make and any potential upwards is eroded away in the process, without inducing

Table 1 Ten types of innovation Keeley et al. (2013)

	Innovation Type	Description
1.C	Profit Model	How you make money
2.C	Network	Connections with others to create value
3.C	Structure	Alignment of your talent and assets
4.C	Process	Signature of superior methods for doing your work
5.O	Product Performance	Distinguishing features and functionality
6.O	Product System	Complementary products and services
7.E	Service	Support and enhancements that surround your offerings
8.E	Channel	How your offerings are delivered to customers and users
9.E	Brand	Representation of your offerings and business
10.E	Customer Engagement	Distinctive interactions you foster

any qualitative leap. In order to assure sustainable competitive advantage over time entities have to invent, and obtain the qualitative leap forward.

From Plato to Einstein the saying of "Necessity is the mother of (all) invention(s)", remained true Jowett (1894) and was completed with: "then resourcefulness is the father," by Beulah Louise Henry, then Jonathan Schattke, Schattke (2021) added: "its father is creativity, and knowledge is the midwife.", no now it remained true, and we have to highlight the fact the exposure to the need of those who accumulated the necessary knowledge, inside a realm of abundance of means to accomplish are the main ingredients for progress. In my experience I was exposed to various facts and phenomena, where for some I simply acknowledged their existence without being able to provide an explanation, and for some we came out with innovative ideas, most of them lost in their way to market or application. A solution to speed up things was the development and funding of innovation incubators, and we learned in the hard way that not any funding and organization level drives to success, and a funding threshold and quality of organization have to be exceeded and that is dependent on socio-geographic area.

Unfortunately the actual investors so called venture capitalists are looking for ideas that are enabling a ROI (Return of Investment) time shorter than 6 mo. as in the period of market reaction with similar patentable ideas, which usually takes 2-4 years to have an important financial gain, up to 10 times the initial investment. Unfortunately these are not ideas able to solve fundamental problems of the mankind, as food, energy, propulsion, health and education. One 18th century politicians said: "If one seeks a profit after one year does agriculture, after 10 years seeds a tree, after a century invest in educating a nation", and that remains true even today, when the world economic competition becomes tougher Balcescu (1846). The recent bio-challenge, generically named COVID-19 revealed a lot about capabilities of nation of adapting and responding to nature exams.

1.1 IQ NUMBERS AND REALITY FACTS CHECK

From about 200 nations of the world about 120 took part in national IQ (Intelligence Quotient) tests and a number have been allocated to each nation, similar to grades obtained in school representing the average value.

Recently a bio-hazardous nano-machine containing about 200 k bio-code instructions named SARS-CoV-2 appeared, surpassingly being carried by bats, then transmitted to an "unknown host", and then to humans, creating a planetary scale pandemic.

We plotted the infection rate of each nation as a function of its assigned IQ, and the result was surprising, as one may see in Figure 1 . One may see that the infection rate is not linear proportional with IQ, and a completely abnormal behavior is recorded, as nations on the Pacific Western shores have large IQ and low infection rate, while most of "Caucasian" race lead countries registered higher infection rate than countries with low IQ in Africa and Middle East, while moderate IQ countries registered a moderate infection rate.

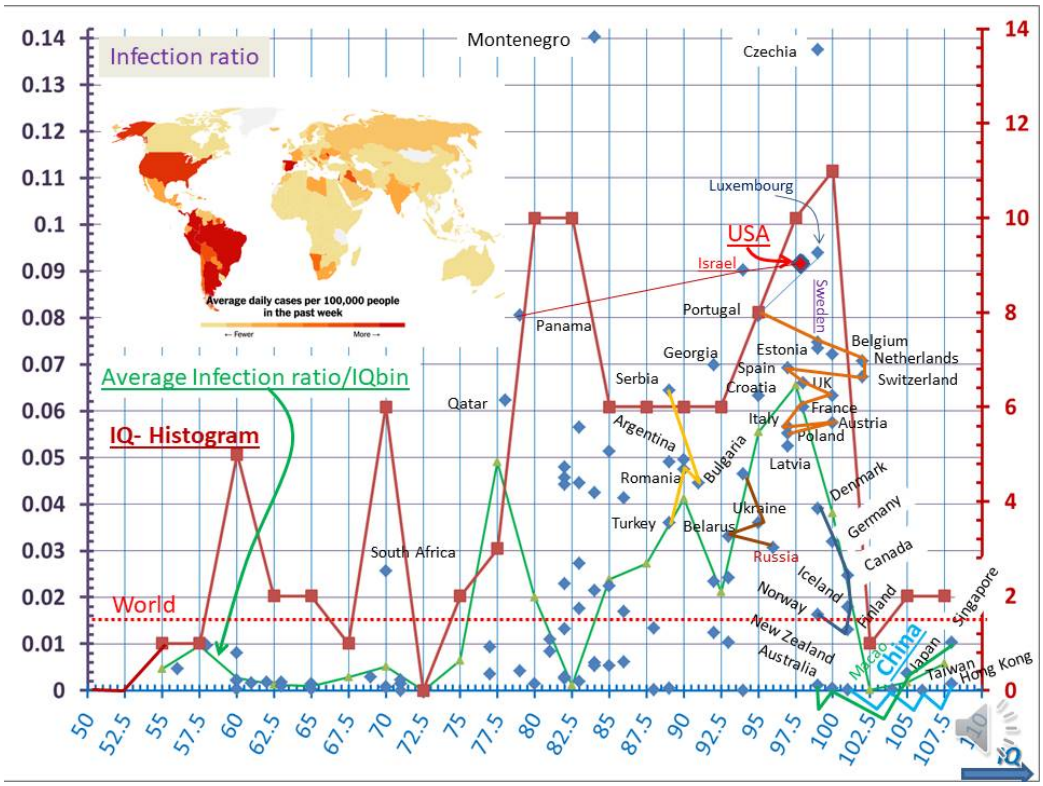

Figure 1 COVID-19 infection rate as function of IQ level

One may also see on the right ordinate in brown the grouping of nations in bins of 2.5IQ and the average infection rate per bin, in the green curve, being referred at the beginning of the bin Popa-Simil (2021a).

We have reprocessed the value and introduced a corrected IQ, by dividing at the infection rate and multiplying with the average population density of each nation and we have represented as function of primary IQ, as shown in Figure 2 .

The area of Figure 2 has been split in 4 classes or categories on each axis containing the correction magnitude. If the primary IQ reflects in the corrected IQ to infection rate, the formula in upper left corner, and the IQ corrected at population density too, the formula underneath, the points will stay on the first bisector line brown for IQ_C and grey-green for IQ_{CD}. Well, one may easy see that is not the case, the functions are not linear, but if the dependence will be proportional the points will place on the monotone segmented curves, but the phenomenon is more complex, and the points are placed as blue diamonds and grey-green triangles show, having the blue, respectively grey-green dashed curves as interpolation lines. Now looking at the points and their placement in the categories (bins of arbitrary range) one may easy see that those who were very smart remained very smart. The countries with IQ from 87 to 100 dropped 1.5 categories, in reality being dumber than the low IQ countries who with few exceptions maintained steady their low IQ but placing better than those with Medium IQ. The countries with Ultra Low IQ placed in the middle IQ zone, showing that the IQ evaluation test is something that was customized on Caucasian race concepts of Intelligence, that are artificial and in disagreement with nature.

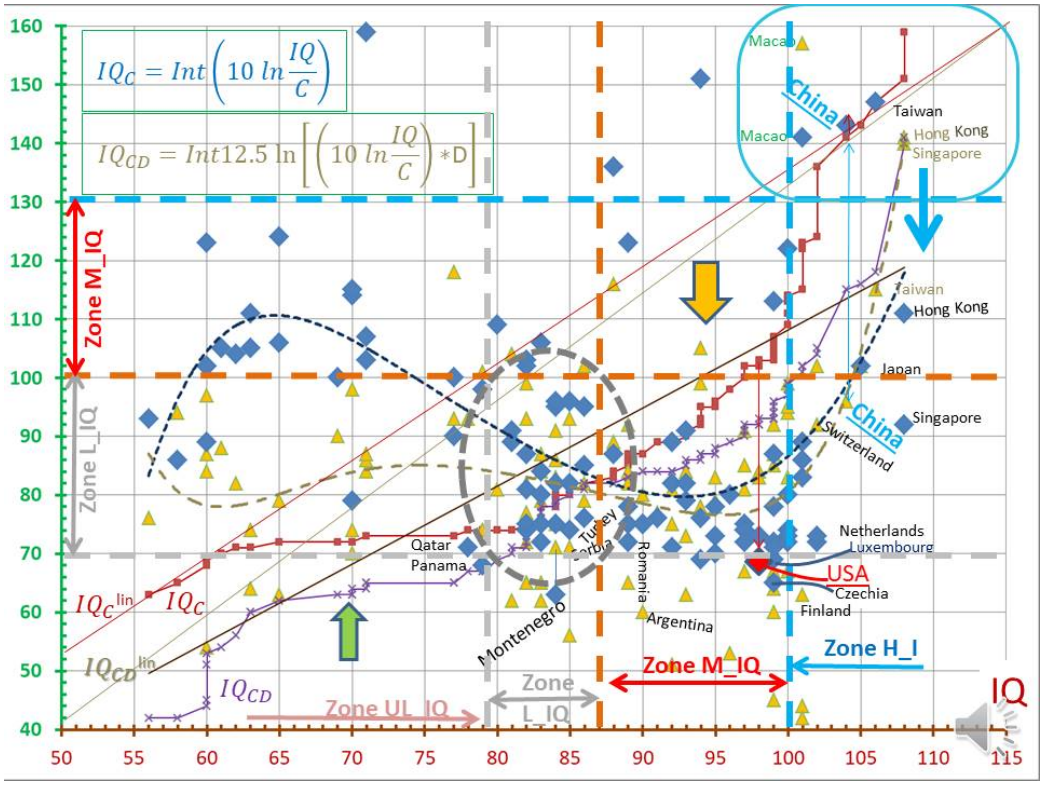

Figure 2 The correspondence of corrected IQ to basic IQ

When one tries to understand the roots of this unbalance, enters into a jungle full with very sensitive subjects, that traces deep into the "civilization" particularities, their morale, and ethics, their attitude towards the truth and finally at education Popa-Simil (2021b).

In Figure 3 is given the IQ Gaussian for China blue curve and for USA, red curve scaled with their population ratio, 1400 to 331 Million people. The vertical red line shows the point where number of people living in China with IQ over 120 is larger than the entire US population, and that translates in a big problem for the USA. Figure 4 gives an inside detail of the US population political orientation based on supposed IQ, indirectly measured, as a direct test measurement is impossible.

One may see that there is a conservative chunk of population, GOT, that prefer to fabricate their own reality in order to survive, another distribution leaning democratic, D" and another one of independents "I", that are a little bit smarter and make easier fact checks and are at odds with both doctrines. The problem is that a very little fraction goes over IQ=120, and in the light that IQ is fake in part, customized for the white race, which in fact might be somewhere around 70 explains the slowness in invention implementation.

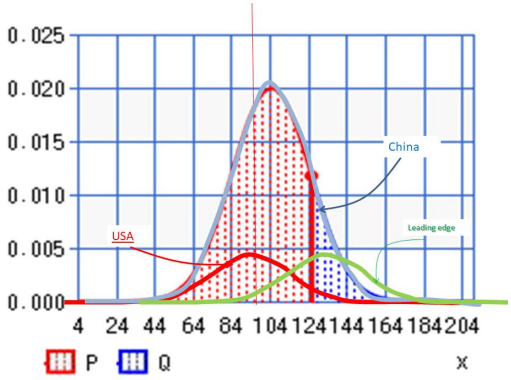

Figure 3 IQ distributions USA and China

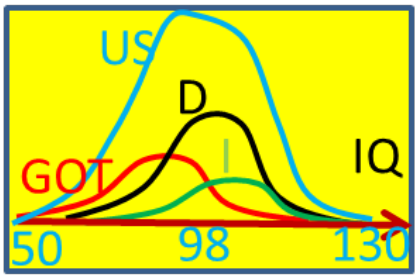

Figure 4 IQ distributions inside USA

The component called social education and social aggregation is missing, US society being a tribal multilayered, composite society, closed at cluster level. People with IQ under 120 trend to be conservative, mainly because encounter difficulty to learn and understand, and aim to spend a proficient life using the kindergarten knowledge only.. The education in the USA, is highly praised, but is formal, superficial and delivers knowledgeable fools in the sense of Einstein-Bohr: "any foul can know, the problem is to understand" Popa-Simil (2019). Without going down into too much detail the problem in education have deep roots in the entire society, starting with social models, that are promoted by Hollywood, that very seldom praises the work, knowledge and professionalism in favor of other human features with more "traction" to public and their profits. Learning for short term reward, just to play and get a grade is another detrimental factor, and the new computer games, that trend to keep average Joe happy, promote fast judgment and eye-muscle direct connection avoiding the brain, and deep thoughts.

1.2 IN THE RACE FOR WORLD'S LEADERSHIP

As previously shown, in the IQ charts in Figure 3, a planetary leadership is possible only if one has the real IQ dominance, because this is what propels the economy.

In the past US took advantage of WWII very few outstanding prepared, flocking US from all over the world, who delivered atomic energy and with its military applications stepped forward in the cold war and maintained economic dominance, until in recent days what "fiat dollar" appeared, with all the abuses "sanctions" spread all over the world against various nations following different paths. Falling the COVID-19 test, with economic contraction, US lost de-facto the leading edge, and military dominance started to vanish, with exception of naval-nuclear deterrence that trends to be used as economic levers under MAD umbrella with uncertain success. In order to assure world's leadership position, US must move the average IQ from where it is now, to 135, and conscientious or not the new administration realized the need that only educating the next generation US my get near this goal. Another option is to increase the population up to 2 Billion, and that is an impossible task even they mobilize the national guard, or a third less pleasant option is to get used with a multipolar world, where US to lead by the power of example, in agreement with other nations. The alternative of a global confrontation, even with a limited nuclear war is still under MAD (Mutually Assured Destruction) realm. A drastic change in education is needed in order to produce a smarter population, but that may only be cracked up by the abundance of resources distributed at the mass level in the purpose of a better. Over all these come the racial and gender inequities, an hidden xenophobia, and clan and religious mentality, deep-routed racism culture that stubbornly festers despite efforts to curtain appearances pushes a negative influence over creativity and development. Recent political disagreements exacerbated up to the level of adversity where the goal of the party in opposition is to block the actions of the other party and when in power reverse all the actions committed in the past, makes a very skew spi-

ral of evolution, and screws-up any progress. The fight for health care and education are a good example for not to follow, running against common sense that states that health is a human right and have to be extended to all living beings surrounding us.

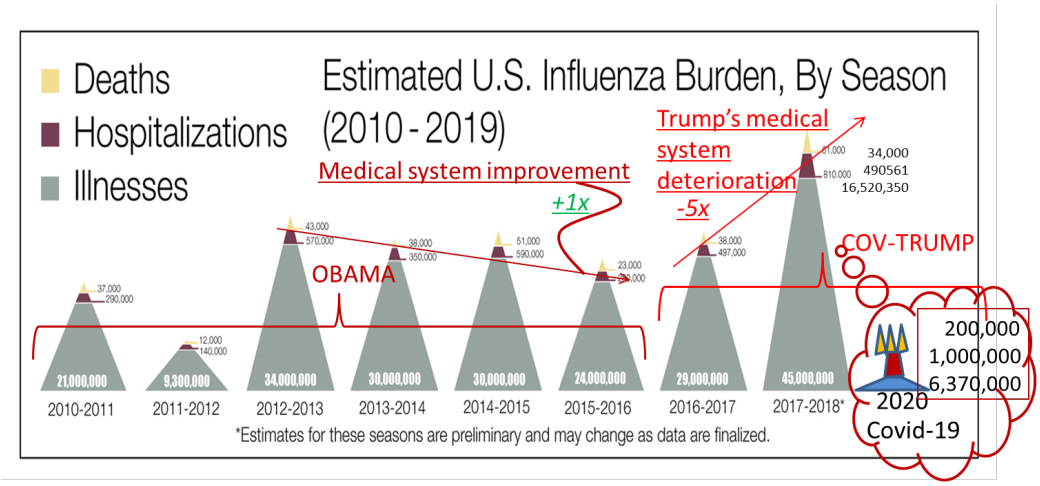

Figure 5 Deterioration of US health system by adverse measures of a new administration in front of COVID-19

A clear example of the intestine fights taking place in Washington, similar to somebody fighting his hands one against the other one, meanwhile having hands clashed and be able of doing nothing else is seen in Figure 5 where all the progress made by a democratic administration in front of virus pandemic defence was cancelled in less than a year by a new Republican administration, leaving the country totally unprepared for SARS-CoV-2, with a lot of impostors in leading positions, who excelled in theatrical stunts. Finally with 4% of world's population US provided 25% of world's causalities and deaths, and probably ending the pandemic with over 700k deaths and over 35Million infected (10% of population) some of them "long haulers".

This represents another 5% of population lost from development and $\frac{1}{2}$ of annual GDP wasted on non-productive expenses. This was a power of a "not to follow example", and world's leadership is practically lost, because democracy is good for smart people only.

1.3 FUNDAMENTAL RESEARCH GOVERNMENT FUNDING

Venture capitalists are unable to fund long term, complex research projects because these projects require large collaboration infrastructure, 10 to 20 years up to maturation, and large investments in Billions, placing them outside the private investment realm.

A $250 billion U.S. Innovation and Competition Act of 2021, or USICA, Zengerle and and (2021) is the United States last moment measure to counterbalance the fact that it spends less than 1% of gross domestic product on basic scientific research, less than half of what China does. The problem is how this will be spent, with who

and what procedure, because actual selection rules published for the sake of fairness and open competition, when applied by other countries, US points the finger and calls it corruption. In fact the application of these criteria drove to big spending with little and no progress or reward, entering in the class of "candle technological advancements". In this way USA is wasting almost 90% of the scarce resources it has allocated for R&D.

2. ISSUES THAT ARE DETERRENT TO INVENTING

Contrary to all nice words said about the USPTO, the road from invention to market and prosperity in the USA is closed for many except a very few, lawyers and businessmen mainly practicing patent trolling or protecting an already existent business *United States Patent and Trademark Office* (2021). The complaint that other countries are using US published inventions for free, by stealing them is a political falsehood. As an invention is an open access writing anybody may use it in a non-protected market monetize it and give credentials to authors, but no money.

2.1 PATENTING ISSUES

Usually an inventor is a person that most often is a newbie to the field of invention, but had that spark, and usually makes a living from other activities. In order that the invention to have some value help is needed. First obstacle is the patenting knowledge, where one needs a lawyer, but it charges between 200 and 400 $/h, and asks for about 1 week of work and in most of the cases this is a no-go *Thervo.Com* (2021). If this is done by himself, have to read the manual, download a template, do the search on an neutral search engine, that does not track the searches and use for its own business, as a .gov site, and fulfil the template and apply online. 15 y old smart kids can do that successfully, if they have the advantage of taking free classes of patenting until they understand the process in its details.

Suppose one gets a patent, now what, how can transform it into money, and the easy way is to assign it to a company interested in doing it. Reality shows that after one gets a patent issues very few to none companies are interested in it, and most of them wait for protection to expire to do it for free, therefore only dummies or kids may remain interested in such publishing activity. If some US government entities touching very gentle the patenting process, they claim rights over the patent, but offer no reward for that if the person is not connected in the structure. In this moment idea is in TRL=2, and to go through all the Technology Readiness Levels (TRL) the inventor has to have the capability of building it, testing, produce a zero series and see market reaction, improve the product and launch mass production. Up to here he has to spend money, and some revenue is coming as a part of the profit from mass production selling, as royalties.

Ok, that is good for a single market, but what about the world? Simultaneously with patenting application, one may apply for PCT (Patent Cooperation Treaty) which

buys time up to 30 months at a cost of $100/month, and after that one has to apply country by country where there are 192 countries and each country has its restrictions, mainly asking for an correspondence physical address inside the country which means in fact a lawyer office, and here the time and cost explodes at about $\$\frac{1}{2}$ Million and about 4 years of diligences. This terminates any small inventor, as it imposes a threshold for the product market value at about $10Million/year, that to drive at a ROI=2 year, and at this point very few venture investors are interested. More, at the moment of the invention, inventor has no clear idea about market, competition and market reaction to the new product, in order to see if it is worth all this effort, and the easiest and safest decision is to give-up and mind his/hers business Popa-Simil (2009). This process kills more than 90% of the ideas, and a substance change is required in order to correct this attitude, and to have a proficient flow of inventions and innovations.

2.2 THE LOCALITY OF THE INVENTION PROCESS AND PEOPLE IQ AND EDUCATION

This is a complex issue, that is related to local history of each place, its population, tradition, skills, believes and attitude towards change, novelty and adaptation capabilities and local resources. No place is identical; it may have some similitudes but have own particularities that have to be well understood.

As “exposure is determinant to inventing”, for a place to generate a certain invention rate, is necessary that the population there to be involved in a series of processes they master and are interested in, in order to get ideas, and to have the interest in improving and developing them in agreement with the civilization level of that area. Constrains and threats are important in the process because they generate or increase the interest. Other factors as greed, curiosity, vanity and social competition are very important too. These are stealth levers of control for the inventiveness of a population, inside a delimited area.

In Figure 6 one may see a simplified version of the “radar” of inventiveness controls, where various factors may get different values, and that determines the direction of creativity as well of the type of invention. In order to channel this, one needs to know and understand the accumulation of “stress” both at society and individual level.

Education, Knowledge and IQ connections are important factors in complicated inventions, while creativity, motivation are complementary ingredients which in a proper environment with the right healthy people, climate, processes, and policies are driving factors for inventions. Other factors as competition or adversity up to enemies, weather, hunger and pandemics, which generate fear or dissatisfaction, are accelerator ingredients for specific brands of discoveries. Human character features as greed, vanity, simplification, passion, curiosity are other elements which may be turned into control levers, influencing the discovery rate. Any entity or organization interested in controlling and accelerating the invention rate may use these controls

in the measure they succeed to understand their particular interaction with various groups of people, in order to make them able to invent and discover, as shown in Figure 6 .

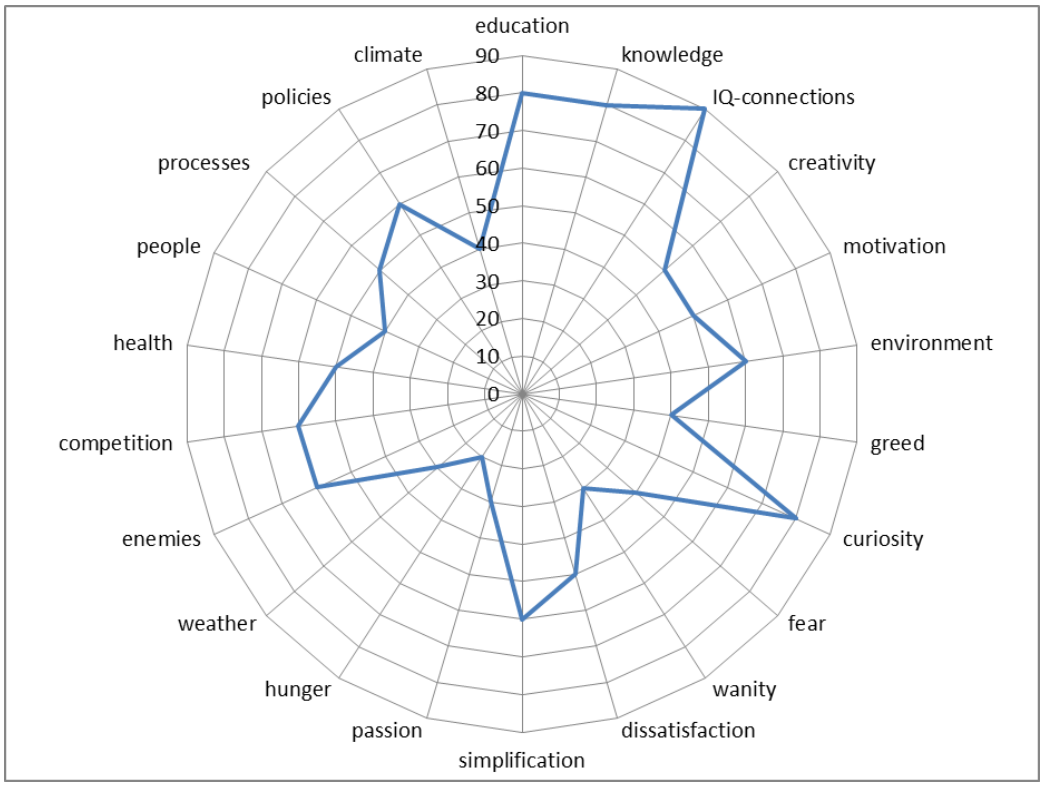

Figure 6 Radar of invention controls Popa-Simil (2012)

3. MEANS TO STIMULATE AND ACCELERATE INVENTORS' IDEA TO MARKET

There is a genuine interest in stimulating and facilitation inventions in the world, as a certain way for progress, but simply knowledge are not enough. It is important first to have the courage to acknowledge the problems in order to find the right solution.

3.1 THEORIZATION OF THE INNOVATION ACT

The theorization of invention stimulation process drove to the development and understanding of the Innovation ecosystem Granstrand and Marcusholgersson (2020)as one may see in Figure 7 , based on interoperation of 4 elements: People, Process, Policy and Climate, as in Figure 7 .

A more detailed approach is presented in Figure 8 where various levers to stimulate creativity and innovation are presented, and may be set at various levels as needed.

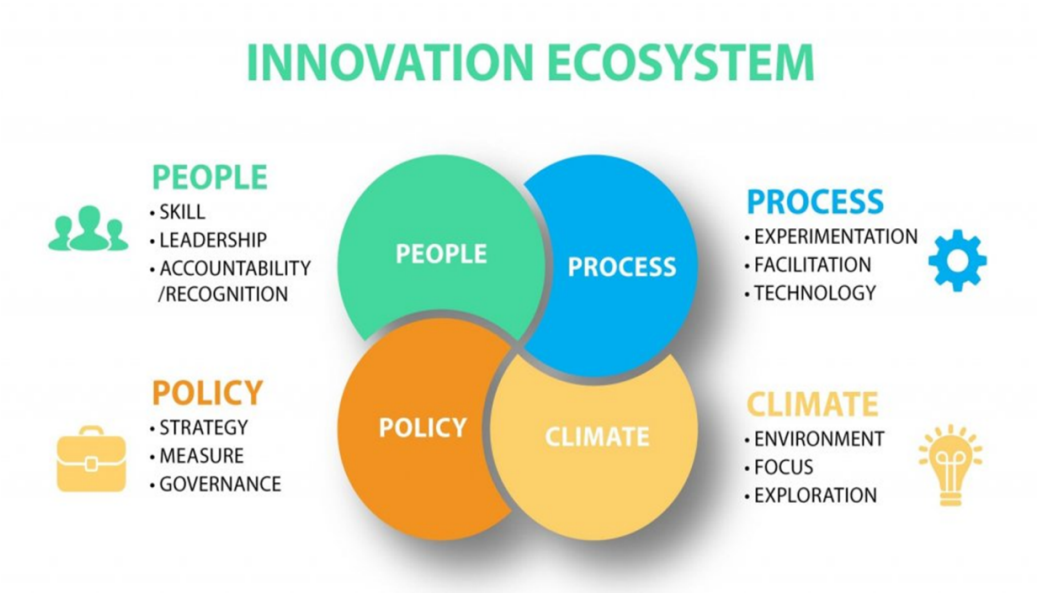

Figure 7 Innovation ecosystem

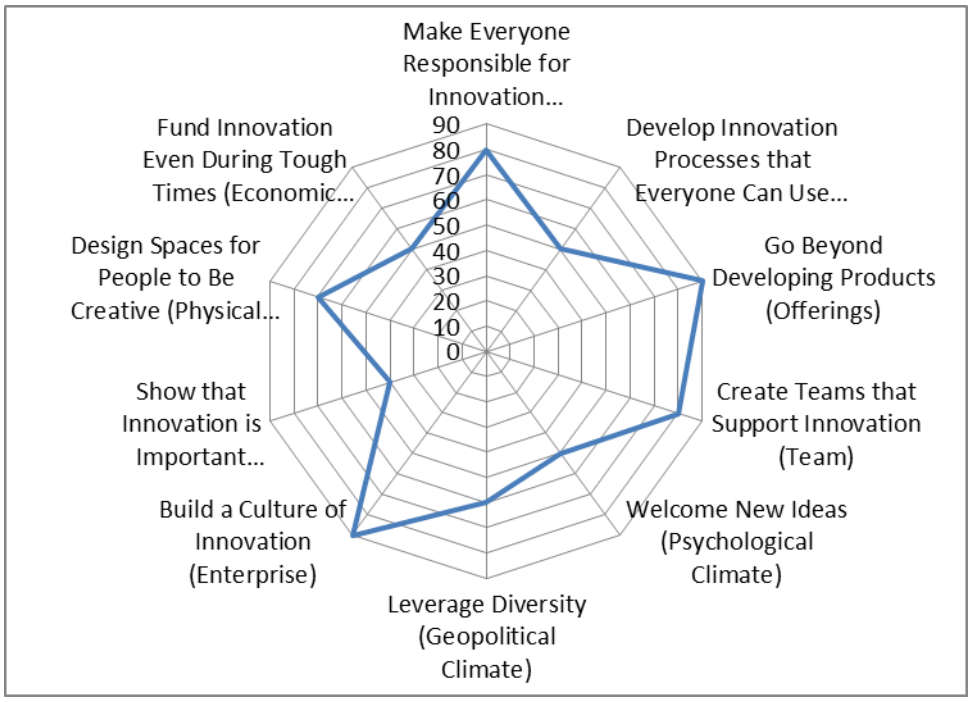

Figure 8 Lever of inventiveness controls Desjardins (2020)

There are many innovation hubs around the world that may prove that traction of these levers inside a population is not as good as praised, and that is because everybody avoids talking about the inconvenient truths.

3.2 LIMITED EXPERIENCES BY APPROACHING REAL SYSTEMS IN THE USA

From the original idea at the bottom of the picture, based on knowledge, represented by the books, a light bulb, that represents that enlighten moment an inventor may have when he responds to a real life challenge, and gets an idea, that can be envisioned to – say on a supercomputer – drive to the right solution to the problem and is the first step on the 10 step ladder, TRL=1 (Technology Readiness Level) as seen in Figure 9 . Immediately he needs help, because on step 2 the inventor steps on a mine, that explodes under his feet - the invention, with all IP associated issues, normally referred to as TRL= 2, finds very little support and most of potential inventors are discouraged from proceeding. This first and very important step requires community support to reach the patent application that is the basis for the new IP. This step costs about $1k when it is done by the inventor alone, and >$10k when an IP attorney is used, money that the inventor may not have, or be willing to invest at this stage Jones and Popa-Simil (2013).

Figure 9 TRL Ladder and variation of the role of Investors vs. Inventors

At this level, in spite of the fact that many pretend otherwise, the inventor doesn't have a clear knowledge of how good or valuable the invention might be in the market, and he is left to his imagination. The business community middlemen have invented various tools, that claim that help the inventor, such as teaching the inventor to write better business plans, or subjecting the invention to "murder boards", but many inventors stay away because they are aware that this is a way big companies, that pretended support, tap into new ideas for little or nothing. The same is true for the so-called X-prizes, that attract a lot of newbies, but many competent inventors refrain from taking part because they know that the invention will be stolen.

For sure something else has to be put in place by the community, with community support, and that is represented on the left side of the picture.

Clear rules of potential profit sharing, clear support, and a strong helpful hand makes the inventor climb the ladder and graduate every step. That is what gentlemen No. 2 is doing.

After the patent has been filed, the inventors have to work fast to bring that IP to life, which takes it from TRL 3 to TRL 6 when a prototype is created.

Based on 20 years' experience in the USA and 20 years in Romania, where 10 years were during socialist regime and 10 years during wild capitalism I have reached the following conclusions:

1. In Romania, under communism incentives for innovation were missing, because only the enthusiastic and connected people there were exhibiting some creativity, that 90% was not finalized by a product and market success but was used to get or maintain a position and for vanity.

In Romania, after developing a multisport welding equipment, that was initially rejected by Patent Offices specialists, as" it is not compliant with French Citroen welding norms", and after the reply was: "that is why it was formulated as an invention", and they got the joke and approved it Popa-Simil and Rolea (1984). After 1 year. When the multi-gun resistive spot welding machine was built in 2 versions improving each time, and being able to deliver 100 welding spots in less than 10 min. using only 4 welding transformers and control equipment, applied to all-terrain car chassis, the 3^{rd} generation was CANCELED by the county leader, an equivalent to US governor, because Gen. 2, considered slow, finished all the production of department for 1 year in less than 2 weeks, and the County Communist Party Secretary deemed it antisocial, because the workers supposed to weld those chassis remained without work. I was forced to promise that I may remain with funding for industrial robots if I promise to keep researching and never to implement them in production.

2. Another invention opportunity was lost, for a dual 256 channels, pulse analyzer used in nuclear spectroscopy, developed with a Z80 (Intel 8080) 8 bit microprocessor, which production was delayed by a group of connected electronics who had no intention to do the project but to cash it, and meanwhile 8086 microprocessor was on market and the entire work deemed obsolete $. Popa-Simil and Pop (1988)

During the communist period the incentive for an invention was 1 year salary added to regular salary and some congratulations in front of the team, but the work and loss of comfort was undercompensated by that. In many cases many ideas were turned down by the opposition of the team members who refused extra work.

3. During transition period from socialism to capitalism, dominated by legal robberies and demolition of previous constructions the climate of instability was not favorable to inventions and creativity, most of inventiveness energy was applied over "creative-accounting", and property manipulation, from state in private hands and from there to bankruptcy and salvage yards.

4. In the USA after 2000 inside a national laboratory the atmosphere was like that described at pct. 1 above, where the institution was sunk deep into bureaucracy, formal safety, where any initiative was faded under a wide range of approvals and formalities Popa-Simil (2009).

Not all ideas were encouraged by the center for invention promotion and spinoff. The patents who had DOE and US government as final users were not funded because the money were never returned as royalties by these entities. In the case of an invention for a machine to improve Real Time radiography installation to speed-up measurements for Transuranic Waste deposition was turned down because the laboratory just obtained another 1 year contract from DOE due to bottleneck at visual examination unit, and removing that bottleneck was anti-social leaving an entire team without work for 1 year. Some other failed due to slowness of the patent lawyers that were expensive too, and team leaders were reluctant in spending much money on them, and by a complex conjuncture as in socialism, there were no incentive for creativity, just "programmatic work" Popa-Simil et al. (2004).

5. Outside the government realm in private business, one of the creativity deterrents came from the employment conditions at hiring, where the employee was coerced to agree that any product of his brain belongs to his employers, and very little reward come to him. That aspect varies from company to company, and is a creativity control lever.

6. Between companies and private inventors the luck of trust is the main deterrent, people uses to sign NDA (Non-Disclosure Agreements) which they do not trust as they are a formality and does not prevent undisclosed third party leakage.

7. Another deterrent for companies that succeed to get a patent granted, and give credit to their employees, use to take control over the patent based on a document where they buy it for $1 and other good words and appreciations (exactly nothing), and after 1 encounter the employees suddenly have no more ideas. Up to here the creativity reached TRL=2.

8. To go forward one needs funding, and there are so called SBIR funding, that is mainly insufficient and is in high competition, and for a company to win such funding has to leave the realm of reality, making the proposal as luring as possible, while after they consumed the funding they have to find a reason for why they do not deliver. More than 90% of the researches I am aware of were based in "alternative realities"

and hidden connections with the funding agency. In order to meet this criteria, companies are hiring relatives and acquaintances of the people in power, and overload the research scheme, making that the weight of funding going towards creativity to represent a little fraction from all the spending, basically wasting the research funding.

9. Criteria of selection of the companies that are granted, are openly published, and they are driving to what when is done abroad is called "corruption", but in the USA it is openly published as "business as usual.

If it is about an invention, the inventor is required to "have credibility" and experience, and to prove that it did it before successfully – and common sense states that an inventor is doing that idea FIRST TIME, therefore is not on the list. The grant will be given to a "rewoven" (familiar to the examiners, some of their acquaintances). Sometimes they ask inventors to be skilled in marketing and sales, while there is nothing yet to sale. And so on, therefore important ideas coming from independent or small inventors remain unfunded while the research money are consumed graciously inside packs of people, some of them known as "old boys club".

10. In many circumstances due to loss of manufacturing capabilities even in the case the funding was granted, the prototyping come at astronomic prices, and iterative improvements are impossible, delaying the rime to TRL=6.

4. INNOVATION HUBS ATTEMPTS FOR IMPROVEMENT

This is about a failed experiment in NM to create an innovation hub, and was believed that due to existence of one of largest concentration of smart people, over 70% graduates from college, and 50% PhD.s with just a meeting entertainment and workshop and a spending of about $10-20 k/mo. patents will spring-up. The result was null, in spite some very interesting ideas were presented none took-off.

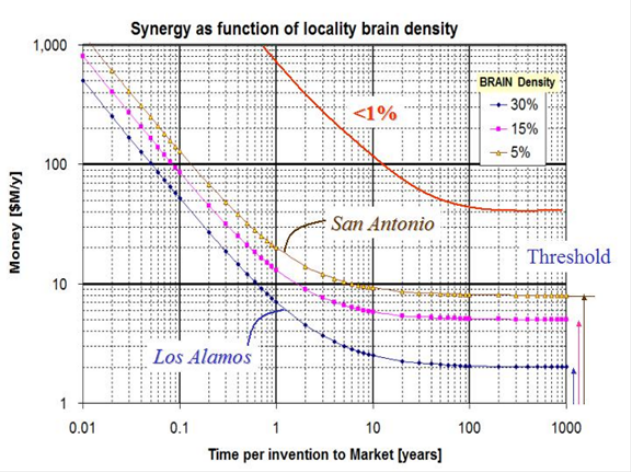

Figure 10 Development of synergy inside invention hub as function of investment and IQ

An in-depth analysis showed us that in order to have something like this functioning, there is a threshold expense that to be put up first and that is invers proportional with the density of high IQ people, or in other words with average IQ of the area, in less than 20 miles range. For Los Alamos, the cost was estimated at about $20 M/year, while it is $50M/y in Albuquerque NM and about $150 M/y in San Antonio, TX.

Figure 10 The figure below shows the synergistic process launch probability as a function of the potential BRAIN Power density – that simply means the relative percentage of highly educated individuals in the local population of a town or county Jones and Popa-Simil (2013).

The chart represents the level of investment needed, in various communities, with different concentration of highly educated individuals, able to invent.

We have to be aware of the fact that, when a community is relatively rich, it is more prone to leisure than to inventing, because they feel comfortable. In the case of Los Alamos, one of the richest communities in NM, the innovation and relaxation trends are intermixed, similar to the yin-yang vortex. On one side our community loves easy, smooth spending on risk free objectives, and on the other side the many people in the community are simply suggesting that the opposite direction might be the most successful one, because they see the risks of not developing alternate income sources

This cost is meant to cover few volunteer patent lawyers, some editing people, a fully equipped and operated general manufacturing unit having a mechanic, chemical, biological, electric, electronic and computer workshop, with last gadgets as 3D printers, CNCs, Laser and electron welding, and an adaptive shop for higher tech equipment, developed based on request.

A sound economic development model has to rely on facts and real local conditions, with an accurate prediction into the future, and that is what seems to be missing in LA County - a reliable strength, weakness, opportunity, and threat (SWOT) analysis.

The only abundant resource –BRAIN Power- isn't easy to harvest, like ore from the ground, and in order to be successful, this process requires special skills and capabilities developed by the community – it simply doesn't just appear by itself and begin to spread prosperity. Many things need to be done in order to obtain a stable flow of brainpower and its byproducts. The process is generically called taking ideas to the market place through invention stimulation, a process many talk about but very few understand. There are many middlemen, touting their powers to guide inventors in how to write business plans and how to find investors, but they are missing the essential points, so their guidance looks similar to how to hunt elephants in Alaska. No elephants are there, but that's considered a nonessential detail, and the guidance is considered more valuable.

In order to get inventor participation, the issue of mutual TRUST has to be solved. In the patent world, the mistrust suspicion is dominant part in inventor's life, as an inventor is aware that he got something, but in most cases is unable to estimate its

real value and falls in overestimations, and paranoid care and suspicion. In order to solve this problem, the center has to have involvement shares, hat to be honestly stipulated from the very beginning, living enough for the inventor, as to cover his/her work and then some. More a patent evolves towards TRL=10, more the inventor role is dimmed, because other people as market analysts, sellers, advertisers, publicists have to collaborate to assure a successful ending and then to assure production and development. Now, the stages for TRL=6 to 10 and after that are difficult to impossible to achieve in NM and generally in the USA, because lack of manufacturing capabilities and available people to hire, and here the balance between education and job opportunities plays an important role. After more than 50 years of dimming the local manufacturing, the USA work force available of being hired to produce and deliver to market new products is expensive and inefficient, and this effect was recently observed in production of N95 masks, which turnout of being bankrupt by the Chinese competition, and stop production. During covid-19 pandemic we developed complex protection systems, but the society was so unprepared as were unable to understand the advantages of using the novel protective equipment.

In the *https://www.statista.com/chart/23199/support-for-qanon-conspiracy-theories/* (n.d.) US 38% of republicans and 18% of Democrats, 10% of independents live in an alternate reality, being conspiracy theory believers, and this are those in the lower IQ spectrum, unable to check the reality, but frustrated with their social condition and marginalization, being intoxicated by "foxitis", and other extremist outlets left and right, that are pushing poison on their solves drop by drop up to addiction. These population echelon is formed of really good trustable people, but have this issue with their cognitive ability, mainly without being their direct fault or mental incapacity but being victims of an unequitable system, which puts the dollar first, in an artificial immoral set of values, some may call decadent capitalism, where to be rich is more important than to be humane.

There is a direct advantage of social systems like China, Jacobs (2021) only if their unique leading group remain smart and proceed with clever decisions, having great accomplishment, in a time when "great democracies" as US is wasting its time, money and energy with left fighting right and having "hands" clashed against each-other unable to control any direction, but each seeking immediate political gain, pretty much against the USA. For the moment China is applying measures to correct its demographic growth, while India is developing, challenging US position.

The general political experience shows that stability of political power makes possible diffusion and polarization to the top of pyramid of corrupted, incompetent elements skilled in theatre and socializing, and this is very hard to prevent. This effect turned down almost all great states of the world, starting with famous empires of the past.

In this atmosphere, with fading, expensive, low quality manufacturing even if we succeed to develop good idea to market accelerators ("inventrons") the failure is assured by launching them in rarefied manufacturing and consuming capability

realm.

What is the best strategy for the USA, is to cooperate and meanwhile recover in education, in society moral values and in manufacturing, developing modern universal manufacturing while reforming R&D and increasing the number and effectiveness of "Inventrons".

5. CONCLUSION

The smooth development of creativity into invention, and from idea to market and successful business can only be made in countries where the all ingredients for progress are in abundance, starting from a civilized and technological educated population with high IQ, to the conscience of community that has to create complex and complete, self-sufficient centers to harvest and promote the inventions to TRL=10, and to market, to a market that has the right production capabilities and marketing and commercialization resources in place back to an intelligent population, open to novelties, ready to learn new things, to adapt and use and consume the novel products and by this create exposure to develop new better products, repeating the process in a spiral of evolution.

Social ethics and morale, attitude towards work and performance, appreciation and adhesion to elites, reasonable conservativism, and curiosity and ability to continuous learning and improving skills are at the fundament of successful, prosperous creativity.

In the present configuration US has very slim chances to recover and maintain world leader role, because even with the newly proposed spending set on maximum, 90% of the money will be uselessly burned out due to social configuration and their IQ distribution. The only chance for recovery will be to make drastic changes in education, transforming it from memory and repetition intensive into a cognitive and heuristic learning with all the foundations set in place at the right time, and smartly used. It will be needed a social transformation, where the population to stop putting the dollar first, but they have a consistent and truthful set of values to protect and develop, among those the attitude towards honest, passionate work, and curiosity in science, equity and fairness in society. Only after these changes will be in place, in about 50 years we may hope to bring the average corrected IQ >95% and to have a leading edge over the world, in hypothesis that they do not evolve on same path.

Most realistically, USA have to get used with the actual 2^{nd} position among the world nations in a multipolar world, for the next 20 years falling in the 3^{rd} after China and India which have the advantage of large populations, becoming an example of decency and democracy, giving up militaristic and world policing tendencies but maintaining a strong defense and research, recovering the universal manufacturing capabilities, as to become a "fertile ground" for "inventrons".

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