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Thursday, 2019.11.14 №7 (119)

A WEEKLY GLOBAL, NATIONAL, INDEPENDENT, ANALYTICAL NEWSPAPER COVERING THE POLITICS AND ECONOMICS OF MONGOLIA (IN ENGLISH JAPANESE RUSSIAN AND MONGOLIAN) www.iargaldefacto.com





DeFacto ARTICLE

Jargalsaikhan Dambadarjaa, Mongolian political and economic observer, columnist

ROLE OF THE GOVERNMENT



DeFacto INTERVIEW

CYRYL KOSHYK ASSOCIATE PROFESSOR THE KYOTO COLLEGE OF GRADUATE STUDIES FOR INFORMATICS

AI SHOULD BE UTILIZED **SOLELY TO DEVELOP** THE COUNTRY AND **RESOLVE ISSUES RATHER** THAN AS A MEANS FOR GENERATING PROFIT

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Over the past fifty years, there have been no significant changes in our central government methods and strategies to rule the country. Instead there is an increasing number of politicians who allude to many changes happening. However, almost every person who got a position in the central government becomes an autocrat, treats the citizens as their bond servants, and still does all things in a dictatorial way. Though they passed laws and orders to moderate property relations, which are fundamental to society, and to develop an economy by the law of market economy, the central government still cannot get rid of its old socialist approaches in regulating other social relations.

Experts from the Harvard University have found that the understanding of the government playing the most important role in determining and developing national advantages is entirely baseless. The government's decision to take over the duties of a helper and supporter for each economic sector, hinders firms in their efforts to develop their competitiveness on a long-term basis, causing the loss of possibility of continuous economic improvement. For instance, in our country, in order to keep major consumer goods prices stable (meat, petroleum etc.) certain type of goods are stored for an extended period and are released to the market at cheaper prices in times of shortage in supply.

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The actual cost of such "aid" (storage cost, loss, seller's choice, transport cost) is often higher than the sold price. This indeed is a wrong political action for income transfer attempting to support a part of the community with the money of other part of the community. Apart from material losses, this kind of "aid" dampens the firms' desire and enthusiasm for competition, sometimes brings ties of some businesses and politicians too close and encourages corruption, which causes big damage to society. Aids only support and assist the increase of demand for aid itself. Experts claim that the most important role of the government in developing the economic competitiveness is to be a presser and challenger.

In order to define and develop its competitive advantage, the government needs not only to focus on improving and strengthening the business environment but also needs to support business competitiveness in all aspects. The only unalterable principle for the government is to establish precise standards of human safety and environmental impact and ensure their firm observation and compliance. In Spain, for instance, there are precise high standard established for the construction of building facilities and all competent agencies adhere to these standards strictly. In order to comply with such high standards and make a good profit, building companies introduce the best technologies and can be creative and proactive in their competition, thanks

to which this country is very popular in Europe because of its beautiful and high quality buildings in terms of thermal insolation and sound proof walls and window sets, as well as planning and architectural designs.

Another tool of the government to improve the competitiveness of business sector is to give the right signal at the right time. For example, in the 70s when Japan-made products were considered to be low quality and cheap, the Japanese government had tightened up all quality-related national standards and initiated popular Deming Prize, which was an important signal for companies in planning their businesses. Because it was a matter of honor for companies to receive this prize, which is believed to be the guarantee of excellence in quality, after nearly ten years the name Japan stood for "quality" and soon almost every company started to export their products abroad.

In our country it is the opposite. Some public organizations rate the companies according to the amount of taxes the companies paid (originally the taxation is supposed to be the matter of government) and if exclude "prize certificates" the price of which is paid by the competing companies, there is no specific government policy in Mongolia in this sphere. It is even strange that such a prize does not separate the vodka, tobacco and petroleum selling companies that are anyway obliged to pay excise depending on peculiarities of their businesses.

The principal objective of the companies is not to pay taxes but to be competitive in their respective fields, expand scope of their business, strengthen their position in the market being different by their productivity and make a high profit. The main duty of the government for the economy is to create a domestic demand by which every business will continuously endeavor and be constantly creative and initiative in order to increase their productivity and profitability. The government has a duty not to support and assist business activities but to press and challenge them.

2010.04.22



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For interviews in Mongolian, English and Russian, visit http://jargaldefacto.com/category/8

AI SHOULD BE UTILIZED SOLELY TO DEVELOP THE COUNTRY AND RESOLVE ISSUES RATHER THAN AS A MEANS FOR GENERATING PROFIT

Cyryl Koshyk is a professor at Kyoto Computer Gakuin and started his career at 16 with a Polish marketing company doing advertisements for brands such as Mercedes Benz and Volkswagen. He continued his career with Dark Horizon Pictures and Cinemat Studio in Hollywood as well as Stanford University where he worked on 16k Panoramic video and coding software. Professor Koshyk currently works with Etugen University to develop artificial intelligence in Mongolia.

Jargal Defacto: Good Afternoon! Please tell us about what brought you to Mongolia and how many times you have been here?

Cyryl Koshyk: The students from Mongolia that I met in Japan were very ambitious and open minded. This sparked my interest in Mongolia as those students told me more abo ut Mongolia and that I should visit. I recently became very involved in promoting Artificial Intelligence (AI) in the education sector and the main purpose of my visit was to visit Universities and meet students.

JD: Can you elaborate on what you do at Kyoto Computer Gakuin (KCG) involving Al?

CK: KCG is one of the first private schools in Japan and I am very fortunate to work with them. Al is a very broad subject but my team is currently working on using Al in entertainment by controlling CGI (computer graphic) elements. It is similar to the movie Avatar by James Cameron where actors controlled CGI characters with the main difference being that the camera processes the motions of human

beings through AI and controls the CGI characters.

JD: Can you give us some background into Al and what it will achieve in the future?

CK: Al has been present for a long time in many iterations and began in the 1950s where scientists used Perceptron to teach computers using examples. Although Al operates based on coding, it simulates the human brain. When I first heard of AI 15 years ago, I thought of movies such as the Terminator and Matrix, thinking that computers will take over and control humanity. In about half a century, I believe machines will develop a conscience. AI has made significant advancements in the medical field recently and I should mention that I am working with Etugen, a medical university to develop a prototype for detecting skin cancer by simply using a phone. A nurse can for example use a phone to examine the skin of a patient and determine whether it is cancerous.

JD: When did you develop this?

CK: A prototype has already been developed and we are currently testing and gathering samples. I was recently in Irkutsk, Russia to make a presentation and the Russian government expressed interest in equipping its hospitals with this technology. However, I am more interested in donating this technology to Mongolia.

JD: This technology will save a tremendous amount of resources for people. When did you develop it?

CK: We want to carry out more testing on the prototype and the technology can be further developed to detect lung cancer through X-rays for example, but it will initially be used to detect skin cancer. One interesting aspect of this technology is that it is not being funded by any agency or individual allowing it to be utilized in education. By far the defining aspect of the technology is that it would allow medical students to utilize it without any prior knowledge of IT. It actually operates on a browser so it can be accessed on an ordinary phone. For me, it is

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not about the money but the right cause.

JD: I understand that this is not your first invention and that you own a number of patents. What is the most moving for you?

CK: I am driven by a desire to introduce AI to students in a

manner that does not require IT knowledge at a very early age.

JD: You have worked with Hollywood to develop photo and video enhancing technology as well as augmented reality. What drove you to the realization that kids matter?

CK: Through my work in Hollywood and on films, I have been involved in a lot of projects involving databases and government projects. I believe it is time for me to pass on what knowledge I have to the younger generation as I can only take it so far.

JD: You mentioned the Global Expansion Japan-Mongolia organization. Can you elaborate on this organization?

CK: I believe that Japan and Mongolia are both great countries in that Mongolia has tremendously ambitious students and Japan has state of the art technology. I am very interested in establishing an exchange program where Mongolian students visit Japan and Japanese students visit Mongolia. I have visited a few Universities and we are in talks of initiating this very promising program.

JD: Do you have an idea as to how many students take part in these exchanges and for how long?

CK: I think it will initially involve short-term exchanges of select Mongolian and Japanese students. The program can start as early as 2020 and there are many avenues and areas in which to implement the program. For example, many Mongolian students are interested in Japanese manga animations.

JD: There is a belief that if utilized properly, Al can open many opportunities for a landlocked country like Mongolia. What is your opinion on this?

CK: In the right hands, I believe that AI can contribute to the solution of pressing issues such as pollution and population of sheep in Mongolia. I would however like to note that AI should be utilized solely to develop the country and resolve issues rather than as a means for generating profit. I think there is a new development every 10 years such as the internet and AI so I believe that the next step will appear in a short time. Therefore, it is imperative that we should not view

new technologies with skepticism or fear.

JD: What will be the first area of improvement as a result of AI that Mongolians will see?

CK: I have been in Mongolia for a short time and spent most of my time developing the skin cancer prototype, but I was thinking of utilizing remote controlled balloons to analyze potential areas for pasture. It would allow us to map the vast expanses of Mongolia and potentially discover areas suitable for introducing new plants not found in Mongolia.

JD: This requires a shift in our education policy. At what age should we begin introducing AI to students?

CK: The UK and China start teaching AI from kindergarten, but we should begin incorporating AI into Universities in Mongolia as a start and in a decade, we will be able to begin introducing AI at virtually any age.

JD: There have been significant developments in 5G which provides significantly more speed than 4G. Is there a necessity for 5G and should we be seeking to incorporate it at the earliest opportunity?

CK: I am able to effectively communicate over the internet with 2G, but teenagers may wish to stream videos or watch YouTube. There is no denying the importance of 5G for the financial sector, but I don't believe it is a necessity for

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the average student. I haven't researched the conditions for Mongolia to be able to incorporate 5G but if it finds investors from Japan or Australia maybe you can expedite the process. However, as I said, I believe currently, 5G would only be needed for instant financial transactions of large data uploads and downloads.

JD: How can we begin incorporating Al into Mongolian universities?

CK: We are beginning with the medical university and I believe that the initial introductions to AI will take place in science subjects. One interesting aspect of AI is network revolution and I believe it is more interesting than AI itself. This involves computers independently learning to solve problems rather than requiring data inputs to learn.

JD: So we input data into the computer and eventually it will be able to make predictions on things it was previously not exposed to?

CK: It will try to guess. Network intelligence seeks to create new intelligence, so it is even more powerful. Under AI, if you give a computer a sample, it will try to categorize it and we are currently unable to explain how it does this.

ID: Eventually, when there is a

network of computers that know certain things and can communicate with each other, they may be able to develop more complex solutions than the human brain?

CK: This is absolutely correct. Google and Amazon connect thousands of computers to create a super network. The fact that Al is now able to produce abstract paintings points at the significant power that it possesses. It is my hope that certain companies will look into utilizing Al to for example develop a cure for HIV or cancer for example.

JD: How will Al impact our health and lifespan?

CK: Some developments have taken place in printing organic matter through 3D printers and this may expand people's lifespans. Combining 3D printing with Al would allow us to recreate damaged organs and replace them.

JD: Recently, a 3D printer generated functioning heart was tested. Can you elaborate on what this development can bring about?

CK: They are currently growing 3D organs in mice as their physiology resembles that of a human and I believe AI and 3D printing combined can achieve many things such as travel to Mars

and change the quality of our lives.

JD: Liver and kidney diseases are prevalent in Mongolia and a lot of money is spent by Mongolians to seek transplants. How can 3D printing generate the required parts of these organs?

CK: It utilizes organic matter and the idea crossed my mind that the organs can be replicated from aging sheep. It will use the same technology as that used to generate parts of the skull from metal or powder following accidents. Even artificial limbs have been created for people who are not able to walk. Recently, I learned of efforts to repair the damaged connections in the spine and neck that creates paralysis through AI. These efforts are taking place through the use of fiber optic lights prevalent in AI.

JD: Please tell us about your current research.

CK: I am currently working on skin cancer recognition technology, but I may look into gathering samples of sheep and disease to perhaps determine the best areas for sheep in Mongolia on my next visit.

This interview originally aired in October 2019. It has been edited here for space and clarity.

You can watch the full 30-minute interview at www.jargaldefacto.com





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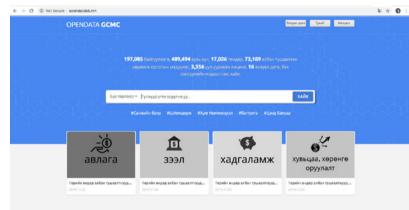
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OPEN DATA FOUNDATION OF GOVERNMENT INSTITUTIONS

The Independent Authority Against Corruption (IAAC) unveiled their search engine of 5 aspects of governance which they created in conjunction with several NGO's. Information about government tenders, company registration, the election process, income statements of government officials and mining licenses are now easier for the public to find at http://opendatalab.mn/. This is definitely a new initiative and the product initiators deserve praise. This serves as a very big step for the public and NGO's as transparency of civil servants and institutions is only possible through the utilization of advanced technologies.

It is worth delving into a survey conducted by Mr. G.Batdorj, one of the project initiators which found that more than 50% of deposits of civil servants belonged to Members of Parliament and that the grew by 39 billion MNT in 2018. If we were to extrapolate this to a monthly basis, the revenue of Members of Parliament grew by 44 million MNT. Looking back further, IAAC was founded in 2007 and it was a perpetually politicized agency. This was mainly due to NGO's and the public lacking access to public information.

While not all government institutions are contained within the initiative, it is the very first step and the portal needs to be very dynamic. There are two issues that I would like the portal to incorporate in the near future. Firstly, over 400 cases of corruption were initiated at IAAC over the last two years. Information regarding those cases such as when it was opened, closed and the outcome would be welcomed. This information is crucial as it will allow the public to monitor the progress of corruption cases. Another category that should be incorporated into the portal would be expense statements of government officials and high-ranking politicians. These statements



in conjunction with the income statements will allow the public to gain insight into the conduct of politicians.

This system gives great power to the public and we all understand that no one is trying to control the government. We are trying to generate avenues through which to influence our government in order to make it more practical and transparent. If we look at any state, it has two sources of power with the government and its legislative structures which can be referred to as south power and north power which is at the hands of private companies. A state with a single source of power will not be able to exist for any sustained amount of time.

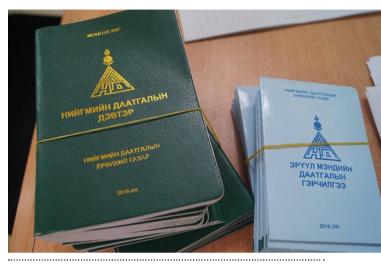
There is a Russian proverb that the salvation of the drowning people is the work of the drowning people themselves. If we look back, the Mongolian government has always attempted to seize access to information. However, there is a growing trend in the world of governments providing the public with access to information. If the government and public have access to the same information, expectations can be articulated from the beginning and joint solutions can emerge. It is however the responsibility of the public and civic society to obtain access to this information and to ensure that it is as transparent and accessible as possible.

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SOCIAL INSURANCE AND PRIVATE SECTORS

There has been opposition to the scheduled social insurance tax increase from the private sector culminating in social media campaigns. The tax is scheduled to be increased by 1% making it 25% and this follows an increase of 1% this year. This is a very complex issue which can not be fully addressed within the purview of this review, but we will attempt to be as precise and concise as possible. Firstly, we must acknowledge that there is no ideal social insurance system. Social insurance is affected by a number of dynamic factors and it should be a collaborative effort between the state employers and citizens themselves. The existing social insurance system was adopted 15-20 years ago at a time where it was essential. However, we need to understand that the situation has changed but also that there are fragments of society entirely dependent on social care. One of the prevailing **views** is that the government should be wholly responsible for social care and insurance. The second view is that it should be a collaborative effort between government employers and the citizens. I would place myself in the second camp as I don't believe that the government should be 100% responsible for something.

Within our region, Mongolia has the highest percentage of social insurance tax. If we look at Japan and South Korea, their social insurance taxes comprise 9% and 16.8% respectively. However, it is worth noting that these countries have mature economies. While everyone is in agreement that the current system needs to be reformed, there are serious divergences as to how this should be pursued. As Mongolia is one of the fastest growing economies in the world, these reforms should be implemented as soon as possible. People have changed over the last 15-20 years and our culture, mentality are different.



There are five funds in the social care system and the pension fund is the only one that operates at a loss. In 2018, its losses were 500 billion MNT so the social insurance tax needs to be increased in order to cover these losses. However, this is a shortsighted decision and the same measure would be required following the next loss unless the system is drastically revamped. We already pay too much taxes as a third of our salary goes to the government in one way or another. A multilayer social insurance system as in the Netherlands where they have a social care tax of 2% and a mandatory pension tax of 10-13% with private pension funds available to citizens as well would be the best option for Mongolia. A basic mandatory social care system covered by the government augmented by an optional system would be most feasible.

If we look as Xac Bank or Golomt Bank, they already began offering alternative pension funds to their employees. These efforts have been said to be successful as it increases the productivity and overall performance of the employees. All we need is a corrective legislative action from the government.

GAS PIPELINE OF NORTHEAST ASIAN COUNTRIES

The Northeast Asian gas pipeline Forum was hosted in Ulaanbaatar this week with representatives from China, Russia, Japan and South Korea participating in the discussions. The Mongolian delegation was mostly comprised from representatives from the energy sector and the Mongolian President met with the foreign dignitaries to discuss the issue. In light of the many forums that take place these days, I am cautiously optimistic in saying that this forum was quite promising. The news of a transit pipeline through Mongolia is in of itself good news. Another good news is that Mongolia is now a part of the Executive Committee which is comprised of representatives from Russia, China, South Korea and Japan.

The pipeline is guite simple and follows the shortest route to Southeast Asian countries determined through a preliminary study. Given its geolocation and controlled risks, it is time for Mongolia to become involved in the transit pipeline to Southeast Asia. The organization responsible for this is an NGO consisting of representatives from the business community and government as well as scientists. During the forum, studies and strategies regarding the implementation of the pipeline was discussed. Moreover, it was agreed that the next forum will take place in Sakhalin Island in Russia next year. Most importantly, they requested that Mongolia take part in this forum and that Mongolia develop technical and financial proposals. Representatives also pledged to support Mongolia in developing these proposals in the form of any studies and numbers that may be required.



During the Forum, the Minister of Energy, Mr. Ts.Davaasuren stated that we will take active part in the initiative. Following the construction of the pipeline, it will provide incremental revenue to the state budget. It will also create an entirely new gas industry in Mongolia which may

even lead to sound and technical solutions to combat air pollution through the gasification of the Ger districts. It may also lead to cars and buses potentially operating on LNG (Liquefied natural gas) and the much-discussed upgrades to powerplants 2, 3 and 5 can lead to them operating on gas. There is a company called "Erdenes Methane" LLC that is already carrying out geo-exploration works to find gas in Mongolia. When we find gas, it is feasible for us to export Mongolian gas to neighboring countries through the pipeline and its infrastructure.

This is a very long process so I don't believe that the upcoming election will have much impact on it. Mr. G.Enkhtaivan, the Head of the Policy Planning Department has already been appointed to lead the Mongolian side. While there is no private sector involvement as of yet, I would imagine that "Erdenes Methane" LLC would be more than happy to join the Forum. This project will hopefully take place within the next government term. This will serve as an excellent opportunity for Mongolia to demonstrate its capacity to unite over a megaproject.

GOOGLE STORE



This review has been edited here for space and clarity. You can watch the full 30-minute review on the Defacto website [HERE].

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