ST. PETERSBURG INTERNATIONAL ECONOMIC FORUM

JUNE 16–18, 2011

Business lunch

THE BIRTH OF THE NEXT GENERATION

Expanding Technology Horizons

JUNE 17, 2011 — 13:30–14:15, CAFE PEPSICO

St. Petersburg, Russia

2011

Address by **Mark Kurtser**, Head Obstetrician-Gynaecologist of the Moscow Health Care Department

Moderator:

Dear guests, good afternoon. The St. Petersburg International Economic Forum and PepsiCo would like to welcome you to PepsiCo Café. PepsiCo would like to thank the Forum's organizers for the great honour of holding this business lunch at our café. Please take your seats. When I was asked to introduce our guest of honour and presenter, I was told, "After all, you are a big, important man". I will not argue with this, just as I will not argue with the fact that the topic of today's business lunch is of equal concern to women and to men. That is why I am deeply honoured to call to our improvised stage a professor, a Doctor of Medical Sciences, and a person whose name is held in great regard by thousands upon thousands of women in Moscow and across the country, Chief Obstetrician-Gynaecologist of the Healthcare Department of the city of Moscow, Mark Kurtser. So, let us get started.

M. Kurtser:

Dear colleagues, First of all, I am truly grateful to the organizers of the Forum for giving me a chance to speak. This invitation was quite unexpected. I was honestly surprised. But after talking it over with my colleagues, some of whom are here today, I decided to take part in the Forum. I have prepared a brief presentation from the point of view of a physician and a healthcare organizer, attempting to address certain questions in connection with the birth of a new generation.

Let us talk about expanding our economic horizons. I borrowed this term from the main topic of the Forum and fit it to the part of the report I will deliver today. My presentation will highlight the issues facing the new generation.

What is the relationship between the economy and the size of our population, and vice versa? Economic successes always lead to population growth. Later, I will explain what factors drive population growth. In turn, population size—in other words, the number of taxpayers—stimulates economic growth.

The general guiding tendency of the economy is increasing demand for human capital and the creation of new jobs. One of the goals facing any leader is to create favourable conditions for population growth. How do we go about achieving this? With the help of migration. I am not an expert in this area. Migration will be discussed in another panel. It is a very complex process. It is not always successful, and it does not always lead to healthy results. Certain migration processes trigger socially dangerous diseases: tuberculosis, bad habits, and so on. We use the term 'natural population change', which is defined by the death and birth rates. If the death rate is higher than the birth rate, we are talking about negative population change, a decrease in population size. If the birth rate is higher than the death rate, that means the population is growing. My report will talk about what can be done to create positive natural population change and increase population size.

Much is being done in the Russian Federation: state subsidies for families with several children, maternity certificates, the national Health project with special screenings to diagnose hereditary and congenital diseases, such as hypothyroidism. I do not think this project is being implemented across all of Russia, but I know for sure it is underway in Moscow. These measures also include free medication and other benefits. I would also like to highlight the issue of tax breaks, and the federal law passed in late December 2010, which gives tax-exempt status to organizations that conduct medical activities. Unfortunately, the law has yet to come into effect. But we hope that it will be passed with amendments, and the Ministry of Health will finally submit a list of medical activities to the government, and the law will at last take effect.

What kind of birth-rate trends are we seeing in Russia today? This slide presents the data we received from the Ministry of Health and Social Development. As you can see, the growth rate is 20%. This is a considerably high growth rate. If we were to compare this with the rates for the 1980s–2000s, we would see a negative trend. Here, you can see a positive trend. In Moscow, the trend is even

more pronounced. Please note that this can be caused either by the improving economical situation or, possibly, by the migration processes that go on in Moscow as a major city. So while in Russia the growth rate was 20%, in Moscow alone the birth rate, the number of births, went up by 35.3%. Meanwhile, the profile of our patients is changing. This diagram shows that we are seeing an increase in second births. In the past, Russia experienced increases in first births, and most households were one-child families.

This new trend is very interesting: it is a good indicator of the economic situation, and of the maturity of our society as a whole. Take a look at this very interesting process: more than 10,000 families, amounting to 20,000 people, had a third child. If we combine the numbers, we get approximately 12–13,000 second births. This is a very good trend.

The next trend is an increase in the average age of our patients. It might only exist in Moscow – other regions, especially the south of the country, might see the opposite trend. But our patients are getting older, which means that we are seeing an increase in extragenital and somatic disorders. We have a saying: there are no healthy people, only under-examined ones. But we are increasingly registering people under form 32 of the Ministry of Health and Social Development, which means that our patients' health problems are on the rise.

The number of multiple pregnancies is growing. This is related to the assisted reproductive technology of IVF in-vitro fertilization.

Note that whatever is happening in the economy, we always see more boys born than girls. Only 40 years later does the number of females in the population outstrip the number of males.

The last slide shows that the number of Caesarean sections and surgical interventions in medical care is also growing.

What factors impact the decision to have a child, and how can we influence this process? Can we increase the birth rate by simply granting tax-exempt status to

medical organizations? I do not think so. I would define three steps that would help to raise the birth rate and increase the number of multi-child families.

The first step is to focus on the institution of the family. I would like to say that the family itself must provide guidance in this respect: religious traditions and the corresponding treatment of children.

And socioeconomic factors – there can be no argument there. We have to make sure that having many children is fashionable. For example, we have with us today the father of five children, who can serve as an example. This is great and commendable. We will introduce him again at the end of my speech. The goal of the government, the nation, the entire society is to make multi-child families fashionable.

Next, we must not forget about the medical aspects of the issue, though I listed them third. I am talking about safety, painlessness, transparency, and goodwill towards patients.

And finally, we get to the question of how to invest correctly. I am going to skip the first two steps because they are outside the realm of my professional work, and I am not one to judge. We have scheduled a panel with healthcare representatives and organizers, including Valentina Matvienko. I expect the panel will discuss this question in greater detail. I would like to focus on specific investments in healthcare. Investments go through three stages. When we first begin the investment process (for example, we decided to build a new centre), we have to remember that we must still go through two no less crucial stages. If we lose sight of them, we can end up with a fiasco.

The next stage is construction of a modern clinic. My slides include a photo of a large, beautiful—I would say quite successful—building, along with an old, small one (though reconstruction of old sites also has great promise). This is what a modern maternity ward looks like: safe, comfortable, even elegant state-of-the-art rooms. I will not go into the question of alternative birth methods; I will only say that we have patients who prefer to give birth in water. For example, I had a

patient who worked as a partner in Ernst & Young. She chose this particular method of childbirth. As organizers of medical services, we must understand that we cannot say no to these patients and turn them away to give birth in a non-hospital setting.

The next slide shows a new hospital currently being built in the village of Lapino. This is an example of new investments.

A few words about modern technologies – the second stage. We decided to invest in the construction of a new hospital; or we built a new hospital or restored an old one. But unless we supply it with new technologies, the building will remain outdated, and patients will turn away from our hospital. The same will happen if we have more complications, or cannot cope, or if mortality and the sickness rate remain at the same level. Here, I shall illustrate where it all begins. This is the morulation stage, this is the embryo. Here, I present information about the number of IVF cycles – we borrowed this data from the RAHR, the Russian Association of Human Reproduction. Patients pay for most of the cycles out of their own pockets, with the government offering partial assistance. These are happy married couples who have given birth to 50,000 children. Here, I am showing the cutting-edge technologies which can take one cell from the embryo for genetic testing. Our molecular department in Moscow has contracts with clinics in other regions. Some of them work directly with us; others simply send over materials for testing. We send these cells to Moscow by DHL and conduct genetic testing. Then, the foetus—considerably healthy or completely free from acquired or hereditary conditions—is implanted into the uterine cavity, and the mother gives birth to a healthy baby.

This slide shows Moscow's experience with diagnosing Down's syndrome. These are investments into prenatal diagnostics, biochemical and ultrasound screening, and amniotic fluid screening – a biopsy of a small piece of the placenta for genetic testing. Note that while the number of births in Moscow has grown, 0.08% of children were born with Down's syndrome. We have managed

to cut this number virtually in half. Most families in this situation give up their sick children, and the responsibility falls on the government, with annual expenses for each of these kids amounting to approximately RUB 800,000 a year. So this kind of screening more than pays for itself.

The next slide shows our ultrasound diagnostics and magnetic tomography capacities. Here, we see a brain tumour in a 16–18-week-old foetus. In cases like this, for fetoscopy, when the patient is an unborn child, we use endoscopic surgery. These operations are conducted at our clinic. This is the foetus: the umbilical cord, the feet, the arms. These are twins. This is twin-to-twin transfusion syndrome, when one foetus robs the other and steals its blood, which can lead to the death of one or both foetuses. Here, we see coagulation on the inner side of the placenta. And there is a high probability that after this operation, both children will be born healthy. The limbs of one of the foetuses, the one on whose side the surgery is being conducted, are getting in the way. This highly complex operation is conducted in Russia, but unfortunately all the equipment is imported. Operations like this one have a high rate of success and allow us to save two lives.

On the next slide, we see that Moscow pushes us to solve other problems as well: patients cannot reach our centre, they get stuck in traffic jams. We have no choice but to offer remote examinations. Our current on-call physician is the site administrator. We issue monitors to patients so they can conduct self-examinations at home or at their summer homes, then upload the information to our server. The site administrator examines patients and reports his or her conclusions about their health; about whether the foetus requires further testing, hospitalization, and so on.

The next slide shows a typical patient we deal with: a foetus weighing 700 grams, just 26 weeks old. Chances are, this child will not only survive, but will be born healthy.

Now, let us revisit the first part of my talk, in which I mentioned investments. We must either create and develop new methodologies independently, or acquire and develop Western and even Eastern methodologies that have a proven track record and good success rate. Some countries with developing economies have also shown good results. But these two components mean nothing if we do not realize that we must train the workforce. What does this mean? Our workforce must be optimally prepared. They have to *know* how to work. My worry is that certain national projects, certain perinatal centres—let us say, centres with state-of-the-art medical technologies—may purchase the equipment only to realize they have no personnel who can treat the same diseases appropriately, in the same numbers and using the same methods.

This slide presents information about how we conduct post-graduate training. This slide shows how Russia's obstetrics and gynaecology professionals are taught. It only takes two years. In two years, the student graduates, and at 25, he or she is already a certified specialist who can work independently. In Europe and North America, it takes double the amount of time to become a specialist in this area. Maybe our young people are more talented, and we have a higher standard of medical education: there is no corruption, and our students diligently and honestly prepare for their exams.

Now, let us touch upon the number of doctors. For example, 2,730 obstetricians and gynaecologists are registered and practicing in Moscow. If we look at the medical departments of Imperial College or UCL Medical School in London, they accept 60–70 applicants a year. In Russia, each medical university—the first, second, or third one—enrols up to a thousand people a year. Considering the workload for each doctor and the absence of sufficient computerization, the number of doctors in Russia is staggering.

Of course, we must enhance the prestige of this profession. Can you think of anyone you know who is applying to a medical school? In my family, for

example, the kids decided to go in a different direction. We must develop programmes and work on the personal qualities of our doctors.

The role of the leader, manager, also plays a crucial part. We still call him or her Head Physician. We are debating whether to call him or her the Head Physician or Director; whether he or she has to be a doctor. I know some medical companies where non-medical managers have proven to be very effective. Schools in the West even have medical management departments. Poor team formation, unskilled solutions, and incompetent doctors have a negative effect on our development. A medical mistake can outweigh all investments, and all the new equipment bought at great expense. Ineffective management of medical personnel can also play a role in this.

We created a video to help encourage employees towards continuing their education, to instil the desire to be a doctor from an early age, and as a result, to attract our brightest children into the field of medicine.

From the audience:

You mentioned IVF as an auxiliary procedure. Many completely healthy people think that after a certain age, it is better to conceive in vitro in order to select the healthiest cell and create a perfect child. Do you see this as an exception, or is this a general trend?

M. Kurtser:

Thank you for your question. Of course ideally, this is our dream: to outlaw sexual activities so that all births are a result of in-vitro fertilization. Of course, this would be our dream come true. Which is wrong, because we must always be guided by natural methods rather than auxiliary ones. But in some situations, couples decide for various reasons to use this method. What motivates them? They might have different reasons. Is this a good thing or a bad thing? We do not have enough experience to recommend a wider application of IVF. But I can

tell you that I have a talk dedicated exclusively to IVF. I divide indications for its use into two categories: traditional, in cases of infertility, and others, which include various diseases. There are other reasons besides your traditional pancreatic cystic fibrosis, haemophilia, and sex selection. For example, we have a couple at our clinic: the woman suffers from breast cancer, which is hereditary. Today, we can isolate the gene that causes breast cancer. If a couple with this kind of problem comes to us, if the woman has a family history of deaths or disabilities, we can transfer an embryo that will not get breast cancer. Similar work is being done for hypercholesterolemia, the early-onset of strokes and heart attacks, and so on. Theoretically, it is possible, but in practice, today, we do not recommend these options, and each family makes its own decision.

Y. Krestinsky:

Mr. Kurtser, thank you for this informative report. My name is Yuri Krestinsky. I represent the Public Healthcare Development Institute. I have a few questions. My first question is: what is the current share of private medical organizations among maternity service providers? And how is the budget allocated, across Russia in general and in Moscow in particular? What is covered by the government, and what is paid for by individual citizens?

M. Kurtser:

I can tell you about Moscow. Moscow currently has two channels of financing: the compulsory health insurance budget and budgetary financing. In January 2012, the law will take effect, and the single-channel financing structure will be implemented. I think we will be discussing this tomorrow. Under the single-channel financing system, non-profit organizations will also be able to apply for state contracts. Until January 1, 2012, we will not have a single medical organization using CHI or budgetary financing for maternity services. The share for obstetric services comprises about 3% of all services. Of 38 maternity clinics

and wards with federal or municipal property, only three obstetric hospitals hold private licences. This number is slightly higher: 10%. And its share among overall medical services is 3–3.2%. The CHI Fund does not offer financing. Currently, all maternity services in Moscow rely on budgetary financing, but as of January 1, there will be a possibility of involving private services.

Y. Krestinsky:

When I was talking about the budget, I meant the overall volume of financing, not the government budget.

M. Kurtser:

I can only tell you about services.

Y. Krestinsky:

I see. Thank you.

From the audience:

Mr. Kurtser, the last few years have seen demographic growth in our country, and you know full well that in the next eight years, we will fall into a demographic pit. This is perfectly reasonable: people giving birth today are from the mid-1980s generation – the most populous generation of the Soviet period. If we take St. Petersburg, we had 85,000 births in 1985, and 31,500 births in 1993. Naturally, within the first five months of this year, St. Petersburg has already experienced falling birth rates. In the first five months, they were 0.3% lower than the 2010 numbers; and if we compare the May figures with figures for May 2010, we can see a 9.5% decrease. What methods do you think the government can use to compensate for this? After all, this problem is of crucial national importance.

M. Kurtser:

Moscow has not yet experienced this decrease, but the first few months have not shown any growth either. The only thing I can tell you is this: when I was discussing ways to stimulate population growth, I showed a slide that identified three groups: the family, national policies, and medical services. In theory, it is possible, within a government programme, to create budgetary financing for additional IVF cycles. But there are very few of them. In Russia, IVF accounts for only 150,000–160,000 births per million. So this is a complex issue that we can only solve if we work together: not just as physicians, but, say, as regional leaders and as corporations. We had a campaign in Moscow – a competition for the title of best maternity organization that creates optimal conditions for women to make sure their career will not interfere with motherhood.

From the audience:

You just mentioned that a woman's career should not interfere with motherhood. I have a related question: what is your opinion of surrogate motherhood?

M. Kurtser:

If it is based on medical factors, it is great. We recently had a patient whose uterus was removed as a result of disease. She is 28 years old. She cannot give birth to a child, so her child was carried by a surrogate mother. Moscow has a lot of surrogate motherhood within families, when a grandmother carries the baby for a mother who has medical contraindications, such as oncological diseases. But if a twenty-year-old patient who just got married six months ago comes to us and asks whether she can take part in the surrogate motherhood programme, she should go see a psychiatrist.

Moderator:

Please, we have more questions.

From the audience:

Mr. Kurtser, you know full well that maternity management is an extremely expensive undertaking due to the cost of infrastructure, personnel training, and so on. In reality, the private obstetrics market probably only exists in Moscow, and maybe a little bit in St. Petersburg. I was just talking to colleagues from Samara – they are operating at a loss, and are planning to close down.

M. Kurtser:

I visited a flourishing maternity clinic in Tolyatti. I had not spoken to them in a year, but they were very successful. You might have more accurate information because of the economic crisis, but private maternity clinics do exist.

From the audience:

What role do you see private investors playing in the field of obstetrics, not just in Moscow, but across the Russian Federation?

M. Kurtser:

A lot of work is being done in this direction. So far, the government has taken very wise steps. The medical industry is undergoing reforms. In addition to reforms aimed at creating single-channel financing, there are programmes that define various types of organizations, such as governmental, budgetary, and autonomous. Governmental organizations cannot be touched: they must remain within the government structure forever. One example is a hospital for HIV patients. Budgetary and autonomous organizations handle slightly different types of activities that are not as essential. But each of them will be receiving money based on per-capita financing: what they get will depend on how many people they cure.

The government is closing in on formulating the net cost of childbirth. It will take into account depreciation of real estate and facilities and the cost of facilities – something that was never included in the price of a product before. Today, this can possibly change the face of the market. If a real payment mechanism materializes, investors will come and calculate the cost of childbirth, and they will start investing. This would be a great relief for the government. It would not have to worry about management, construction, and other things. It would just select construction sites, and then the investor would come in and take further responsibility, while the government would oversee these medical enterprises with the help of licensing and taxation. This is all in theory. In practice, until all this is put in place, the issue for investors will be quite difficult, but not impossible.

From the audience:

Do modern technologies allow parents to control the sex of their child? And if so, what do you think of that?

M. Kurtser:

In a number of countries, this is called sex selection. Yes, we do have this ability. In some states, it is illegal. In Europe, Israel, and Russia, this practice is legal, and we do get patients interested in it. Truth be told, I have only had two families so far: they had six boys and wanted to have a girl no matter what. Usually it is the other way around. I do not think this practice should be outlawed. What is more, even if babies were to be strictly pre-sorted by sex, all the same, a new life, a new person will be created. And we can only welcome that.

Moderator:

Dear colleagues, do you have any other questions?

R. Bobro:

Rita Bobro, Merck.

Mr. Kurtser, here's my question. Too often, gynaecologists spend years treating infertility and do not refer the woman to the right specialist in time. Can this problem be solved at the legislative level?

M. Kurtser:

Thank you for your question. We have a lot of medical questions.

Yes, this is a big problem, but it can be solved without legislation. We cannot have a law for every disease: one law for the flu, another for infertility, another for flat feet. Our legislators would not have enough hours in the day. It is impossible. But let me remind you that in my report, I mentioned that training personnel and instilling professionalism are highly important, not to mention honesty in dealing with patients, because you are right. We sometimes get patients who are in their 40s and do not have any ovarian reserve left, it is all gone. It is the first time they come to us, only to be told that we cannot help them because, "you do not have any eggs left". Yes, you are right. But in my opinion, the main issue here is professional training.

R. Bobro:

When I say legislation, I mean standards. For example, if after two years the couple still does not have a child...

M. Kurtser:

Recommendations for the provision of medical services (we have a different name for this procedure now) do cover this. But there are always alternatives. You cannot decree that 35- or 37-year-olds must undergo IVF. That is not a

good idea. We cannot allow ourselves to do this. The patient must be examined by a physician.

Verlinsky's son came to see me before he left. He told me that every place has a different system. For example, services provided to newborns in St. Petersburg are different from those in Moscow. St. Petersburg has created one integrated resuscitation unit that transfers sick kids from maternity clinics. In Moscow, every maternity clinic has its own paediatric resuscitation unit. This decision is driven by the city's traffic situation. We cannot allow children to suffer or die because of this. But this, for example, is what the late Verlinsky Sr. did: he opened an IVF lab without a clinical department. He just had the lab that handled cell division – and that was it. His embryologists would go to every gynaecologist, and every gynaecologist in Chicago could pick up or drop off an egg. And they did not have any problems with age or other factors.

But we moved in a different direction: Moscow, St. Petersburg, and everything else. We made the clinical department an integral part of the IVF lab. And this naturally causes tension between doctors who are trained in this methodology and those who are not. We have to move in the direction that will allow the lab to provide services. We must make local services more accessible, and make sure that women who go to maternity clinics have access to so-called technological treatment methods. This will allow us to solve this conflict. But I am speaking in purely hypothetical terms.

Moderator:

Any other questions from our colleagues?

M. Kurtser:

Thank you for your questions, thank you very much for your time.

Moderator:

You have been listening to the report by Chief Obstetrician and Gynaecologist of the Moscow Healthcare Department, Mark Kurtser. Thank you for talking to us. And thank you for your great questions.

This concludes our business lunch, but the programme of the St. Petersburg International Economic Forum is far from over. We welcome you to visit our café. Thank you very much.