



SPECIAL COMMISSION ON FUTURES

(Session held on April 20, 2022).

MR. PRESIDENT. -If there is a quorum, the session is open.

(It is 2:12 p.m.)

- This is a formal session of the Special Commission on Futures, but we have I have invited other legislators who have shown interest in the topic that we are specifically bringing together today. So we are very pleased to welcome them.

First of all, we welcome the representative of the World Bank, Dr. Celia Ortega, who, as everyone knows, has been very willing to collaborate with the work of this commission from the very beginning. We have projects in common, which we will continue to discuss later. And one of the first concrete contributions that the bank offered to integrate into our work consists precisely of a study that will be presented to us today by its author, the economist Ignacio Apella, who is Argentine but who also feels very Uruguayan, as he has told us time and again, and is very interested in being here.

We are referring to a work of which you have a summary, but which I It is clear that it has reached your offices. It is a very interesting work, which was written for Uruguay, entitled "Just in time. Aging, technological change, skills and labor regulations in the Uruguay of the future." So we wanted to have the opportunity to hear the author himself so that he could present it to us at this instance, and to stay in touch, as we have always said, because this type of link does not necessarily have to go through the commission in a formal manner. The idea is that we get to know people who are working on these issues and who can make contributions. All those who have expressed their willingness to contribute have shown themselves willing to talk, naturally, with each one individually, if necessary.

We have one hour and fifteen minutes to listen to this presentation and Afterwards we will welcome the Minister of Education and Science from Finland.

Without further ado, and of course, very especially thanking the presence of those Dear legislators, we give the floor to economist Ignacio Apella so that he can make his presentation.

MR. APPELLA. -Good afternoon and thank you for the space you give us to share this study.

(PowerPoint presentation displayed).

- For us, as a bank, this topic is very important - the title says it all. Clearly, it is "just in time" - especially for Uruguay, although this is not the case for other countries in the region. Perhaps for Argentina or Brazil it could apply in part, but for Uruguay it is just now or never.

There are several challenges, but also several opportunities that the future presents to you. the country, and the idea of this work is to analyze them, show them with arguments and some rigorous data, and above all to think about public policy spaces, which is what concerns us.

I'll try to go pretty fast, but slowly.

Why do we say it is just in time? Because Uruguay is going through - and you know this better than we do - a demographic transition, and its characteristics are more similar to those of European countries than to those of the region, that is, it is a very aged society.

Of course, population aging is a trend that affects This is true for all countries in the world, but especially for Uruguay in particular within the group of countries in the region. This situation poses certain challenges in the long term, in terms of higher spending on health, on pensions, but also from the point of view of economic growth, because an older population implies a smaller workforce and a limitation on the growth of the gross product per capita. So, there are also some challenges from that dimension.

At the same time, there are some opportunities that should be seized right away. Now. They should have taken advantage of it about ten years ago, but we still have time. That is why, I repeat, the title of the work is "Just in time".

I want to address the key messages of this paper, and then I will address some of them in greater depth.

From a public policy perspective, it is precisely now that we must We must begin to seriously discuss two major dimensions with a long-term view. One of them is how to extend the prosperity that demographics are temporarily giving us over the next twenty years. At the same time, the country's great challenge is how to increase human capital, which is the key and relevant factor for economic growth from now on.

Within the first dimension, there are two large areas in which attention must be paid: work, which have to do with encouraging the delay of leaving the labor market

workers – I am not saying to increase the retirement age – in order to be able to expand the size of the workforce a little more in the medium and long term, simultaneously with the generation of mechanisms that allow for greater female participation in the workforce. There is much to gain in this regard, because Uruguay maintains a female participation rate that is much lower than that of men, as occurs in several countries in the region.

From the point of view of human capital, it is clear that we must think about a reform of the education system as a whole. I know that it is a complex and difficult area, where political economy is strong, but we must begin to seek consensus to improve the content and the how, that is, what we teach children and how we do it, something that is relevant for the future, although that is a somewhat deeper discussion.

Finally, we recognize – and we all must – that the training process of an individual does not end with the formal education system. Currently, given the context of technological, productive and other changes, the training process occurs throughout the life cycle. Therefore, continuing education programs begin to play a key role in the adaptation and re-adaptation of the workforce.

Those are the four key messages, and now I'm going to go a little deeper into the study.

I was saying – and everyone here knows this better than I do – that today Uruguay is in the middle of its demographic bonus, which is measured by the demographic dependency ratio, that is, the percentage of the passive population – under fifteen years old and over sixty-five – divided – let's put it that way – by the percentage of the population of working age. Uruguay is in the middle. Now, it will come out of this demographic bonus in twenty years, that is, there is not much time. Paraguay, to give you an example, will come out of the bonus in 2070. It has fifty years of demographic bonus. Uruguay has twenty left.

In this context, although there are challenges associated with an increase in social spending, in particular, and some limitations in terms of economic growth, it is not all bad news. Before reaching the ageing stage, we have a great opportunity as a country, which is associated with what we call "demographic dividends". What does this mean? The gross product per capita, that is, the GDP divided by N, which is the population, can be broken down as follows: the gross product divided by L, which is the number of workers, by the number of workers divided by the total population, that is, employment.

The demographic bonus, the first demographic dividend, greatly favors economic growth, and in practice it has done so. Why? Because as the dependency rate decreases, that L over N increases. In other words, the percentage of the population in working age is at its highest today.

Now, the problem is that, as we move out of the demographic dividend, this falls. So, to sustain the pace of economic growth, what we call the “second demographic dividend” has to increase: the productivity of the economy. And there are two ways to be able to realize this second demographic dividend once we reach the ageing stage: investing in human capital and in physical capital.

During the 2010-2014 period, demographics contributed significantly to economic growth, which is why I just said: the first demographic dividend. Now, this contribution is transitory. Why? Because in the long term, as the population ages, the size of the labor force decreases, and that constitutes an important limitation for growth. So what should we do? We have to take advantage of today, right now, when we have the largest size of the working-age population, which on average is the one that has the capacity to save: its income level is greater than its consumption level. Of course, in the distribution one will find people who can save and others who cannot, but on average it is like that.

So, we need to take advantage of these savings and encourage them to finance investment in both physical and human capital, so as to have more capital per worker in the future and thus increase productivity, which is what will allow us to sustain growth in the long term.

However, it is worrying to see Uruguay's savings rate because it is one of the lowest in the region. Chile is the *outlier* in the region; it has the highest savings rate, similar to that of the OECD countries. But our north should be South Korea, which has already gone through this situation and faced it in this way: with another social security system, with other institutions. That is how the miracle of the Asian tigers was achieved. That should be, then, our concern, and I insist that the time is right now, because otherwise the opportunity will pass us by.

So are there any spaces where something can be done in the short term? Yes, but I repeat: it is temporary. For example, generating incentive mechanisms to delay the retirement age would be a good step, in the sense of being able to increase the size of the workforce with older adults, conditioned on the *stock* of health capital that people have, of course. On the other hand, I insist, we must think about generating mechanisms – there is a lot of room for improvement here – that encourage female labor force participation. There is a World Bank document prepared two years ago that clearly shows the gains in terms of product due to greater female labor force participation. In that sense, there is a lot to do.

All these measures will change the level of the size of the workforce, but not the trend. The downward trend will continue to persist. So, productivity must be increased – that is the only option – through investment in both physical and human capital. It is the only alternative.

Technological change is another megatrend taking place in Uruguay and in everyone. And that's good news. *A priori* One might assume that new production technologies lead to efficiency gains, a reduction in average production costs and therefore higher productivity, and that is why this is good news. However, we must be careful and pay attention to the impacts this may have on the labour market and of course on income distribution. And that is where I want to go.

When we talk about technological change, the first reaction that people have is: "Machines are coming for our jobs. So we are going to be unemployed." And the big concern is first of all how we finance this situation and then where we spend our free time.

Unfortunately – or fortunately, for me – that is not the case, because the automation –when I talk about technological change I will emphasize automation–, machines, both digital and physical, do not replace occupations *per se*, but rather some tasks that we perform in our occupations. If someone gives me the example of an elevator operator, it is true that replacing a task is equivalent to replacing an occupation, because the occupation is composed of a single task. But in general, on average, workers perform a combination of tasks. Not all of them are replaceable or automatable.

In fact, let me give an example from the United States that I find very clear to explain this. In the period in which the placement of ATMs expanded, one would have expected the number of bank employees to *full time* would be reduced. However, that did not happen, but on the contrary it increased, because these new ATMs reduce the costs of means of production, allow for the expansion of a larger number of bank branches and, therefore, more people are needed. So, that can happen too. Not everything is a cause for concern, but we do have to be vigilant.

In Uruguay, technological change is not something that emerged two years ago. It comes since the wheel was invented, with greater acceleration in the last twenty years and now a little faster, if you will. But the ATM was born in the nineties or even before. That is to say, we have been living with a process of constant technological change for many years. However, when one looks at the indicators of the Uruguayan labor market, as well as those of the rest of the countries in the region, excluding the crisis of 2001 and 2002, one sees that they are solid indicators. So, there is no risk of losing occupation or employment. What there may be is a potential change in the employment profile, which also generates risks, but that is another thing.

Now, what tasks can be automated? Basically, large ones. Tasks are classified into two groups: manual or cognitive; or we use the body to develop the task or knowledge. These same tasks, in turn, can be classified as routine, which means that they follow a constant process

and unalterable in their execution, or non-routine, that is, adaptable to time, circumstances, etc.

Manual routine tasks – those that a machine operator can do or those that, with greater force or greater emphasis, are developed by a cashier, a typist, etc. - will of course be less in demand for the human person, so to speak.

On the contrary, there is more space for the worker who performs non-professional tasks. Routine tasks – they are difficult to automate; there is no algorithm that can take into account all the variations – or cognitive tasks, such as those performed by a manager, an administrator, an IT specialist, an architect, a researcher, which require qualities such as problem solving, design and flexibility. One would expect that these types of tasks would take on greater emphasis or greater participation in the total set of tasks that workers perform.

With regard to non-routine but manual tasks, such as those of drivers – although there is autonomous self-testing and all that discussion that we can have, but in general they are difficult tasks to automate – waiters, stylists and all those types of tasks that require a lower level of qualification, one would expect that they will also be more in demand in the future.

As for routine cognitive ones – I think this is the point; this is the – the tasks performed by an accountant, an editor, or even a translator can now be easily replaced; this was never expected. These are the tasks performed by workers in the middle of the income distribution, that is, those in the middle class, and this is where the risk lies. The new industrial revolution 2.0, unlike the first, replaces these types of tasks, and this is where the risk lies.

An example is the task of the translator. We all know Google Translate. Twenty years ago, I was translating with millions of errors, but today I translate much better. So, one would expect that as users make suggestions and so on, I would continue to improve. In fact, I know many translators who translate using Google Translate.

So what can we expect? That these types of tasks will be less demanded in the future due to the advancement of automation.

What has happened in Uruguay in the last twenty years? In some respects, What happened in Uruguay is in line with what happened in developed countries, but not in others. As in developed countries, in the last twenty years in our country the relative importance, within local employment, of the development of non-routine cognitive tasks has increased a lot. In the graph, a distinction is made between analytical and interpersonal tasks, but it is the same thing.

On the other hand, it decreased – I don't know if much, but it did – the intensity or the relative importance of manual tasks, both routine and non-routine, and even those that one suspects should not or should not be automated.

So far we are relatively well. The concern arises because it is also the relative importance of routine cognitive tasks has increased significantly, which, as we said before, is where the middle class is. Why is this causing concern? If today employment in Uruguay is very intensive in this type of tasks, there are many workers at risk of their tasks being automated in the future.

Why is this not happening now, which is happening in the countries? What is the relative price effect in developed countries? The hypothesis – it is a hypothesis, nothing else – is that there is a relative price effect. For developing countries, the cost of acquiring a machine to perform this type of task is relatively more expensive than the cost of labor, if I may use the expression. As these new technologies become standardized – like any product, such as televisions or mobile phones – the scale of production increases, average costs and prices fall. This is going to happen; I am referring to substitution. The risk we see in Uruguay, I repeat, is not technological unemployment – as is often mentioned – but rather polarization of the labor market and greater inequality. What does labor polarization mean? If the tasks performed by workers at the center of distribution are going to be automated, there is no other option than to perform non-routine manual tasks or non-routine cognitive tasks. The former require a lower level of qualification compared to cognitive tasks and, therefore, a lower level of income. The latter require a higher level of qualification, higher productivity and a higher level of income. So, the distribution of workers will be represented, in some way, with two large groups at the extremes.

What is happening in Uruguay? There is an incipient process of polarization and that is where the red light comes on. As you can see, over the last twenty years the share of employment that is very intensive in non-routine cognitive tasks has varied greatly, the share of employment in occupations that are very intensive in non-routine manual tasks has varied positively, and the share of employment in cognitive tasks has fallen. That is the effect of manual tasks in reality, because, as we have seen, cognitive tasks have grown. That is why I say that it is incipient, it is the first little bump.

That said, what is the space for public policy? Considering the two megatrends, population ageing and technological change, there are two major areas of work. On the one hand, we must try to extend the demographic bonus as much as possible, in order to gain time to be able to increase the savings rate, investment, the accumulation of physical and human capital, and to end the ageing stage with an increase in productivity. For this, incentive mechanisms are more important than regulatory changes. In any case, if society accepts regulatory changes, there is no problem. It is necessary to encourage greater participation by older adults and women; that is key.

From the point of view of human capital or productivity in general, We need to reformulate the educational system, as I said at the beginning. We have an educational system in the region – not only in Uruguay – about which we must ask ourselves if the content being taught is relevant. Is it worth it for her to memorize the name of a certain river? Is it better to work by subject rather than by projects? By the way, I would like to tell you an anecdote. When my daughter was fifteen, she was studying Mathematics, more specifically equations. Since I love equations, I asked her if she wanted me to help her and she said no, that she was studying Mathematics because she had an exam. A few days later I see her studying Physics, the speed formula. So, I say to her: “Ah, equations.” And she answers: “No, no, this is Physics.” I insisted, pointing out that it was an equation and she said no because there were no x or y. Do you understand what I am saying? We have this dissociation between subjects, and we do not help children to generate creative thinking or to discuss when they have all the information. It is a discussion that I do not want to get involved in, but I always do. Why do I not want to get involved? Because I do not have much time and I want to focus on what we are advancing with the bank, that is, on the need to strengthen continuing education programs, because in general they always appear isolated, but in this new context, where the training process does not only end with the formal education system, it gains a lot of relevance. In what sense? It is important to generate or redesign continuing education spaces to re-adapt the workforce and rethink the entire system with a focus, of course, on Inefop, but also on UTU and UTEC. And if there is any other institution that I do not know or am forgetting, please let me know.

It is also important to promote socio-emotional skills and complex cognitive skills of workers, but above all flexibility, adaptability and many soft skills, to call them something. In addition, it is extremely important to promote private participation in this discussion. Why? Because it is the private sector that knows better than anyone what skills are needed or what their workers would need to be able to carry out the tasks carried out in that productive sector.

What is Uruguay doing today and where should it be strengthened? Uruguay In addition to the creation of this commission –which I celebrate–, this space was created where the long term is discussed –let us not forget that the situation sometimes takes us by surprise and everything is urgent, so we have no room for important things, as Mafalda said, and at the same time we have a problem of inflation due to costs resulting from the war in Ukraine and we must go out and try to solve some problems–, because there is a group of people who are thinking about that or at least have a moment to think about the long term, which is important because that is what allows us to reduce emergencies in the future.

On the other hand, for some years the Statistical Unit of the Ministry of The Ministry of Labor and Social Security is developing an information system called O*NET Uruguay. Why is this information system being developed? Because it is very important, precisely, for the definition of the continuous training strategy.

of workers. This project aims to build a large database, a large information system in which each of the current occupations in the country can be identified – around four hundred – and their characteristics in the sense of which tasks are performed most and least frequently, what skills, knowledge and abilities are required to develop them and what the work context is. In this way, each of the occupations is characterized in order to understand as best as possible what the needs are for each of the workers in terms of skills, abilities and knowledge to be able to develop in them. In this way, the database allows for the management of continuing education courses. That is one of the great advantages.

Between 2019 and 2020, a first wave of occupations was reported; they were only Twenty-three. Why were there twenty-three occupations? It was a matter of resources, both budgetary and human. For this survey or for the identification of these occupations, four characteristics were considered: their importance in the economy in terms of job creation, the risk of automation using a certain index, the dynamism – that is, how employment in these occupations varied – and, of course, some rural occupations should be considered. We have a list of all the occupations with their characteristics. In the database that we work with together with the ministry team, we developed an algorithm, with this database, that allowed us to draw a map of occupations.

Something I didn't mention is that for this database it is taken as an example The O*NET of the United States, which is the one that everyone uses to work on the subject of tasks and skills in occupations. This occupation space is a very useful tool that, although it does not solve anyone's life, contributes precisely to the definition of redirecting or directing training or formation courses. Why? In the graph we can see little balloons; each one represents an occupation, which has a number –for the purposes of simplification, since it is easier to put a number than the entire name of the occupation–, grouping the locations in neighborhoods according to the skills they have in common, that is, those that workers should have to carry out the tasks in those occupations. So, an administrative worker is very close to an accountant, but an accountant is not very close to an administrative worker. However, we take the shortest distance and consider them to be neighborhoods. I'll give an example. If the market for accountants, due to automation or any other reason, is affected, there is a *shock*, and accountants do not have work, they could easily move to a job that is nearby, such as administrative, since they have the skills for it. However, moving from administrative to accountant is a bit more complex; they will not be accountants, but with some training as a commercial expert they will be able to perform some work in that field.

However, not everything is so easy. What is attempted is to locate the nearby occupations in order to be able to redirect workers in crisis situations towards them, promoting certain skills. For this to be effective, the retraining process must be done in a reasonable time and, therefore, the closer the occupation is to which we want to send the person, the shorter the time has to be.

training. We can run the risk – those are the colors we can see in the graph – of sending the person to an occupation that is mostly composed of tasks that are at risk of automation. So, let's try to send them to a not-so-red circle. That's the idea of this map.

Of course this map is incomplete, because it only has Twenty-three occupations, but the algorithm works and is replicable –we already did it–, to the extent that the Ministry of Labor and Social Security and the Statistics Directorate continue to survey and incorporate new occupations into the database. In this way, today we can have two occupations that are close, but in reality, when locating the entire universe of four hundred occupations, they may be far away, because there will be others closer. This is not the truth, but an example, an instrument, and I am showing it so that we know where other actors are working in the country.

This database is of utmost importance for different reasons, but especially because it has multiple uses and users. On the one hand, of course, there are those who design, promote or administer continuing education programs, such as Inefop and educational programs, such as UTEC and UTU, and on the other hand, there are the users, individuals and families when they must decide on their children's learning careers and future career paths. In the United States, this database is widely used by families, because when the teenager decides what to study and which university to go to, part of that decision is made with a computer in front of them, by accessing the onet.com site and seeing what the tasks, occupations, and average salaries and labor income are. Therefore, it is very useful for that as well.

In summary, the information system is a fundamental pillar for the Definition of continuing education programmes. Of course, work must then also be done on the provision of courses and the training of the training centres themselves, but this is very important; it is the cornerstone of the design of this type of policy.

I repeat: Uruguay is the first country that is seriously thinking about this. long term, through the Commission on Labour Affairs and Social Security, the Special Commission on Futures and the Ministry of Labour and Social Security. Argentina tried to do this –for example, with O*NET– and it is doing so much more slowly. From my point of view, Uruguay is an example for the region in terms of how to approach these discussions, whether we succeed or not. We can fail or succeed, but the initiative and the search for consensus in these discussions are extremely important.

Of course, within what the Ministry of Labor is doing and There is still a lot missing in Social Security. This is a small first step and a greater amount of resources, both physical and financial, are needed to be able to rapidly expand this database. Today we only have twenty-three occupations, which, although they represent between 30% and 40% of total employment, the rest of the occupations are missing and they must be incorporated quickly to have a complete map; otherwise, it will not be useful.

I won't bore you any further. Thank you very much.

MR. PRESIDENT. -Thank you very much, economist Ignacio Apella.

Today the turnout has been very good, because the following are present: the deputies Elsa Capillera, Martina Casas, Lilian Galan, Veronica Mato and Fernanda Araújo, the deputies Sebastian Cal, Martin Melazzi, Ivan Posada, Gabriel Gianoli and Juan Rodriguez, the senator Guido Manini Rios and the senators Carmen Sanguinetti, Gloria Rodriguez and Silvia Nane.

We are also accompanied by Bruno Gili –from the first moment of this process– and Lydia Garrido, as advisors to this Special Commission on Futures; Inés Fynn, representing UNDP; María Noel Lanzaro, Valeria Bolla and Celia Ortega, representing the World Bank.

We have a few minutes to ask questions and exchange ideas.

There is the concept of the demographic bonus as a starting point.

MR. MANINI RIOS. -Good afternoon.

Thank you very much for the presentation, which was very enlightening. Congratulations.

I'm going to ask a question about the demographic bonus – I arrived a little late. And perhaps I missed something – because I understand that it could also be affected if births in this country were increased through appropriate policies. If measures are taken from now on, in twenty or thirty years, could that letter L have a significant alteration?

MR. APPELLA. -Yes, of course, and also with migrations.

MR. MANINI RIOS. -It is a way of thinking about how to influence that relationship in the long term: with policies that encourage one thing or another.

MR. APPELLA. -From my point of view, when you make a decision, you always make a derivative: you look at what the marginal income is and what the marginal cost of that decision is. When I decide to have a child, it is the same. So, for any policy that encourages a higher fertility rate, the decision is in the price. As countries develop, the cost of raising a child rises. So, families make decisions based on that; this is what has happened and what is happening. In addition, there is a very important factor that has to do with the significant reduction in teenage pregnancy, which is also a problem where, fortunately, important improvements are being seen.

I understand when fertility incentive policies are proposed, to having children. The question I ask myself is this: how much money should I give? How much?

MRS. NANE. -I don't want to start a debate, but as long as women continue to have children, we have to think about many things, in addition to the cost. For example, we have to think about a properly functioning Integrated National Care System and many other things, unless we go out and raise children in some other way that we haven't yet thought of.

MR. PRESIDENT. -While any other questions come, I would like to make some comments.

I do not want to take on the role of Deputy Posada, but the Minister of Labor and Social Security, Pablo Mieres, has expressed his expectations regarding this project. – he has said this publicly and he also said it the other day at the event – because it is information. When the ministry makes its decisions – even Inefop – it is very important to have this data. Without attributing bad intentions, in other times – it does not matter when – efforts have been made to train in capacities in spaces where there was zero chance of creating jobs. So, I think this information is very important. We all know that Inefop is also working in this direction.

I take this opportunity to share – we have not yet decided, because the commission There are proposals from some of the experts of our Special Commission on Futures, basically Guillermo Dutra and Felipe Migues. Among other things, they have been proposing to think about regulations for dual training, which do not have to be legal. In the study that Ignacio Apella did and in many other studies, the idea that training within companies becomes an essential need and not only thinking about the worker appears clearly. The good thing about this is that demand and supply, supply and demand, begin to come together. Here we gave the example of when a company no longer needs a task to be carried out, but the worker is useful to them, because they have been with them for more than ten or fifteen years. They want them, they are a partner, but they will not have them in that task any longer.

Training within companies, in addition to dual training, is changing and generates the need to make it easier from a regulatory point of view, because if not, we give the more complex task to companies, which then end up assuming costs that, in reality, belong to society.

So, we have a first instance of public presentations on May 12th. – as we decided on the first day of this year's commission – and perhaps for the second day we could define this other instance linked to training. I repeat that there is a concrete proposal from Guillermo Dutra, a member of our group of experts.

On the other hand, there were people – perhaps Bruno Gilide can complement this – from a sector that we did not take into account and that we omitted in the original invitation: the organization of managers or experts in personnel selection. They have been reproaching us, with reason, that they are the ones who know more about the practical demand, since we also promised them an opportunity. They are very valuable and very diverse people – coming from all activities – who formally asked us to participate and make their voice heard on this issue. So we have an agenda.

MRS. GALÁN. -Thank you very much for the presentation.

I was thinking about what Senator Nane said about a policy specific public: the National Integrated Care System. In fact, I also wanted to talk about public gender policies, which go beyond the development of that system. If we study today the reasons that lead women to relegate motherhood to advanced ages, we see that it is because, with the same training, they do not have the same opportunities as men in all jobs, that is, managerial, research and so on. There is no equality of opportunity there.

So, for the whole society, gender policy has to do, precisely, with the incentive of fertility and so on. Therefore, for certain sectors to enter the labour market, a properly functioning Integrated National Care System is needed, as well as other gender policies that go further.

On the other hand, I would like to emphasize that I thought it was a very good presentation – I understood that it would be a very quick presentation – that would allow for many hours of discussion and learning more about these topics.

I also got to thinking that we would have to look at automation. from a gender perspective. I know that in Uruguay the Faculty of Economic Sciences and Administration is working on these issues.

In turn, I find it very interesting to look at this from the point of view of The change in the productive matrix of countries. If we take into account previous industrial revolutions, we see that in the sixties or seventies, in a rich country like Uruguay, which has livestock and fertile soils for certain purposes, certain things were more important in automation. Now that view is perhaps different, because today that can be managed from anywhere in the world and we do not need labor, for example – although I know nothing about the subject–, to check the humidity of the soil. I insist: is it more important today to have natural resources or the knowledge of that technology? So, there is also an asymmetry between developed and non-developed countries. What is Uruguay's approach to this development of the productive matrix? It seems to me that there is a very strong discussion that should be the view of the future.

Thank you, Mr. President.

MRS. SANGUINETTI. -Thank you very much for the presentation. For those of us who follow these topics, there are some that we know because we already deal with them and others that are very new. I found the presentation very interesting.

As far as the demographic bonus is concerned, I am particularly interested and working on the topic of attracting talent. Although there are emblematic cases of countries such as Israel or some others, I would like to know if you have any systematization in public policies that are in that line.

Thank you so much.

MR. APPELLA. -I don't know her, but we can investigate the team and the bank, because one of its characteristics is precisely having international experience. So, I would have to identify the person or people and contact legislator Sanguinetti again, if you allow me.

MRS. CASAS. -The presentation was very interesting. Personally, I didn't know about O*NET, but when I was in college I learned about similar platforms, such as Will Robots Take My Job?, which are widely used in the United States.

At the event held, organized by the Special Commission on Futures, There was talk that we are clearly failing to plan for the future and that we need to improve our ability to adapt. In that sense – I don't know if it's a professional, generational or other deformation – I am concerned about the effects of climate change on job loss.

There are many jobs in this ecological transition that must be made. that could be lost. Uruguay is constantly concerned about this issue, since we have a public state company on which a lot of jobs depend and, eventually, in the future that I am going to live, this company will have to undergo some kind of transformation. A lot of jobs will be lost and not only because of the transition to renewable energies. I have read scientific articles that say that jobs will be lost, but that they will be reconverted. Likewise, it seems to me that they are not in those neighborhoods, because although they are in the energy sector, the oil energy sector is not the same as the renewable energy sector. In that sense, it would be interesting if you could tell us if you have any assessment to make or any material to provide us.

On the other hand, there is the issue of pandemics, which is a type of phenomenon that my generation is going to see more often. In relation to that issue, there are more vulnerable jobs. In Uruguay, for example, the tourism sector – which is precisely one of the main sectors in the GDP – was affected by these changes that we are clearly not able to foresee.

MR. APPELLA. -Let's hope that the pandemics mentioned by legislator Casás do not occur so often. Let's try to be a little optimistic.

I don't have answers to some issues and they are pending issues that one has left.

I want to refer to something that was said in several comments. In our From a working perspective, gender is transversal to all dimensions. In each of the discussions, whether on climate change, technological change, demographics or the labour market, the gender dimension must be included because it is transversal. This is something I wanted to comment on.

Of course technological change impacts differently on men and women, but not because it is unequal, but because the labour market is unequal. It is the same as when they tell me that the pension system is unequal in terms of gender. The pension system is not unequal, but the labour market is. The pension system reflects the performance of the labour market. We do not have it published, but we have some very specific indicators on the impact of technological change on tasks based on gender, of course in cognitive, non-routine tasks.

On the other hand, in terms of climate change and so on, at least I have not I have not participated in any research on the impact of climate change on the labour market. My perception is that, like any change, it generates gains and losses. Jobs are lost not only because they have to be green, let's say, but also because a flood in Paraguay prevents a certain economic activity from taking place. Floods in that country are becoming much more frequent and intense and they generate disasters. This means that this happens for two reasons, both due to exclusion and reconversion.

I haven't studied it, I'm saying it because it's free to talk, but you have to see. What are the neighborhoods? I really can't answer that question.

MR. PRESIDENT. -Senator Nane has the floor, then Deputy Martín Melazzi and finally we close because we have another delegation waiting outside to enter the committee.

MRS. NANE. -I would like to raise some thoughts on what we have been discussing.

It is true that, as a country, we continue to have a fairly primary economy and I think that is one of the issues to take into account. We also have and have had recently a significant increase in deposits abroad, meaning that there has been no reinvestment in the country. Likewise, we have a research and innovation system that basically and solely operates with a state budget. We have not yet managed to rely on private investment, which I think is a path that we must begin to follow.

Senator Sanguinetti spoke about talent recruitment. Today We have a development industry *software* with about a thousand companies that export

about a billion dollars, mostly to the United States, but a large percentage of that export is through Manpower and not products. It is not transformed into intelligence; it is basically people standing on the podium, as the jargon says.

Another of the big problems we have is that artificial intelligence is increasingly replacing programming tasks, so I think that those jobs that we see in high demand today have very little time left.

In relation to all this and with respect to one of the aspects that the President also mentioned when he said that we lack human resources recruiters, I think that one of the great problems that we are going to have is that, very soon – and it is already happening – those who recruit will be artificial intelligence algorithms. When artificial intelligence algorithms recruit, we have to start asking ourselves what data they are fed, and that is where the whole problem of bias comes in, which is not only that of the female population – Senator Gloria Rodríguez knows very well what I am talking about – because there are many other minorities that are completely lost in the biases. Therefore, the future of work will be that of those who can access those jobs and it seems to me that this is a point of view that we must not ignore in the analyses that we make.

Thank you so much.

MR. MELAZZI. -First of all, I would like to thank you for the excellent presentation that has been given to us; it has been impeccable.

Just as an assessment, I would like to know if we have similar concepts. From what I have been reading, in Uruguay, from 2007 to 2017, micro- and small businesses, thanks to the introduction of technology, have increased their production by 56%. It is clear that when one incorporates technology, many times certain jobs are displaced, as was just being said. But this displacement, as you rightly said when making the comparison with ATMs, due to the improvement in efficiency and profitability that companies may have, automatically transforms them into generators of new sources of work. From what I see and as this statement says, from 2007 to 2017, although productivity improved by 56%, new sources of work were not generated and that is the great challenge we have. You might think that in the next ten years the same thing will continue to happen, that is, technology will continue to be introduced and companies will be more productive, so that the personnel that is displaced can be hired elsewhere because companies continue to grow. So, it seems to me that the great challenge facing Uruguay is to explore new productive systems that are not known in the country today, but that do exist in the rest of the world. We must dare to do so and to do so we must strongly support innovation, science and technology in our country. I think we should go down that path because Uruguay has the possibility of selling knowledge to the world. Today the world has shrunk thanks to the Internet. Therefore, Uruguay has all those possibilities and I hold on deeply to what was said in the sense that education must be directed towards where the world of employment goes. That is why

We must have an education that is more up-to-date with our times. It is simply an appreciation, but I do not know if you share it.

Thank you so much.

MR. APPELLA. -I completely agree.

One thing I didn't mention, but is very clear in the study, is that the Technological change can generate two effects: the substitution effect and the scale effect. In the substitution effect, when automation comes into play, workers are displaced. The scale effect is the graph we show of ATMs, automatic teller machines and banking employment.

We studied three sectors in Uruguay and one is commerce. And I will give an example with respect to Banco República. The bank's production grew, but the size of employment remained constant. That is, the labor force remained constant despite the expansion of techno-finance, of the *home banking*, of the applications, etc., when one would expect the opposite. Of course, it is not such good news because no new jobs are being created, but at least they were not lost. That is my perception of the matter. What the BROU authorities were saying at the time was that it was necessary to reprofile those workers. That is what was happening. In addition, there are issues in the labor market that define much more than individual decisions. It seems to me that the important thing is to try to promote what was said, that is, productive sectors where the scale effect prevails versus the substitution effect.

I would like to refer to something that the President mentioned at the beginning. As long as we are clear about what an internship means in a job, of course it is the best option. Various impact assessment studies show that the employability of a person who undergoes dual training is three times greater than one who does not. Now, this has political risks because it can generate incentives to replace workers. So, one must keep this in mind so as not to generate noise or political and, of course, social conflicts. The impact is estimated, studied and is very high, so it is worth it.

MR. PRESIDENT. -As I said at the beginning, the World Bank has always shown its willingness to actively participate in this process.

We have a project that we will present at some point.

All this task, beyond the presentations, has a part of questions, of to go more towards the demand. We have been offered – and we have accepted – to carry out work along the same lines that the bank has been doing with the Ministry of Labour and Social Security and the Government for some time. It is about being able to ask questions in the most objective and unbiased way possible, so that it will later help us to make better decisions. Some regulations and proposals are being put forward in this framework and,

We are therefore working to give the greatest guarantees, not only to the Commission but to Parliament, regarding this exploration of the demand of all the different segments that are at stake. I clarify that it is not only about young people – although of course it is important to ask them – because where we see more uncertainty and even, we would say, anguish is in adults because their jobs are increasingly at risk and we have to listen to their voices and proposals. Perhaps one understands that one solution is the best, but the truth is that, sometimes, it is not the one that is expected. Of course, there will be a great diversity of alternatives and although in this there is no magic, the truth is that the greatest discomfort in global adult society is the anguish generated by unemployment. Before this seemed like a prophecy, but today we see it every day and everywhere: in the store, in the supermarket, in the bank, on the bus, etc. Progress is being made in that direction; I know that the World Bank wants to present to the commission a work that gives us all the greatest guarantees and that we can take the results with the greatest objectivity. We thank them once again and we will continue to meet. I inform you that the delegation of Finland is already here. It will be a short meeting, no more than half an hour.

(The World Bank delegation leaves the room.)

*(Mrs. Emilia Ahvenjärvi and Ms. Tarja Laaksonen enter the room,
and Mr. Andrew Cooper).*

– The Special Commission on Futures of the General Assembly is pleased to receive the delegation of Finland, composed of: Ms. Emilia Ahvenjärvi, Counsellor for Education and Science at the Embassy of Finland in Buenos Aires and the Ministry of Foreign Affairs of that country; Ms. Tarja Laaksonen – whom we thank once again for her good disposition towards the committee and the Parliament – and the honorary consul Andrew Cooper, whom we also thank for his good disposition towards the committee.

I tell you that, for May or June - it is being seen to move it to June – because there are several MPs who will be absent in May – the meeting of the interparliamentary friendship group is scheduled. As Ms Tarja Laaksonen is present, we suggest that you consider postponing it to June.

Based on a very rich relationship that we have initiated, the commission has We also plan to participate in the first summit congress organised by the Finnish Parliament in October. With the Vice-President of the Republic, President of the General Assembly, and with the President of the House of Representatives, we have arranged to be accompanied by a large delegation, the largest so far that has been proposed to us. We are very interested in participating. In addition, we have also been in contact with other parliaments that are very interested in participating. We are even promoting some events for that event.

artistic activity in Uruguay. I think that this is going to be a very important instance that, in some way, will deepen this process. It is no coincidence that we are doing it with Finland, since it has been the pioneer country in this process, which it has been involved in for more than twenty years, in addition to having demonstrated more than successful results.

Without further ado, we give the floor to Councillor Emilia Ahvenjärvi.

MRS. AHVENJÄRVI. -Thanks a lot.

I have been here in the region for almost three and a half years, and it is an honor for me to be able to I am very pleased to be here with you today to present some key issues on the Finnish education system. I am very grateful for your interest in Finnish expertise in this area.

Since we don't have much time, I'll jump straight to the point.
question.

(PowerPoint presentation displayed).

- The current motto of our education, "Finland is a country where everyone "They always want to learn more," was instilled about seven years ago by Sitra - the Finnish National Research and Development Fund - which functions as a *think tank* with the idea of making a plan for a knowledge system and an educational system for the future. If we think of a country where everyone always wants to learn more, it is obvious that much more than just education is required, that is, a certain social and economic well-being that allows the entire population to want to continue learning. Today we are going to focus on what education and the knowledge system are so that this continuous training, as well as this constant concern and desire to learn, can become a reality.

We are often asked what the pillars of the Finnish educational model are. There are several key themes in the history of our system and in its current development, but there are also certain aspects that have been identified as the most important in its success.

Point number one is quality education accessible to all. When we talk about accessibility, we are not only referring to the fact that all students can have a place in a school - that is, that there is school accessibility - but also to the fact that within the school or educational center of any level, the focus is on the student, on their learning process and on being able to identify the capacities of each individual in said process.

The second pillar of success is highly trained teachers, with high professional skills, with quality training at Finnish universities and with very important social recognition.

Thirdly, for a model to continue to bear fruit it must be constantly being renewed. This renewal process must be based on evidence and must involve different interest groups, such as teachers, students, representatives of industries, services and also other representatives, such as trade unions.

Fourthly, there must be a system that allows for learning. continuous for everyone. That is to say, our system has no dead ends; it does not matter what educational option one has had previously, because there is always the possibility of continuing to learn and develop.

Let's look a little at the history of this system.

Our first approach to something resembling an education law dates back to the mid-19th century, and around that time the first Finnish-speaking teacher training seminaries were also being established. A few years after Finland declared independence – on 6 December 1917 – the first Compulsory Education Act was published, with a five-year school and the first national curriculum frameworks.

The current system was created in the late 1960s and is called school Compulsory and unitary basic education. Unitary means that during nine years of compulsory schooling there are no separate days for more practical, more scientific or academic studies, but that all pupils study within the same framework for nine years. This system was first implemented in 1972 and is considered the basis for the current success of the Finnish education system.

There are several curricular reforms that have been accelerated from the school compulsory and unitary basic education. The curricular reforms have supported all the relevant changes in the educational system and the need for new skills and ways of teaching.

Since the 1970s, every ten years or so, there has been a reform. Curriculum. In reality, it has to do with a cyclical process that is constantly underway; the curriculum framework is never finished, but rather is a document that adapts to the needs of each moment.

I also want to point out some issues regarding the management system, the educational policy, its implementation and how it is structured. The National Education Agency, the Education Evaluation Centre and the Educational Evaluation Council depend on the Ministry of Education and Culture, Baccalaureate examination.

The National Education Agency has an important role in the implementation of educational policies and Finnish educational development, as well as an internationalisation role today.

Our Education Assessment Center analyzes achievements, The Finnish system does not have a standardised test within the basic education system. The only standardised test we have is the baccalaureate exam at the end of the upper secondary level, which is used as a university entrance exam. This does not mean that we do not evaluate our system, but the evaluations are based on sampling and on different types of studies so that we also have our data and do not rely solely on international evaluations.

The Ministry of Education and Culture also works with other ministries, for example with the Ministry of Economic Affairs and Labour in anticipating skills needs for different sectors, or with the Ministry of Social Affairs and Health in matters of education and childcare.

Also ^{there is} agencies administrative state-owned regional that They collaborate, together with the municipalities, in the implementation of the educational offer and proposal.

Finnish education administration is municipal. Municipalities are the The Ministry of Education and Culture is the main body responsible for organising education at the initial, basic and secondary levels, but there is also the possibility of creating schools through private providers and educational proposals. I am not saying that they are private because, even if the initiatives are, if they are accepted by the Ministry of Education and Culture they are always financed by the State. Consequently, there are no private schools that operate through payment and financing by the families of the students.

At the same time, there are some educational institutions maintained by the State; These are special education centres and other institutions created by foreign governments, mainly in the capital.

Now I am going to talk about the levels within the system. I apologize because the next slide is in English, but we couldn't do it in Spanish, but I will explain it briefly anyway. The most important thing is the recent change in these levels. In Finland, the age to complete education has just been raised to eighteen; before, the obligation to be within the educational system ended at seventeen because it was considered that completing basic education – within it, the primary and secondary levels – was sufficient to develop a life in society. Today, it is considered necessary to have a high school education level to find a job and develop a normal life in society. Therefore, by raising the age requirement, the aim is to ensure better possibilities to continue studying and complete that level of training.

Another important aspect in this diagram is to see where the arrows go. We have a dual system in which, after basic education, there is a more academic, more technical part, directed towards the world of work, but these two paths are in constant communication with each other. From one side you can go to the other; for example,

For example, you may have chosen a technical-vocational secondary education, but then you can transfer to either a university of applied sciences or a scientific university; or, perhaps, after completing a bachelor's degree at a scientific university, if you find it beneficial for your future career to do a master's degree at a university of applied sciences, that is also possible. In short, it is possible to go from a university of applied sciences – for example – to a scientific university to study for a doctorate degree. This is precisely the approach to ensure that there are no dead ends within the educational system.

Let's look a little more in detail at the different levels within our system, starting with early childhood education. This level of education goes from zero to six years and overlaps with parental leave, which in Finland is up to fourteen months, shared between the mother and the father. The idea is that men take part of this paternal leave and, on the other hand, that women do not miss too long in the workplace.

At this level, the question of whether we must recognize and to foster the individual abilities of each child. Therefore, from the first moment of kindergarten, an individual learning plan is prepared in which the responsible educator, the parents and also the child are always present, because it is thought that from the first moment the student is responsible for his own learning process.

At this level the principles for learning are: the intrinsic value of childhood, growth as a human being, children's rights, equity, equality and diversity – also family diversity – and a healthy and sustainable way of life.

At the age of six, Finnish children go to preschool. It is the year preceding the start of compulsory schooling is also organised by municipalities. Furthermore, this level of education is free of charge for families. This is in the hands of teachers or educators with university training, which can be from scientific universities, faculties of education or universities of applied sciences.

Normally the preschool day is four hours a day and then the student can stay in the same place – as he has done previously in the years of early childhood education – if he cannot be at home with his parents.

At this level there is learning of letters, numbers and natural phenomena and cultural; this is where the foundations for learning are established, but it is not about study objectives but rather a kind of immersion in what will be studied and learned later. In addition, all learning is based on play and activities, especially outdoors.

Let's take a look at something about compulsory basic education.

It starts at age seven and is organized mainly by municipalities. We currently have a little over half a million students in municipal compulsory basic education and that means, more or less, 2,500 schools.

The average attendance at a Finnish school is two hundred pupils; Compared to many other European countries, these schools are quite small. Management is aiming to make our schools increasingly concentrated and larger, especially in the larger towns in southern Finland. The average class size is around twenty pupils.

The school day depends on the level you are in; normally, the number of hours increases as the year progresses, but even so – according to international comparisons – the number of teaching hours in Finland is lower than the OECD average. This tells us that one key to educational success is not necessarily increasing the teaching load but the quality of the content. Normally our classes are forty-five minutes long and the number of school days – that is, school days – per year is between 185 and 195, depending on how each school is organised.

I would also like to say a few words about teaching work in schools. Finnish.

Teachers have great freedom to organize classes in a way that independent, based on the national curriculum and any adaptation, both local and by the school itself, that has been made of that curriculum.

Teachers who teach classes from the first to the sixth grade are specialised in Pedagogy and from the seventh to the ninth grade they are specialised in the subjects they teach. This means that during the first six years the teacher normally has the same children under his/her charge and, therefore, he/she knows their abilities very well and knows how to develop the classes according to their needs.

An important goal is for students to learn for themselves and evaluate also their own learning process, seeking to make them take responsibility for it. During basic education, the assessment of learning is the responsibility of the teacher. As I mentioned, there are no standardized state tests, but there is constant monitoring of educational results, with evaluations and random samples of the same processes in the daily life of the school.

The image below explains our vision well. about the importance of recognising the individual abilities of students. There is a quote from Albert Einstein, who says: "Everyone is a genius. But if you judge a fish by its ability to climb a tree, it will spend its whole life believing that it is stupid." Therefore, both the teaching offered and the way in which students are assessed cannot be the same for all, but must be adapted to their way of showing their abilities.

I understand that those present here would like to ask some questions.

MR. PRESIDENT. -What you are saying is very interesting, especially the second part of the presentation, as it is something new, so we ask you to continue. We will ask our questions later.

MRS. AHVENJÄRVI. -So, I continue with my intervention.

Since we are in a competency-based education system and the objectives are presented as such, at each educational learning level suitable for each age, the competences are expressed in a way. In the national curriculum for basic education, these transversal competences are related to issues of multi-literacy, ICT and working life competences, the ability to think, express oneself, take care of oneself and build a sustainable future and environment. The competences for the higher level are the same, with the difference that the themes are verbalized in a way suitable for that educational and training level.

Regarding higher secondary education, I think that in the case of Finland it is important to understand that the option of technical-vocational training is not a secondary alternative when the more academic path cannot be chosen. In fact, 43% of graduates from basic education directly opt for this path and, as I mentioned, it is connected to the more academic path even if there are concerns or learning needs in that direction. It is a professional training; this means that once this level has been completed, the graduate has his or her skills recognized in the world of work.

This level was reformed in 2018. At that time we moved to a training vocational training is entirely based on competencies, again through a personalized plan for the development of competencies. This means that, whether it is an adult who is coming from the world of work or a young person who is leaving primary education, the beginning of their studies is based on a personalized plan for the development of competencies. According to this, their flexible study path is laid out around diverse learning that includes, in an important way, being immersed in the world of work from the first moment. To complete these studies, it is always necessary to demonstrate the acquired competencies and representatives of the world of work participate in this stage. In this way, not only does the world of work obtain well-trained professionals, but it also passes information on the needs of the different sectors to our educational system for vocational training.

Let's mention some notes about our universities. We continue with these two paths, that is, we have scientific universities and universities of applied sciences that communicate with each other.

In Finland, spending on tertiary education accounts for 1.8% of GDP and right now, the participation of our universities in all research, development and innovation activities is becoming increasingly important. We are close to 3%

of GDP in terms of spending on innovation and development, and the goal for 2030 is to reach 4%. The pandemic has brought us some difficulties and significant participation from the private sector will also be required, but we continue to maintain this objective.

Something interesting about universities is that perhaps we understand their autonomy in a somewhat different way than it is understood, for example, in Uruguay. Our universities are definitely autonomous, but they are constituted as corporations under public law or foundations and are capitalized by the State, with public funding for more than ten years, and the funding they receive through the Ministry of Education and Culture is no longer in the state budget, but is given through a financing scheme and performance agreements.

Also, it is important to note that they have a significant selection of students, not only in teacher training but in practically all courses, and for this selection, what is taken into account is both what has been done at the upper secondary level, as well as what the candidates do in the selection exams.

In universities of applied sciences, its role is very present in the regions in Finland and their involvement in regional development through research, development and innovation activities, and the way in which students are trained to respond to the needs of industry and the world of work in each region. The owners of universities of applied sciences include municipalities, the Finnish regional consortia; in this way they also exercise control over them and can provide them with capital.

Nowadays, there is an increasing effort to ensure that our universities scientific and applied sciences work together, so that they participate in innovation processes and also create consortia of universities so that they can complement each other with their focus and areas of work.

I would like to say a few words about teacher training in Finland.

It is one of the most sought-after and most difficult careers to enter. In the most difficult years, about 10% of candidates are accepted to undertake these studies. The criteria is not that they are the most talented or the best performers in their academic studies, but that they have various qualities that are considered important for teachers to have. Apart from creative qualities, they can be qualities such as the ability to manage frustration, situations of lack of learning, in short, various situations that can be found in the classroom. Our universities select candidates well to be future teachers and the material they receive to offer this training is really good and, therefore, key to later having good teachers.

I am going to point out some important issues in teacher training.

Teacher training reaches the master's level. It is a training that from the first stage includes both theory and practice, as well as research skills, especially in the last part of the training. This combination of theory and practice is related to integrating school work into the studies, where the theory learned is put into practice, i.e., implemented.

Nowadays, one thing that is being encouraged, both in training teaching as in work, is collaborative work through a combination of classes and subjects to ensure that teachers do not only work in their classrooms, but can also combine their skills to offer more diverse teaching.

As for the curricular work – which is also very important in our – when a national curriculum is being reformed and it is being implemented, it is very important that teachers and school principals have been involved in that work of curriculum renewal. The different stakeholders are widely consulted in the planning process and all cooperation with different interest groups and authorities is open and transparent. This is the key when it comes to implementation and makes that curriculum feel like something recognised in schools and that it really reaches the classroom.

For us, at this time, one of the most important reforms has This is related to lifelong learning. We are in the midst of a parliamentary reform of the lifelong learning system. It is a parliamentary reform because it is a long process and we want to ensure that it does not remain within one government, but has a scope beyond the current government. It is also related to the need, not only in Finland but globally, to generate new skills, especially for employment or strengthening skills. To this end, a service centre for lifelong learning and employability was established at the end of last year, which plays an important role in anticipating the need for new skills and also in allocating funding for this purpose.

We see the continuous learning system as a kind of insurance for all the changes that may arise. It doesn't matter if they have to do with climate change, disruption in employment, different reasons for economic insecurity or health reasons. If we have a system in which everyone can find a way to continue developing new skills or acquiring, for example, new job qualifications, we consider that to be the insurance for the future of the Finnish population.

Finally, I simply want to offer you some notes on the work of provision, within the educational system, of the system of knowledge and continuous learning.

Our Ministry of Economy and Labor makes forecasts in what are different jobs, such as what kind of skills will be needed in the coming years.

five years in different areas. At the same time, our National Education Agency makes forecasts for fifteen years onwards regarding how our education system must develop so that it can offer or respond to the needs that we believe we will have in more or less fifteen years. An example of this is the service centre created and the continuous learning system that we are improving.

I think an important element in the whole system is a culture adapting to changes proactively. It is about not waiting for changes to come, but being prepared for them when they come.

MR. PRESIDENT. -Thank you so much.

We now have a few minutes to exchange ideas and ask questions.

I will begin by asking about the following. Reference was made to two centres and I have doubts about whether the Continuing Education Centre and the forecasting work are part of a system and how they are coordinated with each other.

MRS. AHVENJÄRVI. -The work of foresight is done in different instances. In this case, I mentioned the Ministry of Economy and Labour. The centre that has been created is operating under the National Agency for Education, but it is not a centre that offers training, but rather it coordinates activities related to lifelong learning. There are various activities in different organisations and different instances of foresight of future needs, but this is the most relevant within the education system and the training system.

MR. SABINI. -As is known, in Uruguay we have a debate about competencies and content. The Uruguayan educational system is clearly oriented towards content, although there are some educational centers in the interior that work within a competency framework. These are some experiences that have been carried out for about six or seven years.

From the presentation it was clear that the competences have a very important weight. important in Finland, but as I read in the press that you are debating this relationship between competences and content, I would like you to explain how you are carrying out this debate and on the basis of what evidence.

MRS. AHVENJÄRVI. -In reality, a system of competencies and a system of content do not have to be in conflict with each other. We need knowledge, to manage information, to know different disciplines, but we must also understand what this knowledge is used for. That is why competency objectives are established to train people to solve different situations that may not even be known today. Therefore, the knowledge that is acquired must also serve as a competency.

I think that in the case of Finland there is a consensus on this issue. It may There may be some divergent opinions on where to put the weight, but today no one doubts that you have to know how to apply the information. Knowledge is of no use as such if there is no application part.

MR. MAZZINI. -From what I understand, there is a high school exam that works as a university entrance exam. Now, does admission to teacher training imply a minimum entrance exam or is it an independent test?

MRS. AHVENJÄRVI. -For access to teacher training, the grades obtained at the upper secondary level count, but that is only one part. In the case of a candidate who has lower secondary level grades, the grade obtained in the entrance exam is taken into account more. This exam has, on the one hand, a theoretical part, in which the ability to take in and handle information is measured. Then there is an aptitude part and, depending on the faculty of education to which you are applying, an interview or psycho-emotional test may be carried out.

MR. MAZZINI. -Is there then no minimum requirement for the high school exam?

MRS. AHVENJÄRVI. -Yes, there is a minimum requirement, but it is not set because the candidates who apply have good grades. Among those who apply, it is common for ten percent to be able to get in. So that ten percent surely has good grades from high school. There is no need to set that minimum because they are good candidates. If they were those who barely passed high school, then there would have to be a minimum, but at this time in our case we do not require it.

MR. SABINI. -Regarding the evaluation of students, I would like to know what the system is like, that is, whether it is quantitative or qualitative.

Another topic that has also been widely debated in Uruguay in recent years It has to do with a national education plan. I would like to know, then, if you have a plan and how it relates to these curricular transformations that you mentioned.

MRS. AHVENJÄRVI. -Regarding the evaluation, I believe that it refers to that of basic and secondary education.

MR. SABINI. -Exactly.

MRS. AHVENJÄRVI. -As I mentioned, it is mainly in the hands of the teacher who is in charge of a group, a class. Obviously, our teachers must have the ability to assess and integrate assessment into the teaching process, so that it is not just a matter of teaching a subject and then organizing an exam, but rather it is a continuous process.

In fact, in pedagogical approaches based on competencies and in Learning phenomena, rather than subjects, is integrated into this way of monitoring the learning process. So, it has a lot to do with the teachers' ability to not only teach, but also to assess.

So that our authorities and those responsible for educational policies can understand the progress, the general level in the country or in a region of our country, they commission sampling from the National Evaluation Center.

These samples do not work in such a way that schools or different regions looking at where things are going better or worse, or to serve, as in some countries, for families to select schools. They are informative and serve as a basis for making decisions on how to develop the system or how to support schools.

As for the national education plan, for us it is the same as the National curriculum framework. Obviously, each government has its own educational plan that focuses on different topics or points, but the plan that is implemented in schools is the national curriculum framework, with its local adaptation, with its adaptation for each school and, finally, with its adaptation for each teacher in their classroom.

MRS. SANGUINETTI. -Many thanks to the delegation for their presence. The presentation was very interesting. The truth is that when one sees that every ten years or so they have carried out curricular reforms, in a country like ours, which has faced such strong resistance in relation to this issue, it makes one wonder whether you, absolute leaders in educational matters, have accompanied other countries in these processes and whether you have some examples in this regard.

MRS. AHVENJÄRVI. -Today we have several entities. They are usually universities with their international operating arms that have participated in curricular processes in different parts of the world, in educational contexts very different from those in Finland.

Education also plays a role in Finnish international cooperation. important and we have experts working in different parts of the world in this type of processes.

MR. PRESIDENT. -I was going to mention this at the end, but Senator Sanguinetti's question is very helpful.

I invite you to review the *dossier* which was sent to us by the Embassy of Uruguay in Finland –this can also be expanded later by the Embassy of Finland in Buenos Aires and, of course, by the consul and his assistant–, which indicates that there are several agreements in progress on educational issues between Finland and Uruguay.

Firstly, we have an agreement between ANEP, ANII and the Finnish National Agency for Education on these issues, which is in force today.

Secondly, there is another agreement between the Ministry of Education and Culture, the University of Finland and the Joensuu University of Applied Sciences. Ms. Emilia Ahvenjärvi spoke of her experience at universities of applied sciences. This agreement is also in force. There is also an agreement between the Ministry of Education and Culture and Midufi, an entity that, as far as I understand, deals with internal relations, issues of *bullying*, etc.

Thirdly, there is an agreement between UTU and HAMK –Häme University of Applied Sciences–, from September 2019, which is also in force and in which the IDB, Inefop and UTU itself are involved.

Fourthly, two Finnish experts worked at the New Directions seminar –which had a first part and may continue–, organised by the MEC.

On the other hand, a seminar was held which laid out several lines of dialogue between ANEP and Eurosocal, and which included the participation of the Finnish Government.

Kouvola and the Finnish National Agency for Education – Edufi – are now working in Fray Bentos on a project that is currently underway.

On the other hand, we have Eduexcellence, which is a work in coordination between Inefop, UTU and three Finnish universities: Metropolia, Haaga-Helia and Laurea.

There is also another agreement that involves the participation of all our educational organisations and the Finnish National Agency for Education. This institution is actively participating with the Ministry of Labour and Social Security, Inefop, ANEP, UTU, UTEC, PIT-CNT, etc.

There are also other special projects that I have heard a lot about, for example, the one concerning wood. I understand that there are already specific projects underway here.

We have a collaboration between LUKE – Natural Resources Institute of Finland – and INIA. There must be points of contact with us!

The University of Eastern Finland (UEF) is also working on projects with Uruguay.

We have the Joensuu Science Park working with UTEC, the UPM firm, companies from Tacuarembó and INIA. I have also heard that there are several projects being worked on thanks to this agreement.

And I'll stay here, but there are others.

I had left this point for the end, but the question came in handy. Senator Sanguinetti, because there are many things that are being done. We do not intend to interfere under any circumstances, but we cannot stop helping to coordinate. Every time I have been invited to one of these instances, they talk to me about this. So, what can be done from this Special Commission on Futures is to help to carry out some things that are sometimes left pending due to lack of resources, support or coordination and that the organizations that are working today are very interested in continuing and promoting.

That is why we must ensure that the instance that we are going to have in October transcend what could be a summit of futures commissions, because there are a huge number of projects underway here and we can take advantage of this opportunity to facilitate, enable, promote and drive.

So we thank, then, the counselor in Education and Science from the Embassy of Finland in Buenos Aires, Mrs. Emilia Ahvenjärvi; to the Honorary Consul, Mr. Andrew Cooper, and to the Consulate Assistant, Mrs. Tarja Laaksonen, for their presence this afternoon.

The meeting is adjourned.

(It is 16:27).

Montevideo, Uruguay. Legislative Branch.