

## Appendix 6: Interview with Konstantinos Glinos

Personnal communication via Phone Call on the 07/12/2020

*Finishing my studies in International Business at the Louvain School of Management, I'm currently writing my master thesis on the impact of the geopolitical tensions between the US and China on the global semiconductor value chain. More specifically I'm analyzing the consequences of those tensions on different main players in the industry such as American, European and Asian companies and governments. Thanks to this analysis, I'm trying to develop some possible outcomes of this trade war and define the role of every main players.*

*In this framework, I would like to ask you some questions in order to confront my thinking with your expertise and have the possibility to develop accurate and feasible scenarios for the future of the global semiconductor industry.*

*In order to cover everything, I will ask several questions, feel free to answer the way you want.*

*Thank you in advance for your contribution*

### **1. Presentation**

*Can you quickly present yourself and your current activities?*

*I'm responsible for Open Science at the European Commission.*

### **2. Geopolitical tensions between China and the US**

*Since few years, the trade relation between the US and China has deteriorated and some geopolitical tensions have risen. Emerging from these tensions, we could see a tendency for deglobalization and decoupling from most of countries around the world.*

#### ***Decoupling and deglobalization***

- *What do you think about this tendency? Is it possible that countries around the world will slowly **deglobalize in order to obtain a more national/regional system**? Has the European Union the same strategy as China and the US, to deglobalize and becoming self-sufficient? Or will we always see a certain level of globalization and international trade between countries and companies? How far will the deglobalization and decoupling between both countries will go?*

Since the humanity is created, it exists a continuous process of people increasing their relations with families, village, countries, regions and now the world. Now, all over the world, people enter in contact with each other's. The globalization helps to have value chain in trade and to have communication between people around the world. This process is not going to change.

At the same time, many countries and people have realized that this process leads to vulnerabilities and makes many countries or regions vulnerable because it makes everybody interdependent. However, some countries and people are more dependent than others. For instance, if the exports of a very large country that is almost self-sufficient decrease this country will not suffer at all. If it happens to a country that rely on its imports and exports, the economy of this country will collapse. So, it is a process that can't be reverse, but it can maybe slow down. It is very naïve to say that globalization will do a deglobalization, will go back.

At the same time, countries and regions will take measures in order to be able to face their vulnerabilities and to make contingency plans in case of something goes wrong and to continue to be independent.

*What type of measures countries or region are going to take in order to protect themselves from the vulnerabilities?*

One measure is the education and knowledge creation. As the economy is becoming more and more knowledge-intensive and knowledge-based, the countries that are the strongest in knowledge creation, in research, in innovation, in creating companies and having a large part of the population trained and educated will have a significant advantage. This is happening over century and will continue in the future.

Secondly, the vulnerabilities are due to the provenance and the self-sufficiency in raw materials and other resources that are very important for example for energy. For that you have a lot of fragile political alliances and tensions which arise because many countries have their own strategies to ensure that, in the future, they will not be deprived. For example, if they rely on some materials, they don't want to not find any more or the price being excessive. In the past oil and energy was the determinant factor. Today is other resources and raw materials, it is still oil and gas, but the attention goes also to other things including data. Who has control and how do you ensure sufficient supply of data to your economy without other exploiting your own data.

Another approach that China is doing a lot and several others as well, is to protect your market till you are strong enough. So you are protecting your market from competitors or force concession for technological transfer for a period of some years or decades till you are strong enough to be able to compete.

*In the semiconductor industry, the US are strong enough, but they still want to protect their market now from China. What do you think about it? Is it useless?*

The US are very strong in the world in the semiconductor industry but it doesn't mean that it is the strongest in every sector of the industry. For some of them, Europe is stronger than the US for example semiconductors that are going to cars, satellite and airplanes. The US are much stronger for general microprocessors and in graphic processors. Europe was very strong in microelectronics for very low power that goes to mobile phone and it still is.

But it doesn't try to protect its market, I don't see any indications that it wants to protect its market.

*And against China and the intellectual property theft?*

Yes, the US tries to protect its technology leadership and its technology and of course it doesn't want that its know-how is stolen by someone else, nobody wants that.

*Do you think we are going to see an increasing in trade inside regions? Like inside the European Union and inside Asia? And less interregional trade?*

I don't know but I think we will see an increasing in trade, maybe not now but in the long term we should see an increase in trade. We see also this by trade agreements that are being currently negotiated such as between the EU and Asean. It represents a large regional market of 630 million people which is rapidly expanding.

I think trade will increase in the long term and I don't see why it will stop.

*Regarding the trade tensions between the US and China, how do you think the European industries and companies have to position themselves? How they should manage their trade relations with the US and China? What should do the European Commission and European national governments regarding those tensions?*

We shouldn't do anything regarding those tensions. Europe should look at its own interest and to whatever is good for Europe. Europe should continue to trade with the US and China. At the same time, there is an increasing awareness of their vulnerabilities. Many people and governments start to talk about European sovereignty such as the digital sovereignty and technological autonomy to reduce vulnerabilities due to the internationalization of value chains. In that respect, Europe should see to what extent China is a reliable long term partner in some areas or is US a more reliable partner or other international players as well.

It is not about taking side, small countries will be obliged to take side but not Europe, it is big enough to not be forced to take a side.

*For you, the solution to decrease the vulnerabilities of the European Union is the digital sovereignty or do you think about other solutions for Europe?*

The solution is a strategy in key areas where Europe wants to be strong. In these areas, Europe has to take the measures we discuss earlier which are education and research. For example in microelectronics, if Europe wants to lead in a particular area then it need to create the human resources supply, invest in technology, in researches, in facilities and needs to have the right frameworks and to protect its IP as the US does. A strategy is needed with a roadmap and a

plan about how to do it with a combination of appropriate framework, appropriate investments and appropriate training and education to ensure appropriate human capital.

*For you what are the key areas in general and in microelectronics where Europe has to invest?*

This is a broad question but if I have to pick one I will say in the so-called green sector because I think the future of the economy will be green or nothing. For sure, in the digital sector also but the digital sector is huge.

Obviously, depending on the person you talk to you will have different answers. Some will push for the IoT, other will push for microelectronics, others for 6G. It depends what are the reasons and where they came from.

Europe has completely lost the train of social network as no platform are European, so some people will want to let Europe retake control of social networking because it creates a vast pool of data where we totally lost control. But there are no serious plans for European technology that satisfies European constraints, so maybe people will push for that.

*Europe is capable of investing in all of these or does it have to pick some?*

I think it is possible to invest in all of those. Some of these do not require lots of investments and infrastructures. Microelectronics require lots for piloting and fabrication facilities, it is extremely capital-intensive but social networking, AI and the IoT don't required lots of investments and infrastructures.

Big data and super-computing require significant investments like building the next generation computer. So super-computing and microelectronics require high capital investments. But Europe is able to invest.

*Do you think that the investment level from European governments and institutions are enough in order to develop those technologies?*

No, it is certainly not enough, we spend 2.1% of GDP on research and innovation and South Korea spends 5 to 6%, the US spend close to 3%. For sure we need to spend more.

*Do you know why we have a such low level of investment in R&D?*

This is an average of all European countries. In Finland or Sweden, it is more than 3% but in other countries, it is very low, about 1%. So, the average is around 2%. We thus have to build an awareness in those countries about the fact that every country in the future will have to live in a knowledge-intensive economy and we can't have knowledge-intensive economy without investing in knowledge today. And this is not improving, the 2% is not improving for the last 20 years.

*Do you think that having more cooperation and collaboration inside the EU could be a solution in order to increase the level of investment and catch up our digital delay?*

There are many reasons for our digital delay and our low level of investment.

One of those reasons is the absence of a real single market in Europe. Normally it should be a single market entity in many areas and sectors but some sectors like telecoms and digital there are still many differences and many obstacles. This is one major issue. In the US, companies have immediately 600 million people that it can address but in Europe companies have to face many different national regulations. Again, it depends on the sector. In digital and telecoms, the market is completely fragmented. In the other hand, one thing that is very important is where to create jobs. For example, you try to take a new leadership in the digital or in the green economy because you think it has a promising future or because it is good for the planet. Of course, you do it because it will also be better for your people as well. All jobs are being destroyed continuously as the society evolves and new jobs are being created. Historically, the creation of new jobs is bigger than the number of jobs being destroyed. But there is a question about the geographic location of the job creation. If for example, you make cars in France and then in the car factories you have 100 people working and then you replace by robots to be fully automated and then you have 200 people working to make the robots and not the cars anymore. So if the cars are made in Europe and the robots are made in Silicon Valley, then you have create a lot of employment but outside Europe. If you destroyed jobs in a traditional sector because it increases productivity creates employment but if this employment is in another country then you create imbalances. So, you need to think about where you are going to create the value to not have an excessive concentration.

*Coming back on the tensions between the US and China; for the moment the US is putting lots of restrictions to Chinese companies and also the US government wants to see a reshoring in the US of its companies currently located in China. Do you think the US government is providing enough aids and incentives to companies in order to come back? Do you think US companies will come back or relocate elsewhere?*

I don't have this information, I don't know if it is a real policy from the US or if it is just some threats from the US government.

Generally speaking, I don't think it is very interesting for US companies to go back in their country because first China is a very big market and they benefit from it. Secondly, because China also produces good technology so US companies also learn from them. Also being in China help US companies to learn how to develop and market their products there in order to be a good commercial success. Thirdly, there is a competition for talented people and if companies are not in the country, you will not have access to the Chinese talent that could benefit your company.

*Speaking of talented people, the US education is a high level and thus provides talented workforce for US companies. Do you think it is still a competitive advantage against China or other Asian countries?*

There are talented people everywhere but by interacting with other people from other countries, you get out richer. If an American is spending few years in China and then come back to America, he will bring back resources and experiences. The exchanges are highly beneficial. I don't think that Chinese people need absolutely the US or Europe anymore in the sense that they have good universities and research centers, but it is in their own benefits to have international exchanges. If the Chinese or somebody else is going to a country with the objective to steal technological secret, it is a different story. Here I'm talking about the development of skills and competencies between workers.

*Now that the US government is putting more and more restrictions on Chinese companies, how do you think Chinese companies and government will react? Will they find new partnerships in Europe or in Asia or maybe trying to be independent from everybody?*

I don't know but logically, they will try to accelerate the process to become autonomous. For the last twenty years, they try to become independent. For example, three or four years ago they produced the most rapid computers.

*According to you, is it possible that Chinese companies are producing all digital products at home?*

Yes, it is possible but if they close their borders, they will progressively lose this leadership. Let say they manage to become leaders and stop trade relations with other countries, they will lose this leadership. A country that is not in contact with others will see its learning process becoming much slower. It will miss development in some areas like it happened in the past during the Middle Age with the Chinese civilization and Europe.

If there are no cooperation between countries, they will develop independently in some areas where they became very good but will miss some development in other areas.

*According to you, what will be the long-term consequences of the covid-19 in term of trade and globalization?*

In the long term, the impact will be very little. The main impact is that it will accelerate the development of digital technologies both for teleworks and e-commerce.

*Do you think that Asian countries have to foster their trade relations together? Should they have a bigger Asian entity with Asian institutions? Should it be possible and beneficial?*

For China is impossible because China is big enough so if it makes a partnership with an other Asian country, it will be disproportionally stronger. However, inside Asean countries it would be very good for them if they put their strengths together and become more serious. There have been some progress in the region especially regarding the wars. So, in that point of view, it is good. In the other hand, they are not very serious about free trade. They have removed the tariffs, but they replaced it by other obstacles. The problem is that Asean countries are very heterogenous and some

governments are authoritarian. So there are a lot to do such as improving the central power, increasing their budget and stop doing everything by unanimity.

*Thank you very much for your time and answers*