# Changing Universities: The Impact of Government Funding Programs

English Transcript

**Speakers:** Abílio Baeta Neves (Brazil) and Bernd Engler (Germany)
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**Abílio Baeta Neves:** Hello Bernd, it is a truly honor for me to be here with you today.
We first met each other at least eleven or twelve years ago, have met with each other on several occasions since then, and we almost always tend to have one single main topic of discussion in our conversations.
That was ten or twelve years ago for me. It was a very highly topical issue for me personally, the Excellence Initiative in Germany. And that is why you were also invited to Brazil, to talk about the experience with this initiative and the experience of the University of Tübingen.
That was very interesting for me, because at the time I was president of CAPES. CAPES is an organization within the Ministry of Education that promotes and funds postgraduate, master's, and doctoral programs and is also responsible for evaluating these programs.
And within this context, CAPES has been at the very center of the formulation of higher education and of science policy in Brazil.
And the Excellence Strategy—then the Excellence Initiative—was definitely a hot topic for me.
And now I can see that we are partly coming back to this very topic. And I really think that is great.

**Bernd Engler:** Under different circumstances by now, including the funding conditions in Brazil, but also in Germany. But I can remember our first meeting very well. It was probably even a bit earlier, in 2010, during a first visit to Brazil.
But this meeting in Porto Alegre, which was very specifically centered around our German Excellence Initiative and whether this particular topic, whether these funding formats could successfully be applied to Brazil. It was a very exciting event, and I was delighted to have the opportunity to meet you, Abilio, in your role as President of CAPES.
I believe that you also organized that entire meeting back then, with the different Brazilian universities that were making their way to Porto Alegre. And I had the opportunity to present the German Excellence Program. It was received with a very great deal of interest by many of those present. But of course, it is completely clear that our university systems are so fundamentally different that you absolutely cannot simply transfer it one-to-one.
Perhaps we can start off by introducing ourselves briefly to the listeners, sharing a bit about what we have done in our lives?

**Abílio Baeta Neves:** Well, my name is Abilio Baeta Neves, I'm from Brazil, I did my PhD in Münster, at the University of Münster, in political science, and then became a professor of political science at the federal university in southern Brazil,
in Porto Alegre and subsequently served twice as the president of Capes during two entirely different time periods. And right now, I am serving as an advisor in the research office of the Catholic University in Southern Brazil.
And for me, it goes without saying that I deal with issues of science policy, higher education policy, higher education research, and mainly higher education policy all over Brazil,
and I've been doing that for at least 30 years now.

**Bernd Engler:** Okay. For me, it has also been quite a few years at this point. By the way, my name is Bernd Engler.
I completed my university studies in Freiburg, majoring in English, German, and Philosophy, and then, back in the year 1992, I came to Tübingen to take up a professorship in American Literature and Intellectual History, a position which I held with a very great deal of enthusiasm.
I love research, but I also love teaching. I was then appointed President of the university in 2006, served as President for 16 years until three years ago. Since then, I've been involved as a volunteer with a number of organizations.
So, I am still active in the scientific community. So much for that, but indeed, Brazil was also a very defining first experience for me. My first visit was at a research station that the University of Porto Alegre, our partner university PUC Rio Grande do Sul, and the University of Tübingen set up back in the 90s. It focuses on biodiversity, among many other things. I was incredibly grateful.

**Abílio Baeta Neves:** Pró-Mata.

**Bernd Engler:** Pró-Mata, yes.
And I was incredibly grateful that I could visit this wonderful project in a nature reserve and the research station located within this reserve, to get a first impression of it, and also about the very way that research is being conducted in Brazil.

**Abílio Baeta Neves:** If I may return to our topic right now, I would like to suggest the following: I've been trying for a long time to understand the situation of university research in Brazil.
And I assume that we are facing some challenges, mostly at the university.
The first is interdisciplinarity. That is a highly necessary step for research these days.
Secondly, there is the challenge of internationalization, of building up networks, international networks, and platforms for cooperation which should be long-lasting.
That is indeed a second challenge. The third challenge for me has to do directly with governance. And that is, how can we in a difficult situation develop the university's governance to be more strategically oriented. And the fourth major challenge for me personally is how to further increase the relevance of what university does for our society.



**Bernd Engler:** Right. So basically, the challenges are quite similar, albeit in different education systems, but of course, the internal university networking, the way disciplines interact with each other, is a major and also ongoing challenge. We must keep on grappling with the changes occurring in the sciences in order to keep pushing this interdisciplinarity to the forefront.
Because many questions now, and many challenges too, due to changes in the world, climate change, and so much more, can only be tackled by interdisciplinarity.
But as a matter of fact, in Germany there is a special phenomenon, namely that science policy is extremely interested in interconnectedness not just within the university, of course, also collaboration among the universities, even though, they generally compete with one another.
There is also a focus on strengthening the collaboration with non-university research institutions, with Max Planck Institutes, with Helmholtz Institutes, etc. And beyond that, there is also an interest in building international networks.
So overall, we do have almost the exact same set of conditions when it comes to the funding policies.

But an important topic you brought up is the question of how universities can redefine themselves in light of this growing emphasis on interdisciplinary research. It's because the so-called governance structures are actually not geared toward making real changes.

**Abílio Baeta Neves:** Yes, exactly. For me, I don't see any possibility in Brazil that a university itself—an individual university—could mobilize the necessary resources to bring about these changes.
And I think that's due to many different reasons. First, the university's budget is just not sufficient. And then secondly, the academic culture, so to speak, is very traditional. That is really more of an obstacle than a source of support for university reform or transformation from the outside.
In Brazil, I also have to say, that there is, actually, a very clear discontinuity in national policies regarding research or higher education. In other words, based on a specific government constellation, there's an effort to move forward in a particular direction, and then, almost immediately afterward, a new government takes a different course. But that is extremely complicated.
And that is precisely my question: would the Excellence Initiative and the Excellence Strategy really be an instrument to mobilize the university in the direction of this necessary transformation? Should we really try to implement something along those same lines for Brazil? Should we maybe approach this through a formulation of higher education and science policy for Brazil, to see if we can really create the opportunity, the conditions to create an inductive, transformative process for the university?
These are really very current questions for us in Brazil.



**Bernd Engler:** Well, Abílio, you've touched on an important point. Universities are not inherently inclined to change or to initiate change on their own. We have the subject areas, we have the subject cultures, we have the culture of a specific governance, namely self-administration, the faculty, which of course would have to support all changes.
So, it was naturally important for us in Germany, and likely also for Brazil, that there are always new impulses from outside. Impulses that trigger change, that demand change. And that, of course, has a great deal to do with the fact that in Germany, universities are funded by the individual states or, in some cases, the federal government. As a rule, they are state-funded and large-scale research is federally funded, primarily.
And as a direct result of that, the actual funding on the side of the states can, of course, be made dependent upon certain specific forms of transformation within the academic and science system.
This is probably not quite as straightforward in Brazil, because, if I understand correctly, you have a very large mix of private and public universities.

**Abílio Baeta Neves:** Yes, that's true. Even among the public universities, we have state universities and federal universities.
And the really interesting thing to see in Brazil at this moment is, for example, in São Paulo.
São Paulo is currently the richest state in Brazil, and it has three state universities that are really very good: University of São Paulo, University of Campinas, UNESP. And there you can see, for example, the rector of the University of São Paulo, he has already been trying to negotiate with the state government for quite a few years now, the creation of excellence program for São Paulo. What he was trying to do, in fact, was meant to convince the state government, "Yes, São Paulo, needs something like this!" For the state universities, the federal universities and the

public ones in general. Because, besides these three state universities, São Paulo also has other public universities, federal public universities. But for this higher education landscape, and for research. In São Paulo, it would indeed be very interesting if São Paulo, for example, had an excellence strategy for the state.
That is a little bit unusual in Brazil, but that is also completely possible to do in Brazil, that they are in fact trying to establish and create such a highly challenging and demanding policy at state level. That is a new trend. Let's see what will happen.

**Bernd Engler:** When the Excellence Initiative was first launched in Germany back in 2004 and 2005, that was of course the direct result of a major shock, when those in educational policy and science policy finally came to realize, that German universities were certainly not completely off the radar, but at least they were not ranked quite as high in the international rankings as the policy makers had actually hoped for.
I think research at German universities has always been pretty good, but just not at that level, that top level, to be visible on an international scale.
And above all, it hadn't reached the point where research networking, both internationally and nationally, among universities and beyond, was fully established—and in Germany, that was also an important goal — cooperation with the non-university research institutions, since that was not properly functioning yet.
And as you already hinted, it always needs impulses from the outside. And of course, the monetary impulse, when certain research fields in the cluster initiative are provided with substantial funding, is a particularly strong incentive. And the scientists and researchers who were working in strategic research areas at the universities, were, of course, highly motivated to get that funding that went far beyond what the regular funding from the states or the federal government provided. And that was the actual driving force, besides, of course, the enthusiasm of individual researchers for research.
But that is often not enough if the financial resources are not there.



**Abílio Baeta Neves:** Yes, exactly. And even if the available financial resources are simply not enough to think about the long term or to even to plan the whole research.
Right now, we don't have that in Brazil, unfortunately.
São Paulo is discussing, as I said, and trying to somehow find its own way in this situation. Especially for the three universities, the state and federal universities in São Paulo, the discussion about internationalization and recognition or reputation, international research reputation is also a highly sensitive topic. Because these are the universities that are currently right at the very top as research universities in Brazil.
And I should add that São Paulo, economically speaking, is stronger than Sweden.

**Bernd Engler:** Just the state?

**Abílio Baeta Neves:** Just the state. The best university in São Paulo, when you look at the rankings, is between 100 and 200. This is already starting to become an issue for São Paulo, to create a little more reputation for the Universities of São Paulo.

**Bernd Engler:** But with the funding that the state, the state of São Paulo, could invest, the universities shouldn't actually be ranked between 100 and 200, but rather closer to 50, in terms

of research power, of the number of professorships, the outstanding professorships that have been established.
But I want to briefly touch on an important topic, but we'll get right back to the clusters and things like that in a moment. You were speaking earlier about the fact that long-term planning should be considered a key criterion for building structures at universities.
I have repeatedly complained about the fact, that, by now, a great deal of emphasis is being placed on project-based funding in Germany and throughout Europe.
These are very specific projects with specific topics, which have a duration of five years, if you happen to be lucky, maybe even eight years.
And my own personal experience has shown me that building structures at a university is in fact an extremely long-term endeavor. Because if you were to strengthen or rebuild a structure today, a brand-new discipline, let us just say machine learning or artificial intelligence, then it actually takes about five years before you have managed to build up a basic structure that is able to successfully take the very first steps. And until you've actually built a research network that gains real visibility, especially international visibility, it takes ten to 15 years.
And you've probably had similar experiences over in Brazil.

**Abílio Baeta Neves:** Yes, of course. But from this perspective, in Brazil, we are not aware of many initiatives that really take a long-term perspective, since there simply isn't enough funding available for research, even nation-wide.
So, you have to think of short-term projects. Because that is easy to fund, you don't need that much money. But you don't get very much done either. And that has almost no real impact whatsoever on the actual structure of the university. It is quite simply not a factor in changing the university's structure.
And the universities are also not in a position of formulating any kind of institutional policy on their own with sustained goals or long-term objectives.
On the other hand, just to bring up another point, the very idea of excellence is sometimes not all that easy to get accepted in Brazil. That is an extremely complicated matter to deal with.
Because, as I always say, on the Brazilian side, our higher education system is still very young. The universities are very young, they still need to develop, and it is the right of every single university to develop just like all other universities. You have to do everything at the same time for all institutions, the same opportunity for all.
Of course, we don't really have that, but this is the mindset behind the university's approach following this model.
Thus, people always expect the federal government to provide research programs or policies that are meant for everyone at the very same time and actively promote this joint, collective development of the institutions. That is typical for Brazil.
We tried to develop a kind of excellence initiative in CAPES, and the response was tremendous. The negative response was tremendous!

**Bernd Engler:** The negative response was tremendous?

**Abílio Baeta Neves:** It was really bad. That is, we could go up to a certain point and then no further.

**Bernd Engler:** Well, but we also have this tendency to distribute research funding on an egalitarian basis, so everyone has the same opportunity.

That's a rule, basically a rule that there should be no winners. Because if there are winners—and that is the general idea—there must also be losers.
And in this sense, of course, a key prerequisite for such an excellence initiative is that a substantial amount of new money, new funding, is invested in the areas that are then selected, meaning the clusters, for example. And that the funding for the other areas at the universities, both within a single university, but also across the university systems as a whole, that this basic core funding is simply not going to be reduced or scaled back at all.
And I do believe that this was the real secret to success with the Excellence Initiative and later on with the so-called Excellence Strategy, that an extreme amount of additional money was invested.
But nonetheless, there was, especially within the university—and I'm also thinking of the University of Tübingen—this discussion: "But if we focus on profile-building and highlight certain areas, then the others will fall behind".
And that is then also the task of the so-called university governance, the university management, to find the right balance. On the one hand, between profile building, the identification of profile areas, and the general educational mission that the university, across the entire broad range of subjects, and without setting aside the disciplines that are not currently funded under the Excellence Initiative.
That's definitely going to be extremely difficult over in Brazil, as well.

**Abílio Baeta Neves:** Sure. But another question: Excellence Initiative or Strategy and the social relevance of the university, is there a positive experience in this regard?

**Bernd Engler:** Yes, the federal government, in the call for proposals, particularly in the second round, introduced the criterion of relevance, that is, the benefit for society at large, for value creation in society as society at large".
And value creation here doesn't just mean in an industrial sense or by commercial enterprises, but also value creation in the broader societal sense, including in the education sector.
Because the research conducted at the universities has very often been both self-referential and self-sufficient. One did not really feel obliged to account for how they were using the public funds they were receiving for research.
Then policymakers stepped in and said, but we want to take a closer look at what kind of benefits you generate for society, what you actually contribute to society, what kind of returns you produce—not just in economic terms, but also in terms of society as a whole and in the education sector.
And that led to a change in thinking. And I think that by now, many are asking themselves—not only in research projects, but also in teaching projects—how they can contribute to society, to social cohesion.
In the field of social science, people are talking about how political communication takes place, and how our communication from science into society takes place.
And a good example, which you surely also experienced in Brazil as well, was the COVID-19 pandemic, when scientists had to explain why certain decisions were made and what contribution they could make to people's health.

**Abílio Baeta Neves:** Right. That's a big topic in Brazil. And that's because investment, public investment in higher education is constantly growing, as well as in research while there is a

general ceiling. And there is a political conflict over the very same funds as well, which means that public funding is right at the very center of political demands coming from all sides of society. In this sense, universities need to justify themselves better, socially justify themselves.
And that is a point in Brazil, a difficult point for us.

**Bernd Engler:** So, we have noticed in, I would say, at least the last ten years in Germany, that science is being massively attacked. Some say, delegitimized, that it has lost its justification, and that's because of social media.
And quite interestingly, the COVID-19 pandemic also played a very significant role in this, because many of the government's decisions, which were based on scientific evidence, were heavily attacked, and science as a whole was completely called into question.
And because of that, many scientists have now also realized that they need to explain what they do, why they do it, and what kind of benefit it brings to society.
Or let's take AI, for example. I'm sure that in Brazil, just like here, it's a highly controversial topic.

**Abílio Baeta Neves:** But moving on. In Brazil, at least we are trying our best to work with a particularly difficult situation. That means we have a really big problem with the university. We have flaws in the formulation of Government policy for the university and for science as well. And the global situation isn't exactly comfortable either, so to speak, at the moment.
We're also having difficulties with this initiative in the US, because many research groups in Brazil were basically very tied to the North American research groups.
These networks, which were normally coordinated and also largely co-funded by the United States, these networks, they are no longer there as they used to be. And for science, and for higher education research in Brazil, the situation has become quite complicated.
It is mainly only through dialogue and cooperation, through international cooperation, that we can somehow find ways and means to deal with this.
Otherwise, it won't work.



**Bernd Engler:** But if I were to go back once again to the point you made about the role of the United States and its impact on international research policy, then of course that is, what the current US administration is doing is part of a delegitimization strategy. So, when they claim vaccine campaigns are useless, or even rather harmful, then, of course, all the research that goes into infectious disease research or if climate research is dismissed as irrelevant because they claim that climate change isn't man-made, then you naturally end up in a situation where, at a national level, you also face much stronger pressure to justify yourself and even beyond that, just as you have already mentioned, many of those programs that were run by the United States, that those programs are now being called into question. For example, in the field of health research, the major budget cuts at the National Institute of Health in America are having a very direct impact on what we are currently doing right here in Germany, and certainly, of course, on Brazilian research policy itself as well.

**Abílio Baeta Neves:** Very true. In Latin America, mainly in South America, for example, Chile is highly dependent on cooperation with the US, and Argentina too.

**Bernd Engler:** But that means, if we look at the current situation, that we actually need to strengthen even more the binational or multinational programs that we have also been running traditionally outside the US as well, if they don’t want to participate, and see how we can ensure

that the benefits of research, especially through international cooperation, are secured in any case even without any support of the United States.

**Abílio Baeta Neves:** Yes, I do think that this is very clear for Europe. For example, in Latin America or South America, people are starting to look to Europe again. Asia is certainly extremely strong, but Asia is still quite complicated as well. With Japan, it was already very complicated with Japan. With China, it's even more complicated to negotiate. They have money, they keep producing better and better science, but it's complicated.
Other countries, over in East Asia for example, barely have any sort of real tradition of academic cooperation.

**Bernd Engler:** If I take AI as an example, we can cooperate with China in the field of artificial intelligence, but we can't compete, that's how I have to put it, because in a single year China invests several times as much in AI research in a single year as Germany does over ten years. And the momentum this generates is, of course, enormous. But if we in Germany couldn't collaborate with China in AI research—compete, I mean—then we could compete if we made research more international. For example, if all European AI research institutions worked together, and beyond that, with AI research institutions in Latin America, in Canada, and elsewhere. Then, I believe, we would already have the critical mass to compete with China.

**Abílio Baeta Neves:** Yes, I totally agree. That is a really good idea. I always get the impression that the individual countries in Europe—of course, there's the European Research Council and the big programs from the Europeans. And there is also a great deal of money available there. But I think what you have presented here is a very strategic orientation, a move toward creating equal opportunities for the development of science and research in certain strategic areas.
That's a very interesting thing.



**Bernd Engler:** We have the European Research Council in Europe as you correctly pointed out. It is absolutely crucial to actively foster competition not just among the universities, but also among the countries.
And it is indeed extremely telling that, when it comes to the grants from the European Research Council, the Netherlands, as well as Italy, in terms of the percentage regarding the total number of researchers, are positioned well ahead of Germany. This is due to the fact that these countries have realized that they need to set up funding programs that match these so-called incentives set by the European Research Council, and that these also definitely need to be orchestrated and better connected within the nations, the countries, and so on.
And I imagine that over in Brazil there might be very similar efforts, perhaps on an entire Big
But how would it work? If in Brazil, yes, but then perhaps not in cooperation with other Latin American countries? Or is there perhaps a similar institution?

**Abílio Baeta Neves:** No, there is not one. Just like the European Research Council, we do not have anything in Latin America or South America.
Academic cooperation, the scientific cooperation between research groups from Brazil, Argentina, Chile, Colombia, that is extremely difficult to obtain. Mainly because these countries have even less money than Brazil has got available for their funding.

**Bernd Engler:** You told me just yesterday or the day before that Brazil has a brand new program, the National Institutes of Science and Technology. And how does that actually work?

**Abílio Baeta Neves:** It's a network of researchers, so to speak, from different institutions, who usually work on a specific overarching topic, sometimes an interdisciplinary one and it is truly a national network. It must be a national network. At least four universities must play a role in the project.

**Bernd Engler:** But when these kinds of cooperative partnerships are initiated, they will automatically lead to profile-building within the individual universities, because you simply cannot cooperate with each other in every single field, but also have to make choices there. And that's where a kind of governance needs to emerge that makes that kind of decision. How are those decisions being made?

**Abílio Baeta Neves:** Well, that's how it works: In a large university, let's say a federal university, the university administration doesn't actually do that much. It is left up to the research group whether they want to design and formulate the project and take part in the selection process or not. And the decision is not being made by the university itself but is instead delegated directly to the selection committee of the program.
At a smaller university like PUC, where you are quite able to get a comprehensive overview of the research that is being conducted. There, you see more of a strategic decision by the institution: “We will prioritize these three or four subject areas. That is completely normal. That is exactly what makes this Catholic university a very interesting partner, also when it comes to international cooperation. Because it’s relatively small. Who are the ones you can really count on? And they try to do this at least in the medium term.



**Bernd Engler:** I mean, developing a distinctive profile is actually inevitable for universities.
Because on the one hand, over the last 20 or 30 years, the various fields of study have become highly specialized. Take biology, for example. Biology 30 years ago was completely different than it is today. Today, within the broad scope of biology, we have molecular biology, microbiology, infectious medicine, and so on and so forth.
And that is the reason why no single university, even if it could invest a lot of different resources, can ever invest, as a university, enough money on its own to reach what they call the critical mass, so that it can acquire all the highly innovative research instruments, equipment, and so on.
And that is why you always depend on cooperation with others. And that was indeed also part of this cluster initiative.
But what about the critical mass then in these kinds of networks that you are building in Brazil? How many universities do you require working in cooperation just to reach a critical mass?

**Abílio Baeta Neves:** That depends a bit upon the field.

**Bernd Engler:** Are the four universities you mentioned enough?

**Abílio Baeta Neves:** For example, in São Paulo. They could manage to establish excellent research facilities there entirely on their own. Or create clusters. That wouldn't be a problem at all.

In southern Brazil, we have some experience with cooperation between the Catholic University and the Federal University in Porto Alegre. There, we have already some experience with this, as well as very good academic cooperation with good results, with good outcomes.
But for example, this National Institute program requires that the cooperating universities cannot be from the same state.

**Bernd Engler:** That, of course, also sets us apart when we think about the Excellence Initiative.

**Abílio Baeta Neves:** And that makes it a bit more complicated in Brazil, because Brazil is not small. A state in the North of Brazil, it is located as far as 3,000 kilometers away. That brings a whole other problem right along with it.
So, how can we make this national cooperation a productive one?

**Bernd Engler:** Well, this is indeed an issue with all our funding programs in Germany: when it comes to cooperation beyond one's own university, evidence of that cooperation must be provided. And they take also a close look at whether the cooperation can work, for example, despite the geographical distance.
I believe, in the end, it is still crucial, even if physical distance brings additional challenges, that we continue to cooperate across distances.
And then we need to have collaborations with research institutions in the industry, for example. Is that also initiated through your program, that you connect more with industrial companies, pharma companies, and so on?



**Abílio Baeta Neves:** Yes, by now that is also almost a requirement for these projects. They must also have cooperation or interaction at least with partners outside of the academic sphere, in biology or medicine or something like that, or with pharmaceutical companies, In an area with industry of different kinds.
That also has to do with the attempt in Brazil to bridge the gap between science and innovation.

**Bernd Engler:** Oh yes. Exciting topic!

**Abílio Baeta Neves:** And the new INCTs, these national institutes for science and technology, also have as prerequisite this connection.

**Bernd Engler:** And that means, that there, innovation is not just a buzzword, but, as you said, a prerequisite.

**Abílio Baeta Neves:** Yes. A prerequisite. It has to be demonstrated that the research group not only has contact, but also some kind of articulation in the research area, with the intention of producing results, not just as a scientific result, but also potentially as something that could eventually end up being a somehow valuable product or process for a company or a business.

**Bernd Engler:** So, value creation beyond science—meaning, not just looking at science and the progress it brings to the scientific community, but innovation in the field of technology as well. But the highly exciting question then is, of course, how can a university manage to succeed (I will use a certain term here, even though it might not be very welcome at all) in bringing its

research into industry? Because I also have to make it clear that I have something to offer industry in order to enter into such collaborations.
Are there special programs, also programs for startups? That's a brand-new topic in Germany right now.

**Abílio Baeta Neves:** Yes, there are, there are. We have that in Brazil as well. And what we are currently seeing in Brazil in terms of positive results is the development of startups based on research at the university. That means, a particular field of research goes up to a certain point, from which you might support startups. Because relations, contacts, or cooperation between university research groups and large corporations—that's rare in Brazil.
The big companies in Brazil are the multinational corporations. And they conduct their research over in Europe or the US. What they usually want from the university is just some sort of minor contribution for a specific model. That has nothing to do with major research. And it has nothing to do with this disruptive innovation either. They actually do that in other places.
But for example, the new development of startups based on research, that is very interesting, and it is increasingly being seen in Brazil. That is also being funded by using public money from various authorities.

**Bernd Engler:** But you can also be highly successful if you occupy certain specific niches that a company does not currently have.
Just to give you an example, I am going to go back to the pandemic now: Covid 19, the vaccines had to be tested to prove their effectiveness. And pharmaceutical companies then were in need of universities and, first and foremost, the university hospitals to be able to conduct these kinds of test series with scientific guidance and solid backing.
You probably also have to make clear what science can offer the economy or companies in terms of services and expertise.
So, I think it won't be any different in Brazil, since universities can offer services there, too.



**Abílio Baeta Neves:** Yes, of course, that is true. But what I really wanted to say earlier is, you don't have this presence of entrepreneurs, private companies, industry, or whatever, acting as partners of the university, in the sense that they really bring big projects to the university to somehow get a contribution from the university.
It is not quite like it is in Europe or the United States. Roughly 70 percent of all research funding in Brazil still comes from the government. Or nearly 80 percent.

**Bernd Engler:** Right, for universities in Germany, that's certainly true too.

**Abílio Baeta Neves:** Sure, for the universities, but not overall.

**Bernd Engler:** Ah, okay. So, financially speaking, most of the research in Europe is actually done outside of universities. Exactly.

**Abílio Baeta Neves:** We don’t have that. Research is a matter for the university or a few research institutions.
We don't have as many organizations as you here, like Max Planck, Helmholtz, or the like.
But we do have some companies, like Embrapa, for example. Embrapa is a state-owned enterprise for research in agricultural sciences, and with very good results.
But usually, research is done at the university.

**Bernd Engler:** Well, and companies, of course, because they are constantly looking for the return and the added value of a cooperation, might perhaps not be always as reliable when it comes to a long-term perspective as government-sponsored funding.
And as I mentioned at the beginning, a central issue for me has always been that programs, especially funding programs, should not have a short-term outlook, should not operate only on a short term basis, but should offer a genuine, long-term perspective.
And that's why I believe, at the end of the day, the Excellence Strategy or Excellence Initiative will be or is already very successful.
Because it was always designed for the long term. And the political commitment to say, this isn't just one round, but two rounds, three rounds, and after that there will be comparable funding formats that will take effect. That is the real success of the Excellence Strategy.

**Abílio Baeta Neves:** Exactly. That's why I think that you should come to Brazil again. Now to share your personal experience as someone who was involved in this and really knows the development of the whole history.

**Bernd Engler:** Well, I am aware of the negative effects, but of course also of the positive ones, and I believe that, overall, the positive impacts definitely outweigh the negative ones by a very, very wide margin.
So, I actually have experience with three phases, three rounds of the Excellence Initiative. There were some changes there, too, just as there are changes in the funding formats in Brazil.
On the one hand, you have something that is more geared toward competition between universities, and on the other hand, you have a program that is more geared toward cooperation. And all of these initiatives are indeed justified, and they also produce actual results.



**Abílio Baeta Neves:** But then there is also this other segment within the program, this University of Excellence. It is a program in itself, that is, with different goals, different requirements and different funding instruments to support this transformation process at the university.

**Bernd Engler:** Our early-career researchers certainly do play a highly important role in our process of strategy development as well.
But I really do get the impression that over there in Brazil, both the postgraduate as well as the postdoctoral programs also represent a highly crucial factor, basically to strengthen research, to set new innovations in motion. How is that being implemented there in Brazil?

**Abílio Baeta Neves:** Brazil has a rather unique situation because of CAPES. CAPES is an organization that mainly funds Graduate study programs. That means, with doctoral scholarships, scholarships, master's scholarships for all of Brazil.
But there's also, which is a new trend in São Paulo as well, FAPESP, which is the regional funding organization. The basic idea is also to fund master's as well as doctoral students within projects.

**Bernd Engler:** Within projects? Developing a research profile around projects?

**Abílio Baeta Neves:** Within that context, both PhD as well as master's students are then being funded. So that means that they would already be a part of a project starting right from the very beginning.

**Bernd Engler:** Then, how high is student mobility? In Germany, for example, someone might do their master's thesis at the University of Tübingen and complete their degree there but then look around to see where they have the best conditions to pursue their doctorate.

**Abílio Baeta Neves:** Not very high in Brazil at the moment, no.
Why? Because there is also an official policy of promoting the establishment of more and more new doctoral or graduate programs. Even the newest universities out there actually do have the opportunity to develop their very own PhD, graduate, or master's programs.
it's more convenient for students in the region, because Brazil isn't that easy to travel across from the north.

**Bernd Engler:** Sure, given the size of the country.

**Abílio Baeta Neves:** Actually, they would tend to stay right within their region as much as possible.

**Bernd Engler:** So, if I look at Germany, a student moving from Tübingen to Heidelberg isn't exactly a completely different region. That's very obvious.

**Abílio Baeta Neves:** For instance, in certain states this was made possible. But for Brazil as a whole, no. It had been different. For example, São Paulo, until 20 years ago, was responsible for the training of more than half of the doctoral students in Brazil. Until 20 years ago.



**Bernd Engler:** São Paulo alone, then?

**Abílio Baeta Neves:** São Paulo. Mainly USP, but then also the others. Not anymore, due to the establishment of more and more graduate programs at new universities.

**Bernd Engler:** But do the universities actually manage to build such strong loyalty among their students that they stay in the same place, at the same university, when they seek further qualifications?

**Abílio Baeta Neves:** No, they didn't. The students stayed in São Paulo. They didn't come back. That's the problem. Because the opportunities in São Paulo are a whole different story.
But right now, there is this current trend. That can also be criticized in completely other ways as well.
In São Paulo, there are actually a large number of graduate programs that do not have enough students or PhD candidates. They could easily have so many more of them. And they are very good. But they just aren't getting any more students or doctoral candidates simply because they stay in these new graduate programs.
Well, that is pretty weird. Let's see how that plays out. In Brazil, you sometimes have politics that just go back and forth.

On the one hand, you stimulate the establishment of new doctoral programs, and on the other hand, you try to support the best groups, the best graduate programs, with special funding, but then possibly without students, because students are increasingly no longer coming to São Paulo, to Brasilia or Porto Alegre.

**Bernd Engler:** At the very beginning of our conversation, we also talked in a bit more detail about the motivation for scientists to prove themselves in competition. And we ended up talking almost exclusively about motivation that is created by additional funding.
A psychologist would refer to that as extrinsic motivation. So, it is a type of motivation that is not so deeply anchored within the scientist's own personality, which simply means that it could very easily collapse.
I mean, the moment funding programs run out, or you are no longer successful, that extrinsic motivation drops to zero, I would say, or close to zero.
Now, is there, actually, among researchers, what you could call intrinsic motivation, where they are driven by their own initiative, because they are enthusiastic? But there are also other forms of intrinsic motivation.

**Abílio Baeta Neves:** Yes, I really do believe so. I could think of the following, for example: If I work at a university and I feel part of a project, an institutional project with meaning, that is, one that really makes sense for society, for science, then I would stay at the university.
Sometimes you can see that in Brazil as well. Money is not the ultimate and only deciding factor in why you choose to stay at a certain university or not. Or why you conduct research in one particular direction rather than another. Of course, money is crucial.



**Bernd Engler:** Its's fundamental, so to say.

**Abílio Baeta Neves:** So, it doesn't work without money. Unfortunately, Brazilian universities have almost no money of their own to fund small research projects.
That would be of great help to a university, in terms of its relationship with society, to have its own project.
I think smaller universities might have much more opportunity to develop collective research in the form of a collective project. Even in the area of international cooperation. At a larger university, that is a problem.
At USP, the University of São Paulo. USP is a mass university. Over 90,000 students. 25,000 in graduate or master's programs.

**Bernd Engler:** Oh, my goodness!

**Abílio Baeta Neves:** And 6,000 or 7,000 lecturers, professors.

**Bernd Engler:** You just can't keep track of that anymore. It also makes strategy development very, very difficult.

**Abílio Baeta Neves:** In this case very specifically only with a lot of money. Only with money. Only with money.

**Bernd Engler:** But when it comes to the university structure, the role of a dean at such a large university is of course incredibly important. I mean, probably more important than that of a university president.

**Abílio Baeta Neves:** Yeah, but the university president always has to keep on fighting for the budget over and over.
In Brazil, there is no such a position as a university chancellor. The university president or rector takes on all the important functions, so to speak, political representation, academic representation, plus administration, head of admin.

**Bernd Engler:** But this rector would not have the power to say, "I want our university to develop a profile right now, or to create a unique selling point in the specific field of biodiversity?"

**Abílio Baeta Neves:** Actually, yes. That could be done, but then as an additional initiative. With additional funding: “Now we're building a center for climate research here or biodiversity”. What usually happens is that then professors from different subject areas and departments at the university are selected, and they will take over.

**Bernd Engler:** Okay, and then that becomes an interdisciplinary project.

**Bernd Engler:** Yes, normally that will be interdisciplinary.
How many projects at PUC?

**Abílio Baeta Neves:** At PUC, outside of these four National Institutes of Science with these characteristics, we have, I think, a total of six groups.
There is one in the area of brain research, one in climate and energy transition, and then there is also one in the specific field of gerontology. I think five or six groups. Like I said, the PUC is quite small.



**Bernd Engler:** But these are all areas that represent what we in Germany consider the "Third Mission," as a service to society.
That means they can easily demand or claim this legitimacy, because climate research is a central topic, ecology as well, and so on.
That was an incredibly huge topic in Germany, because we had the universities as basic research institutions and the universities of applied sciences. Now, they're actually converging quite strongly.
But I remember very well that when we launched the conceptual framework for the Excellence Initiative in 2011, our motto was “Research,” meaning basic research, “Relevance”, which clearly points toward applied research, and “Responsibility,” which is, so to speak, service to society, to the education system, and so on and so forth, and to the entire research system.
And that was very heavily debated. First: interference with the freedom of research and teaching. How does a rector get to put such a motto out into the world? And then people said, well, the university would effectively turn into a university of applied sciences, in the sense that it would engage mainly in applied research.
And the absurdity, of course, is that if you had a project today as a basic researcher in medicine, it used to be common for researchers, as soon as it moved toward application, not to continue working on it. They simply moved on to another topic.
And there we see clear shift in culture. Now it is widely accepted that you keep researching and asking yourself whether this can actually be translated into medicine, into therapies and other things in everyday clinical practice.

In medicine, the transition from basic research to applied research was even more pronounced than in geosciences, biology, and so on.
It is indeed wonderful to see that universities, with all their differences, always have to find themselves anew and probably even completely reinvent themselves as well, with their programming, with their governance, with their networking, and also with their internationalization strategies.
And that's why the comparison between Brazil and Germany is always very interesting to me, because Brazil is different, yet at the same time, in many areas faces similar challenges.
So, yes, Abilio, it was a wonderful opportunity to catch up again.
And above all, it is truly remarkable to see the incredibly dynamic way in which Brazil is also developing in its research policy.
Sometimes, perhaps, at least from my own personal perspective, it might not be heading in the right direction, which is highly competitive.

**Abílio Baeta Neves:** The opportunity was also more than interesting for me. I'm still learning a lot from what is happening here in Germany.
I've always believed that the German-Brazilian cooperation in the fields of science and higher education has always been the most reliable cooperation for me,
You always have the opportunity to go ahead and create a lot of concrete initiatives within this great cooperation of ours. Symmetrical, meaning truly as a cooperation and not as some new form of colonial relations.

**Bernd Engler:** That's a beautiful image you used, showing that we can truly cooperate as equals.
And I must admit, whenever I've visited universities in Brazil, I've realized that these universities also have a great deal to offer us, because they can offer expertise in fields that are not quite as well-developed here yet.
We are very much hoping right now that we have been able to give all of our listeners some valuable food for thought, something exciting.

**Abílio Baeta Neves:** And I hope we'll see each other again soon in Brazil.