

**“Türkiye’de Özel Tasarruf Eğilimi: Mikro ve Makro Perspektifler” Konferansı**  
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**Christopher Carroll:** I would like to thank Kamil for that what I presume was a kind introduction; not speaking Turkish I was only able to pick out a few phrases here and there. But there is one further phrase that Kamil doesn’t know about that you may be interested in which is that I am also now an economic advisor to the Obama campaign. This talk is going to be adapted from a seminar that I have given several times at the IMF in Washington. But I have modified it to make it more applicable to the Turkish case and to make it more understandable to non-economists. The micro- and macroeconomics of consumption, some thoughts on the Turkish case; there are broadly speaking two approaches to trying to understand consumption and spending behavior. I won’t go into the reasons for it, but these are often referred to in the academic literature as the “Salt Water” approach, which involves, you start with theory how individual households behave. What is their income, what is their saving goals, retirement precautionary motives, whatever? You look at micro data, household level data and you try to understand why they are behaving the way they behave using those data and once you have nailed that down reasonably well you just say, ok the macroeconomy is what you get when you add up all of these micro individuals. This line of research has been very productive over the last 20 or 30 years and has produced a strong conclusion that a key element in understanding individual households, the behavior of individual households is to capture the fact that they face a lot of different kinds of risks. They face in particular risk to their income from, they might become unemployed or they might get promoted, that’s a risk as well. You know up and down are both risks. There are differences across households; some people are old, some people are young, some people have high incomes, others have low incomes and taking both risk and heterogeneity into account our crucial part of understanding households’ saving behavior. But there is a criticism to this approach. The micro salt-water approach tends to sort of ignore the big macro-economic events that affect all households like shocks to aggregate interest rates or growth shocks or other big macro-economic events. The other approach to understanding consumption and saving behavior which I will refer to as the “Fresh Water” approach starts with the macro-economics, the macro-economic circumstances, what is called a representative agent model who has a global view of everything that is going on in the economy and is choosing aggregate consumption optimally. And then more recently, fresh water models have introduced bits of risk in to those models to see what the consequences have been or would be in a theoretical way. The conclusion from this literature, the fresh water literature has largely been that these items, which the micro-economic literature says, are really important; this risk and heterogeneity factors, the macro-economic literature has concluded that these things don’t matter very much; that you can add them in and they don’t change your conclusions very much. But the criticism of the fresh water approach has been that its assumptions are a really very poor fit to, it

doesn't really match all sorts of things we know about the typical household. The model has implications for how does the typical household behave and what does it look like. But in the fresh water approach, the households don't look anything like what we know from micro data what typical household look like.

I think the better approach is what I will call the "Tide Water" approach that sort of merges the fresh water and the salt water approach, which is a macro-economic framework but one that takes the differences across households very seriously and adds them up and is careful to produce behavior at the micro-economic level that looks like micro-economic behavior. If you do this properly then the salt water case which ignores macro-economics and the fresh water case which ignores micro-economics actually each of those turn out to be a sub-unit, a special case of what I am calling the tide water approach. I think this approach combines the advantages of both classes, for example, it is a framework in which the distribution of wealth across households has an important effect; so in the fresh water models the conclusion has been that the distribution of wealth doesn't matter to the overall level of consumption and saving. In the salt water models the conclusion has tended to be that there is a lot of differences across households, between poor households and rich households and people of different ages. The tidewater approach captures this fact that wealth distribution matters. It is a framework in which you can get what the academic literature calls excess sensitivity of consumption. This is a big puzzle in the macroeconomics literature; consumption seems to be too sensitive to economic developments in certain senses. It gives you a high marginal propensity to consume for some households, so if you give a poor household a bit of extra money, they are likely to spend a lot of it. If you give a rich household a bit of extra money, they are not likely to spend so much of it. The framework can incorporate either micro economic or macroeconomic shocks and can tell you sensible things about both kinds.

Having given you that as an introduction, I want to tell you why Turkey is a great country. Turkey is a great country because it has had lots of large macroeconomics shocks and therefore from the perspective of a macroeconomist, Turkey has provided a wonderful opportunity and a wonderful dataset for macroeconomists to exploit. Plus, Turkey has some good microeconomic data, and so you can look using microeconomic data at the consequences of macroeconomic shocks. This is an unusual combination actually. There are plenty of countries that have huge macroeconomic shocks but have no microeconomic data at all and then there are rich countries that have lots of good microeconomic data but not very many large macroeconomic shocks so Turkey is a great country because it provides both. There might be other reasons, you may have your own ideas, of why Turkey is a great country, but from my point of view, this is one of the reasons.

I will give you just a couple of examples of Turkish greatness in this sense. Drawn all from the paper of Burcu Duygan who is in the audience here, will be discussing these issues later, has a really great paper on this subject, I think. She's also a former student of mine, so I'm perhaps biased. But talk about a great big shock; here is data on interest rates from Turkey from 1990 to 1999 and there was, as all of you undoubtedly know, but it was news to me, huge financial crisis in 1994, the spring of 1994 and interest rates

went to this enormously high level for a very brief period. There's a great macro shock for economists to be excited about. At the same time, another example of big event here, of course associated with the financial crisis, is real wages of production workers in the manufacturing industry which is chosen because wages are well measured there. At the same time as the interest rate crisis there was this large drop in real wages. Finally, the particularly great thing about this shock, again from my selfish point of view as an economist, not necessarily from the point of view of the Turkish population, was that there was a survey of household consumption that was being conducted precisely during the period spanning the time of the macroeconomic shock. And so we can look at what the microeconomic consequences for different kinds of households of this big macro shock. You can for example look at consumption by group and so this again is from Burcu's paper and she finds that in the month of the shock there was a big drop in consumption for every single group of households, every single education group. She's ranking them by less than primary education, primary, middle, high school. And then in the month after the shock, there was a big increase in spending again especially by this group which is the primary educated group. The other groups did not have as big an increase. So this seems like a bit of a puzzle, this increase in spending for all of these groups after the crisis month. Partly it was probably making up for the crisis, but we had a little discussion right before my presentation in which Burcu said "Well it turns out that this month here happened to be Ramadan in 1994" and so maybe the big surge in spending was associated with Ramadan. It is interesting though that different groups had a different size increase in spending. At any rate, lots of good data that can be used to understand the microeconomics and macroeconomics of saving behavior, a final thing from Burcu's paper before I move on to the rest of my remarks, is she calculates the variance of consumption so you look across all of the households and you see how much difference is there in consumption spending by the different kinds of households. And she finds that the variance was high, or it was fairly constant leading up to the month of the crisis and then in the month of the crisis it drops and then in subsequent month it drops a great deal and then it recovers and goes to a higher level. So it is not exactly clear what the reasons are for this but it is a beautiful example of how you can calculate microeconomic statistics that give you an interesting perspective on what's happening in the macroeconomy. So, with that sales job for Burcu's paper over with, I'm going to return to a sort of really brief overview of the way of these two approaches, the sort of salt water and fresh water approach and conclude with a little more about Turkey.

So I won't go into all of this stuff and I'll particularly skip the mathematical jargon, but the foundation of the way economists think about consumption decisions really goes all the way back to Milton Friedman in 1957 who said "people spend an amount that corresponds to their permanent income", whatever they conceive of as the income that they will be able to, that they will continue to be receiving, you know, for a long time in a reliable way. That's their permanent income and that's the amount that they spend. So Friedman said this in 1957 and in particular, Friedman said that if you give people a transitory windfall, shock to their income, just you know drop money on them from a helicopter that for every dollar you give people in this transitory way, the extra spending that they will engage in is maybe 30% of it in the course of the first year, so a marginal propensity to consume of 30%. Subsequent to Friedman's sort of non-mathematical, non-

theoretical description of how he thought people behaved, there was an intensive literature trying to have formal mathematical models of optimal behavior, culminated in a paper by Truman Buely and Buely said well actually, maybe the theory tells us that if you give people an extra dollar the amount that they are going to spend of it in the first year is more like 3% of it instead of 30% of it if they can perfectly foresee everything that happens to them and if they live forever, then the right thing to do would be to spend 3% of it. In the last decade or so, the crucial assumption that Buely made, that people have perfect foresight and there's no uncertainty in the world, we have been able to relax that assumption and work on models where there's serious uncertainty and there may be a liquidity constraint so that people can not borrow an unlimited amount of money whenever they want to pay for their pay for their consumption expenditures. It turns out that putting uncertainty in the model increases the marginal propensity to consume substantially for some classes of people and when you have uncertainty in the model, the sort of modern mathematical framework turns out to be closer to what Friedman said in 1957 than to what the theoretical perfect foresight model of Buely said in 1977. So you can obtain estimates of a marginal propensity to consume which is sort of the crucial thing for understanding macroeconomics that are much larger than you get out of the perfect foresight or sort of fresh water types of models. I'm going to skip all of this, this is the mathematical description of household choices and why they behave the way they do. Just to briefly describe how uncertainty works in this framework. So each household is assumed to have some level of permanent income,  $P$ , which is the level of income that they would expect to get in a normal year if nothing particularly unusual or bad happen to them and then there are transitory shocks that could hit them, they might be unemployed this year or they might get an inheritance or they might win a little lottery or something and that would modify their actual income from what their permanent income is. And then their permanent income itself might be subject to shocks. So if you get promoted then you get a positive shock to your income if you get fired then you get another job with a lower salary, then your permanent income goes down. We can calibrate the sizes of these shocks, using again micro data, and then we can figure out how people ought to behave optimally. This figure shows the optimal behavior of a consumer who faces uncertainty of the kind I just described and that optimal behavior is this curve here which shows consumption for any given level of market resources, monetary resources that they might have, this is the optimal level to spend. And the crucial thing to notice about this figure is that at a low level of monetary resources, that is to say for poor people, the marginal propensity to consume is very high, much higher than the marginal propensity to consume for rich people. So let me emphasize that by doing a graph of the marginal propensity to consume. This is the answer to the question: "If we gave an extra Dollar income or an extra Lira of income to someone who had an initial level of wealth, how much extra spending would we get?" and you can see that if you give the dollar to a very poor person, according to the theory, you will get a very high marginal propensity to consume. If you give the extra dollar to a person that already has a lot of money then the marginal propensity to consume will be low. In fact, the marginal propensity to consume way out here, as you get to very large level of monetary resources approaches, it gets arbitrarily close to the Buely perfect foresight model. So it's only as you become infinitely wealthy that you really start behaving like the Buely person who ignores uncertainty. Everybody else has to be serious about uncertainty and be concerned about

it. So the key intuition here, the key insight about how people behave and why they behave that way is the model says, on the one hand people are impatient, they would like to spend today instead of spending tomorrow, they want to borrow against the future, they want to consume right now because they are impatient, on average. Now they could be impatient because they anticipate that they are going to be richer in the future than they are now, so they don't have to be impatient in the sense of caring more about the present than about the future. They might just say "I'm going to be much richer in the future than I am today, so I want to spend more today than my current income" but they need to be impatient for this model to make sense. But what impatience means is that the amount of wealth will end up accumulating is limited as they get very wealthy, this precautionary motive turns out to diminish and get smaller and smaller and smaller and at some point if they are impatient they are going to want to start running their wealth down. But if we take that in reverse and we say, suppose we have somebody that is very wealthy then as their wealth runs down, they are going to start getting more and more nervous and worried. And so there will come some point where the impatience motive that says "I want to spend today" and the precautionary motive that says "Well, I'm really worried about future uncertainty" come into balance with each other. And that point where those two motives are balanced is the target level of wealth that the household wants to hold. So it turns out that in our standard model there will exist such a target level of wealth and actual wealth will be distributed for each person around the target, it will sort of bounce around the vicinity of that target. One interesting conclusion that comes out of a model of this kind is that borrowing constraints don't actually make much difference to the dynamics of consumption or to the level of consumption or to the key things that economists tend to be concerned about. They don't matter very much because when there is uncertainty about the world, that uncertainty is sufficiently strong reason to not borrow and so a liquidity constraint that explicitly prohibits you from borrowing doesn't have very much effect because it is already sort of, a similar kind of behavior is already being imposed by the uncertainty about the future. I say that the borrowing constraint don't matter, but that's not quite right in the sense that the one circumstance, they don't matter if you want to think about what does that economy look like after twenty years with one assumption about borrowing constraints and a different assumption about borrowing constraints. The answer doesn't necessarily look all that different in the macroeconomic dimensions of how variable is consumption and how volatile is the economy. However if you change the ability to borrow at a moment in time, you all of a sudden make it easier for everyone to borrow, you have a financial liberalization and you permit, for example, in some countries there have been rules about mortgages require 50% down payment and then those rules get relaxed and you only need a 20% down payment or something like that, that's a relaxation of liquidity constraints. That kind of a thing, a change in liquidity constraints can have a big effect in the short run. So this is a figure that shows what happens if you have a liquidity constraint that is in place and then you, that's the first lower curve here, this curve just shows for any given level of monetary resources how much does the person consume, and then you relax the borrowing constraints. So, originally we had basically a prohibition on borrowing, people aren't allowed to borrow at all. Then we say, ok, we're going to allow people to borrow an amount up to 30%, what happens? Well, what happens is they go on a spending spree; for the short run there is a big increase in consumption spending, over the long run, this runs their wealth down

a bit and eventually they get to a new equilibrium which looks a lot like the old equilibrium in the sense of how sensitive is their consumption to income shocks and what are the dynamics of consumption and all sorts of other things that you are interested in. But in the short run, you can get a big spending boom if people are impatient in the sense that I described earlier.

So let me sum all of this up. The modern theory of optimal economic choice under uncertainty says that the consumption function is concave which is to say people with low levels of wealth have a high marginal propensity to consume, you give them an extra dollar, they'll spend a lot of it in the short run. But people with high levels of wealth have a low marginal propensity to consume, you give somebody who is rich an extra dollar and they won't spend it all immediately. The level of target assets someone has depends upon their degree of patience or impatience so if you could somehow manipulate the degree of patience and make everyone more patient in the economy you could increase the target level of resources and you could make the economy less volatile. Although increasing people's patience seems to be a difficult thing to do. The distribution of resources can matter a lot. So if you are thinking about a tax cut or a tax increase and you want to know what is the effect on aggregate consumption likely to be, you need to know ok is that tax cut going to poor people who will spend most of it in the short run or is it going to rich people who will not spend most of it. The distribution is a necessary part of the analysis. Changes in liquidity constraints can have a big short run effect so if one wants to have some concern about stabilizing the dynamics of consumption it might be best not to have huge financial reforms that take place all at one instant in time. One might want to go somewhat gradually in relaxing liquidity constraints if you don't want to have a big decline in the saving rate. Ok, so that's the salt water model, the stochastic growth model, the fresh water model is basically a macroeconomic model where you have a consumer that is optimizing with respect to aggregate consumption, I won't go through the details of how this works, it's not that different actually from the previous framework but it takes into account things like depreciation and capital investment. The big difference between the two models is that the, when people who work with the salt water kind of model and are really focused on microeconomic data tend to try to produce a model that matches the behavior of the median household, the typical household, sort of the random person you might run into on the street and they have found that this typical person basically doesn't have very much wealth. The wealth to income ratio of a household as a whole is just not very large. And so one needs to assume that the median household is fairly impatient if you want to get the model to generate behavior that looks like what the median household does. So people that try to match microeconomic data tend to find consumption functions that look something like this, that for a given level of wealth there is a range where you spend almost everything, every extra dollar you spend when you get it and then you, you know, eventually get out to a point where you have a lower marginal propensity to consume. When people try to study consumption and saving behavior using macroeconomic data however, they are trying to rationalize that in the macroeconomy there tends to be a much higher ratio of wealth to income, capital to income. So you look at the national income and the national capital stock and you say ok how impatient would people be if they were to end up at that capital to output ratio, well they must not be very impatient because we have a large capital to output ratio, so there is

a bit of a conflict between what you get. ... Patient and then there are people who are less patient. And the patient ones end up being the ones that hold all of the capital stock or almost all of the capital stock and the impatient ones are the sort of typical household who ends up having a much lower level of wealth and a much higher level of marginal propensity to consume. And so I have a paper that does this and there is a paper by Krussell and Smith that does something similar. And the conclusion is that on the one hand the tidewater model can match the aggregate capital stock, on the other hand it generates a marginal propensity to consume and consumption dynamics that are quite different from the fresh water model. So it can match both the micro and the macro data. And I will skip over some of these details to reach my conclusion which is that you can not really understand household and aggregate saving behavior, you can not understand what's going on using either micro data alone or macro data alone, using either a salt water model purely or a fresh water model purely. You need to understand, you need to have both sources of data and both sets of ideas in mind and I return to my theme that Turkey is a great country precisely because Turkey provides interesting data on both kinds of variation; microeconomic and macroeconomic and there have been lots of changes happening in the Turkish economy that help us to understand what's going on. It's kind of hard what's going on in an economy that never changes; Turkey is not guilty of that problem. It's an intermediate case, Turkey is, between the rich countries basically where everything is boring because you get growth rates of one to three percent every year and no big exciting shocks happen versus there are lots of poor countries in the world that are very exciting in this sense of big increases and big decreases in GDP and huge shocks and all sorts of disasters and things happen to them, Turkey is a good intermediate case and should provide lots of opportunity for future understanding of micro and macro economics. I would conclude with two recommendations that could help Turkey become the model country for this area of research; one is to collect more microeconomic data, in particular data on household consumption dynamics would be extremely valuable. There have been, surveys conducted to produce the consumer price index that look at a cross section of households at a point in time they ask them how much have you spent on bread versus cars versus all sorts of other things, but they don't track the households over the course of time and there are a lot of questions that you just can't answer unless you can see the same household in two different years and see how their spending changed in response to their shocks. So a panel data set would be enormously valuable for understanding these questions. Also a good survey of household wealth would be very valuable. The ECB is working on trying to create a comparable wealth survey across many of the countries of the European Union and if Turkey were to have a wealth survey that was, that sort of borrowed the same structure that the ECB has laid out for all the other countries, that could be enormously useful in understanding consumption and saving behavior. And the final thing that Turkey can do to provide useful information for macroeconomists trying to understand consumption and saving behavior is to have even more economic crises so we that we can see what happens in all sorts of different crises. So that's where I will conclude.

**Kamil Yılmaz:** Thanks Chris. If you have any questions, we can take questions to Chris Carroll right now, then we will go on to the presentation of the report. We have around five to ten minutes for questions.

**Question - Murat:** What is your take on this recent US tax rebates? There is an ongoing debate on its impact, because you made some references to it as well; so I think it's a natural question, if you don't mind.

**Answer – Christopher Carroll:** I would say that among all of the different kinds of fiscal policy responses one might make to an economic slowdown, the tax rebates that have been passed by the congress and now signed by the president are one of the most sensible things that one could imagine doing if you wanted for example stimulate the household consumption. For one thing they, unlike some past fiscal stimulus packages, they are going to go out very quickly after, the economy is still in trouble and could still use the stimulus. Sometimes in the past the congress has passed fiscal stimulus packages that did not have any fiscal stimulus effect for two or three years by which time the economy was recovering. Second, the payments phase out as income gets higher and higher so they are targeted towards households that are most likely to spend the money, the people with high marginal propensity to consume down in the bottom. Of course they go all the way up through the middle and the upper-middle stratum of income, but they are at least much better targeted towards the people that are likely to spend than some previous stimulus packages have been. Whether they will make an enormous difference, that's more speculative, but among all of the sets of things congress might have done, I think, they actually did a pretty sensible thing. Another aspect of these tax cuts is that they are essentially purely transitory so in some sense, they did not make a big difference in the long term budget picture which could have had a more serious consequences for things like interest rates and projected future budget deficits so I think the transitory aspect of them, explicitly transitory aspect of them was a good thing.

**Question:** Thank you very much. Just a clarification about your results; the liquidity constraints, their elimination has effectively no impact in the long run but has a big impact, shifts in it, have a big impact in the short run. I can't bring the two together, are we saying that basically the households run their wealth down and then they come back?

**Answer – Christopher Carroll:** No, so I sort of glossed over that in the interest of time but what happens, when I say they don't have much effect in the long run, what I'm really talking about is from the stand point of macroeconomic dynamics of consumption, so if you are interested in for example what would be the reaction of aggregate consumption to a tax cut like the one the government just passed. What happens is basically when you relax liquidity constraints, people go on a spending spree and they spend their wealth down and have a new target level of wealth that is lower than it was before. The reason it's lower is they now have this ability, the purpose of their saving is to insulate their consumption against shocks, ok, but now with the borrowing ability, they can insulate their consumption with a smaller amount of assets. So they end up with a smaller target level of assets but they have the same sort of ability to insulate their consumption against shocks as they did before the constraints.



**Question:** Thank you for the presentation. You know Turkish economy had a demand driven growth for the last four to five years and at the same time there was an expansion in the global liquidity. Do you consider this global liquidity expansion as a sort of removal on the liquidity constraints for the developing countries? Because we also had a very big expansion in the consumption expenditures.

**Answer – Christopher Carroll:** That’s a good question, I don’t know the details of how the global savings-glut as Bernanke has called it might have translated itself to the Turkish context, but it is plausible that the increase in capital that wants to invest in not just in US Treasuries but in all sorts of different things around the world may well have had a lot to do with an expansion of credit to households. The key question is are there people that can borrow now that were not able to borrow before? Or can they borrow at a lower interest rate now than they could borrow at before? And if so, that sort of counts as a relaxation of liquidity constraints and you would expect to see a consumption boom, so it certainly is consistent that consumption boom, a demand driven consumption boom, at the same time that global capital wants to flow in is certainly consistent with this framework.

**Question:** First of all I want to note the effect of borrowing constraints in Turkey. Borrowing constraints in the form of not being able to borrow against human capital is a big issue, I think because if you can not borrow against your human capital it can affect your education choices right now so it can effect future consumption and I think, in Turkey there is a direct relation between borrowing constraints and the future consumption so I think we should incorporate the education choices of students in these tide water macro models.

**Answer – Christopher Carroll:** I think that is a very important issue and it’s one where I think there is a very strong case to be made for having government provided student loans to help get around these constraints that people face in paying for education because education has enormous returns over the lifetime if somebody gets an extra year of college or an extra year of schooling, especially college. In the US college is paid for in large part now by student loans and this is in some sense, fair because the people that get a college education will be richer over the course of their lifetime than people that don’t get a college education and so instead of having education be free or very heavily subsidized saying ok the people who are getting this wonderful thing, this education, should repay that thing because they are going to be richer than people who didn’t get an education so government provided student loans, or government backed student loans, as long as the government makes sure people do a repay in the end, I think are a very valuable, extremely valuable, kind of government intervention in the credit markets for precisely the reasons you articulated.

**Question – Kamil Yilmaz:** I have one question Chris. It’s about in Turkey when you look at the lowest level of income households, they borrow through credit cards and installments is basically a credit card you pay your debt credit card through installments and that basically to some extent is your budget constraint in the very short term. However the debt is in the very short term it increases consumption but then over the

medium term it has the possibility of making the budget constraint even tighter. So that may create some cycles and in your model, or in the overall tide-water models, how can we deal with that?

**Answer – Christopher Carroll:** The simplest way to deal with it, not necessarily the most plausible or attractive, but the simplest way is to just do what I'm describing in this slide that I skipped over which is to say ok we have different kinds of people who have different degrees of patience or impatience and what this slide is all about is to show suppose you have one group of people that are 66% of the population and they have a time preference factor of 0.90 so they're more impatient, they discount the future at about 10% a year. And then the rest of the population is more patient and they discount the future at only 4% a year. But everybody faces these income shocks. What will the difference be in the level of capital to income ratio, what will be the difference in wealth basically between these two categories of people. And the answer is that the people that are impatient will end up with very little wealth and the people who are more patient end up with an enormous amount of wealth. If we were to add the possibility of borrowing in this model, the people who are more impatient would end up with negative wealth and it would illustrate very well exactly the point that you want to make. What you are suggesting and that I have a lot of sympathy for is that perhaps the degree of impatience of the poorer households is excessive and it may not be in their long-term well being to be borrowing at a 20% interest on their credit cards. How to correct that is a more difficult question but the tide-water framework with heterogeneity certainly can account for it. Incidentally, in fresh water, pure fresh water framework, there's no way you can even think about this question.

**Kamil Yılmaz:** Thank you very much Chris, I guess we can thank Chris, give him applause and continue with the presentation of the report. Şimdi Raporun yazarlarını tanıtayım. Eminim Murat Üçer'i ve Caroline Van Rijckeghem'i tanıyorsunuzdur, ama ben kısaca tanıyacağım. Caroline Van Rijckeghem lisans Eğitimini M.I.T.'den almış, daha sonra Berkeley'den PhD'sini aldıktan sonra, 1991 yılında IMF'de çalışmaya başlamış ve kendisi 10 yıl IMF'de çalıştıktan sonra eşi Murat Üçer ile birlikte Türkiye'ye geldi ve kendisi şu anda Sabancı Üniversitesi'nde yarı zamanlı öğretim üyesi ve aynı zamanda IMF, Dünya Bankası gibi kuruluşlara da hem eğitim hem de araştırma danışmanlığı yapmakta. Murat Üçer Global Source Türkiye Ofisi danışmanlarından ayrıca Koç Üniversitesi'nde yarı zamanlı ders vermekte. Boğaziçi Üniversitesi'nde lisans eğitimini bitirdikten sonra, Doktora eğitimini Boston College'da tamamlamış ve 1991 yılından 1997 yılına kadar IMF'de ekonomist olarak çalıştıktan sonra o da Türkiye'ye dönmüş ve Türkiye'de değişik uluslararası kuruluşlarda ve Hazine Müsteşarlığı'nda da danışmanlık yapmıştır. Şimdi sunumunu yapmak üzere Murat Üçer'i davet ediyorum.

**Murat Üçer:** Herkese merhabalar, her şeyden önce EAF'a çok teşekkür ederiz. Çok önemli bir konuda bizi ciddi ve derin düşünmeye sevk ettiği için. Aslında işin içindeyiz açıkçası, o yüzden hep düşündüğümüz bir konu fakat gerçekten sistematik, formal bir şekilde düşünmeye çalıştığımız zaman ne kadar zorlu bir konu olduğunu daha iyi görüyorsunuz. Ben sunumu Türkçe yapacağım fakat affınıza sığınarak birçok İngilizce kelime katabilirim o nedenle baştan herkesten özür dilerim.

Caroline ile beraber yaptığımız bu çalışma aslında Türkiye’de tasarruf oranına genel bir bakış. Temel bir takım soruları saptamak, bir defa veri sorunları var, bunlara bir girmek. Teoride neler söylenmiş biz Türkiye ile ilgili neler söyleyebiliriz? İleriye yönelik neler söyleyebiliriz? Genel olarak bu konuya bir bakış getirmeye çalıştık. Bu paper’ın aslında mandate’i biraz bu, yapılacak daha çok iş var, sonuna doğru da Caroline biraz onlardan bahsedecek. Bir de tabii bizde çok önemli bir konu, policy recommendations offer etmek lazım. Ama baştan söylemek lazım Kamil’in tamamen doğru saptadığı gibi bir sihirli formül yok. Bunu düşünmediğimiz veya uğraşmadığımız için değil, açıkçası tasarruf sorununun hakikaten kolay bir çözümü gözüküyor fakat en azından düşünmeye başlamak için bu çalışma bir araç olacak diye düşünüyoruz. Prof. Carroll hakikaten teorik bir ziyafet verdi bize, çok hoş şeyler duyduk, öğrendik. Ben sizi şimdi Türkiye’nin ormanlarına geri davet ediyorum ve Türkiye tarafına giriyoruz.

What is the problem? (Slaytlar ingilizce). Aslında sorunu hepimiz biliyoruz, the problem actually is the current account deficit Türkiyede, cari açık. Türkiye’de yatırımlar daha kaliteli yapılabilir, üretkenlik artırılabilir ama işin investment tarafında Türkiye’nin bir sıkıntısı yok gibi gözüküyor ama nedense tasarruflar bu investment level’lara yetişmekte zorlanıyor. Zaten ekonomik özdeşlikten biliyoruz ki current account deficit aslında bir ülkenin yatırım tasarruf açığından başka bir şey değil. Dolayısıyla, bizim aslında Türkiye’de bu konuya girmeye çalışmamızın temel sebebi yatırım tarafından çok tasarruf sorunu yani dolayısıyla aslında cari açık. Son dönemde gördüğümüz datayla 2004-2007’nin simple averajını aldığınız zaman Türkiye’nin %5 gibi bir cari açığı var. 2005-2007’de biraz daha yükseldiğini görüyoruz, 2008’de benim yaptığım tahminler, hepiniz gayet iyi biliyorsunuz, 6.5’ler konuşulabilir gibi bir hava var, it is rising. Türkiye’de hepimizin gözlemlediği başka bir fenomen var, aslında cari açık yüksek büyüme ile birlikte gidiyor. Yani şu anda grafikte gördüğümüz 1990-2003 arasında yine simple averajı aldığımız zaman 1’in altında bir cari açık var, 4% civarında bir büyüme var. Sonra son döneme geliyorsunuz, son dönemde karşımızda çok farklı bir Türkiye var, ciddi olarak büyüyen, %7 gibi büyüyen bir Türkiye ve %5 civarında da cari açık veren bir Türkiye var. Peki bu dönemde ne oldu, cari açık niye açıldı? Tabii ki tasarruftan mı yoksa yatırımdan mı bu çok önemli bir soru bu. Buradaki grafiklerde çabucak iki gözlem paylaşmak istiyorum, bir defa cari açığın 5-6 yılda artmasının arkasında olan şey yatırımdaki artış. Toplam iç tasarruflarımızın genellikle sabit kaldığını görüyoruz. O da en yukardaki pembe grafik. Toplam tasarruflar gördüğümüz gibi aslında flat, yatırımdan dolayı bir şeyin artışı olayı var. en alttaki yatırım tarafına baktığınız zaman cari açıkla bir paralellik izliyorsunuz. Tasarruf aşağı yukarı istikrarlı ama yatırım tarafında ve cari tarafta beraber bir hareket görüyoruz. Bizim hesaplamalarımıza göre Türkiye’de ilginç olan özel tasarrufla kamu tasarrufu arasında bir değişim var. Yani Türkiye’de genel tasarruf sabit kalırken özel tasarruf azalıyor ve kamu tasarrufu artıyor, böyle de bir dinamik var. Peki cari açık sorunundan dolayı niye endişe ediyoruz? Aslında çok açık çünkü cari açık demek, başkalarının finansmanına ihtiyacınız var demek, bunu bir müddet yapabilirsiniz ama sürekli yapmak mümkün değil. Çünkü sizin genelde uluslararası yükümlülüklerinizde bir artış oluyor ve bu artış yatırımcılar tarafından görüldükçe size finance etme isteklerinde bir azalma oluyor. Dolayısıyla zaman içerisinde sizin bunu geri ödemeniz bekleniyor. Yani sürekli cari açık vererek bir ülkenin yüksek

büyümesi mümkün değil. Bu bir budget constraint olarak mümkün değil, bunu bir noktada geri ödemeniz gerekiyor. Biz büyümek isteyen bir ülkeyiz, o zaman ne yapacağız, dış tasarruflara olan yani sermaye inflow'larına olan bağımlılığımızı azaltıp bir yerde kendi iç tasarruflarımıza döneceğiz. Bunu döndüğümüz zaman daha az kırılgan bir ülke olacak. Yani tasarruf arttırmakta kırılganlık diye bir motivasyonumuz var.

Bir de büyüme tarafı var, büyüme tarafındaki neden, sonuç ilişkisi biraz daha kompleks, orada biraz literature zorlanıyor bizim gözlemlediğimiz kadarıyla ama yeni bir literature var, aslında hızlı büyüyen ülkelerin genellikle cari fazla verdiğini, aslında bizim literatürde bize öğretilen özellikle finansal globalleşme literatüründe sermaye piyasalarına aksesiniz varsa daha fazla borçlanabildiğiniz için içerdeki büyümeyi dışardaki tasarruflarla finance etme olanağına sahip oluyorsunuz ve daha hızlı büyüyebilmeniz lazım aslında teorik olarak. Ama böyle olmuyor, aslında bu oldukça hot bir konu, henüz conclusive bir şey yok fakat başta eski IMF chief economist Ragu Rajan ın başını çektiği bir literature var, daha az yabancı sermayeye güvenen ülkelerin daha hızlı büyüdüğünü saptıyor bu literature. (Bakan Şimşek in Capital Dergisine verdiği cevaplardan alıntıya refereansla) Caroline o konuda düşüncelerini burada paylaşacak, demografik konu burada çok önemli gözüküyor. Türkiye'nin genç bir nüfusu olduğundan ve bu yüzden tasarruf yapılamadığından bahsediliyor ki bu aslında büyük bir ölçüde doğru. Çin fenomeninden bahsediliyor ve aslında sosyal güvenlik sorunundan bahsediliyor. Aslında Türkiye'nin gündemi bu (yine alıntı kastediliyor). Aslında bu alıntı Türkiye'deki genel görüşleri de yansıtıyor, o nedenle bizim paper'a da bir pencere oluşturuyor diye bakılabilir.

Kendimize ne gibi sorular sorduk? Çok çabuk olarak, Türkiye'de tasarruf oranlarının gerek Türkiye'nin kendi tarihinde gerekse uluslararası perspektiften nasıl bir seyir izlediğine bir bakmamız lazım. En basitinden başlangıç noktamız bu. Bir de çok bariz olarak Ali Beyin konuşmasında ve zaten Kamil de buna already referans verdi, son dönemde özel tasarruflarda chart'ta da gördük bir düşüş var, acaba bunun nedeni ne? Bunun üzerinde bir takım çalışmalar yapılmış vaziyette biz biraz ona baktık. Bir de prospect'lerle ilgili spekülasyon yaptık. Demografik bir takım parametreleri kullanarak geleceği simule etmeye çalıştık. Acaba oralardan bir demografik bonus, demographic dividend denen tarzda bir return var mı diye sorguladık. O biraz teknik ve simulasyon olduğu için onu Caroline yaptı. Can anything be done? If any, what role is there for policy'den kastımız işte aslında hepimizin merak ettiği tasarruf oranında bir artış gerekiyorsa ne yapabiliriz? Mesela policy intervention yapmak istersek direk saving rate'de ne yapacağız, intelligent neler söyleyebiliriz, onlara bakmaya çalıştık. Burada da daha önce bahsettiğim gibi aslında kolay bir çözüm yok. Sonuçta biz paper'da konuyu değişik boyutlarıyla ele almaya çalıştık. Kısaca şöyle bir overview var, çok çabuk geçeceğim, ampirik bir takım sonuçlar var literatürde hemen onunla başlayacağız, sonra Türkiye'nin uluslararası ve kendi içersinde nerede olduğu ile ilgili bir kaç chart göstereceğim. Sonra olayı Caroline'e devredeceğim, o da bize olayın daha çok demografik ve mikro boyutlarına giren çalışmasını anlatacak. Demografik dividend'den ne anladığımızı, Türkiye'nin ne anlayabileceğini biraz substantiate etmeye çalışacağız beraberce. Household Survey'da acaba enteresan bilgi var mı onu biraz deşmeye çalışacağız. Orada gene bir takım data sorunları falan var. fakat her şeye rağmen birşeyler

öğrenmek mümkün gözüktü, onları sizlerle paylaşacağız ondan sonra yine kendisi sizlerle policy conclusionlarımızı yapacak.

Key results in the empirical literature, bizim paper’ımızda teorik bir survey var, paper draft halde ve aslında %80 tamamlanmış vaziyette. Paper’da teorik şeyleri de konuşuyoruz ama Türkiye açısından bizi aslında ilgilendiren açıkçası empirik çalışmalar. Bu konuda bizim yakaladığımız iki büyük çalışma var. World Bank’in 2000 yılında bitirdiği bir çalışma var, onun datası dikkat ederseniz daha geriye gidiyor ve inflation adjusted private saving falan kullanıyor, bu konuya da çok kısa olarak gireceğim. Ve de Dünya Bankasının bir saving projesi var. Bir de IMF’nin World Economic Outlook bünyesinde yaptığı emerging market’lara focus olan bir çalışması var. O da, yine ulusal tasarruf düzeyleriyle ilgili. Bu çalışmalarda bir takım parametreler bulunuyor ve tasarruf oranına ilişkilendiriliyor. Bu aslında hepimizin elinin altında olması gereken bir takım variable’lar yani tasarruf oranını düşündüğünüz zaman sağ tarafa ne koyuyorsunuz falan tarzı bir liste var orada. Büyüme koyuyoruz, krediyi koyuyoruz, enflasyonu koyuyoruz, ticaret hadlerini koyuyoruz, old ve youth dependency rasyoları, yani toplam nüfusta ne kadar yaşlı ve genç onu buluyoruz, ve kamu tasarrufunu koyuyoruz ve bunların hepsinin predicted sign’ları var ve genellikle bu çalışmalarda bunlar bulunuyor. Yani daha hızlı büyüyen bir ülke, üretkenliği arttığı için, gençlerin daha fazla tasarruf ettiği bir ülke olduğu için, büyüme ile tasarruf arasında pozitif bir ilişki buluyorsunuz. Birçok kereler bahsedildi krediden, daha teorik ve daha hoş bir şekilde reference verildi ama çok daha basit bir anlamda aslında bir ekonomide credit availability’si varsa bunun tasarrufların düşüşünde bir etkisinin görülmesini bekliyorsunuz. Enflasyon bu tip çalışmalarda belirsizliği capture eden bir element olarak giriyor. Yani aslında enflasyon yüksekse daha fazla belirsizlik var dolayısıyla daha çok save ediyorsunuz tarzı bir mantık yürütülüyor. Enflasyonun düştüğü yerde de negative bir etki bekliyorsunuz. Bir çoğunuz benden çok daha iyi biliyorsunuz, kafanızda canlanması için, şu anda Arap ülkelerinde olan, bir anda pozitif bir oil shock olduğu zaman veya negative olduğu zaman veya terms of trade shock olduğu zaman tabi birden bire saving düzeyini etkiliyor, birden hepsini gidip harcayamayacağınıza göre orada temporary veya permanent bir etki oluyor, ona bakmamız lazım tabi. Bu şekilde bir takım teorik konular var.

Public konusu Türkiye’de çok ilginç çünkü chart’ta gördünüz Türkiye’de özel tasarrufun düştüğü bir noktada kamu tasarrufunun arttığını görüyoruz. Bu tip bir offset dünyada da var ama Türkiye’de çok kuvvetli bir offset gördük son dönemde. Bunun nedenini sorduğumuz zaman, hatta standart empirik çalışmalardan çıkanlardan kamu tasarrufunda her bir puanlık artış, özel tasarrufu 0.3 – 0.7 arasında düşürebiliyor. Muhtelif açıklamalar var. bir tanesi çok bildiğimiz rasyonel bir Ricardian, Barro’nun 1974 paper’ına referans verilen, benim artık çoktan unuttuğum ama intuition’ının unutmamanın mümkün olmadığı bir paper vardır. Bugün eğer hükümet evini düzene sokuyorsa bu insanların tasarruflarını azaltmasına sebep olur çünkü yarından endişeleri azalır gibi bir mekanizma var, dolayısıyla yarın daha az bir tax burden olacak gibi bir beklenti oluşur, o yüzden insanlar bugün tasarruflarını düşürürler, tüketimlerini arttırırlar. Buna daha rasyonel olamayan bir yaklaşım da getirilebilir, o da ikinci bullet point, o kadar rasyonel bir beklenti olması gerekmiyor, insanlar sadece tax increase’leri görüyorlar, hükümetin kısıtığını görüyorlar ama consumption pattern’larını değiştirmek istemiyorlar, o şekilde de ortalama olarak

tabi saving düşüyor. Üçüncü olarak daha da basiti var, bu özellikle Türkiye için çok geçerli, herhalde birçoğunuz katılacaksınız, hükümet finansal sektörün kaynaklarına çok ciddi bir claim'de bulunduğu için hükümet kendi claim'ini boşalttıkça özel sektöre oradan yer açılıyor, buna da iktisatta 101'den hatırlarsınız, crowding out diyoruz.

Sevgili dostlar, data issues çok önemli çünkü aslında bugün Türkiye'de bizim çalıştığımız paper'ın datası yok. Bunu espiri olarak söylemiyorum, hakikaten biraz öyle. Şöyle yok, bunu DPT yılda bir kere annual program bünyesinde yapıyor ama biliyorsunuz biz Mart başında yeni bir GDP sayısıyla Türkiye'yi analiz ediyoruz. Bu yeni GDP sayısı çok farklı, eskisiyle hiç alakası yok, %30'lar kadar daha yüksek bir GDP var elimizde ve bu seri bazında özel tasarruf hesaplanmamış vaziyette. Toplam tasarrufu hesaplamak straight forward, identity'yi cari açığı alıyorsunuz milli gelir tarafından, üzerine investment'i koyduğunuz zaman zaten toplam tasarrufu buluyorsunuz. Ama özel tasarruf girdiğiniz zaman kamunun doğru bir tanımına ulaşmanız lazım çünkü kamu açığı gerekiyor burada yazmaya çalıştık paper'da. Çok basit identity'leri workout ederseniz kamu açığını ama mesela KİT'leri dahil edeceğiz mi etmeyeceğiz mi onu Türkiye'deki kamunun o genel haline DPT vakıf olduğu için bunu tek DPT yapabiliyor ve bizim görebildiğimiz kadarıyla biz aslında şunu yaptık, DPT'nin datalarını aldık eskiyi replike etmeye çalıştık, 87 datasıyla. Sonra oradan bu tesadüf de olabilir ama replike ettik bunu birçok yıl için ve bunu replike etmenin verdiği cesaretle de aynı metodolojiyi 98 bazlı yeni serilere uyarladık. Bu şekilde biz kendi analizimizin datasını kendimiz türettik onun için biraz kaygan bir zemindeyiz ama savunabiliriz o kadar da eleştirmeyin.

Dolayısıyla biz kendi saving serilerimizi ürettik. Bir de burada önemli olarak özel-kamu ayrımı için enflasyon adjustment'ı yapmak lazım çünkü bu tamamen, 90'ları düşünün çok yüksek bir enflasyon ortamı içindediniz, burada faizi transfer olarak yazıyoruz, aslında devletin faiz ödemeleri özel tasarruf olarak gözükmüyor, dolayısıyla o faiz ödemelerinin içinde çok büyük bir enflasyon varsa o, özel tasarrufları abartıyor, kamu tasarrufunu azaltıyor gibi bir görüntü oluyor, bunu düzeltmek lazım. Bunun metodolojileri var, bunu biz icat etmedik mesela Dünya Bankasının metodolojisi var. IMF çok hoş bir çalışma yaptı yeni, 2007 tarihli bir raporlarında o yani Türkiye'de özel tasarruf oranını açıklamaya çalışan bir çalışmanın enflasyon adjustment'ını önce yapması lazım. Bunu da yapmaya çalıştık. Uluslararası comparison'larla da IMF'yi kullanmaya çalıştık. Bunu çok çabuk geçiyorum. Bu iki serilerin birbirine yakın olduğunu görüyorsunuz. Burada göstermeye çalıştığımız SPO'yu replike edebildiğimiz. We are trying to impress you basically. Çok kısa olarak enflasyon adjustment motivasyonunu anlattım. İlgilenen olursa tekrar detayları konuşuruz.

Uluslararası perspektifle ilgili birkaç birşey söyleyeyim. Caroline ile şöyle bir gözlemimiz oldu, bunları çizdik falan aslında Türkiye'de ulusal tasarruf, baktığımızda iki cluster var gibi görünüyor. Biri, bildiğiniz yukarıdaki cluster, orada kimin olduğu malum, hepimizin konuştuğu ve 3-4 yıldır merak ettiği Çin ve newly industrialized Asia var. Bir de yeni son dönemde özellikle bu gruba katılanlar, bu terms of trade etkisi aslında, Middle East dediğimiz petrol ihrac eden ülkeler var. Yani yukarıda bir cluster var, aşağıda bir cluster var. Türkiye en aşağıda gördüğümüz gibi, mavi çizgi, denilebilir ki aslında 2 – 3 puan herkesin bir aşağısındayız. Özellikle son dönemde pek de yanlış

olmaz. Fakat aslında bütün o dataların hesaplanmasındaki margins of errorları falan düşündüğünüz zaman burada iki cluster var gibi geldi bize. Yani Türkiye'nin ulusal saving rate'i %17 civarında, is low by world as well as emerging markets standards diyoruz ama burada ufak bir yanılma olabilir diyoruz. Aslında bütün bu dünyayı ve emerging market'ları yükselten Çin ve Middle East diyoruz. Dolayısıyla, aslında overall savings olarak baktığımız zaman Türkiye'deki overall saving'in çok da düşük olmadığını düşünüyoruz biz.

Bunu bir ranking'e uyarlamaya çalışırsak, Dünya Bankasının world development indicators'ta 170 ülkede 90'lar civarındayız, bize çok yakın ülkeler de var, aslında Türkiye ortalarında bir yerde national savings olarak baktığımız zaman ama private savings'e geçtiğiniz zaman olay değişiyor. Özellikle, private saving'in son zamandaki düşüşüne baktığımız zaman Türkiye çok belirgin bir şekilde hem emerging marketlardan, zaten Asya'dan filan geçtim, hem de dünyadan oldukça düşük bir özel tasarruf oranı olduğunu görüyoruz. Hatta bu son dönemde 8% GDP kadar Türkiye'nin bütün bu adjustmantları yaptıktan sonra bile özel tasarruf oranının düşük olduğunu görüyoruz. Öte yandan public saving oranı için aynı şey geçerli değil. Türkiye'nin public saving rate'i aslında tabii ki Çin, East Asia, oil producers kadar yüksek değil zaten bütün oil revenue'nun çoğu bütçeye gelir olarak yazılıyor onun için otomatikman saving'leri şişiriyor. Biz aslında diğer emerging marketlara göre baktığımızda public saving'in de fena olmadığını görüyoruz. Yani özel sektör tarafından baktığımızda aslında bir sıkıntı var gibi görünüyor, kamu tasarrufu tarafından baktığımızda da fena durmuyoruz gibi bir gözlem.

Peki bunu bekler miydik? Türkiye'yi diğerlerinden özel tasarruf oranını düşük olmasını izah edebiliyor muyuz bu sağ taraftaki değişkenler vasıtasıyla? Bizim görüşümüz bunun izahının o kadar kolay olmadığı yani sağ taraftaki değişkenlere baktığımız zaman basit bir regresyon mantığı ile Türkiye'nin sağ tarafının ortalama iyemlerden on average çok da kötü olmadığını saptadık. Dolayısıyla, aslında özel tasarrufların Türkiye'de niye düşük olduğu konusunda bilmece devam ediyor açıkçası burada. Yani basit bir ampirik model bazında da Türkiye'yi kalitatif de olsa düşündüğümüzde sağ taraftaki değişkenlerin Türkiye'de clear bir şekilde zayıf olmadığını gözlemliyoruz. Mesela burada birtakım gözlemlerimiz var, diyoruz ki büyümenin Asya'dan daha düşük olması normal fakat bir takım başka açılardan mesela büyüme tarafını başka bir bölgeyle kıyasladığımızda aslında gayet yüksek gözüküyor. Mesela bir Latin Amerika ile kıyasladığımızda Türkiye'de büyüme oranları yüksek. Terms of trade diyoruz, onu birazdan göstereceğiz, terms of trade'in aslında Türkiye'de GDP'ye oranladığımızda çok büyük bir sıkıntı olmadığını görüyoruz. Bunun da başka ülkelerde aynı seyri izlediğini görüyoruz. Yani sağ tarafı düşündüğümüzde, çok detaya girmeyeyim, Türkiye'de diyemiyoruz ki hakikaten bu 7-8 değişkenden en azından 6-7 tanesi bütün ülkelerden, bütün regionlardan çok bariz şekilde zayıftır.

Çok kısa olarak -- bu paper'da box olarak yer alacak -- biz uzmanı değiliz söylemeye bile hacet yok, ama tabii Çin'in ne olduğunu ve Çin'in aslında Türkiye için ders olup olmayacağını sormak da doğal hakkımız böyle bir çalışma bünyesinde. Çin'e baktığımız zaman, uzmanlarla da biraz konuştuk, biraz kendimiz araştırdık, Çin'in tasarruf oranının

yüksek olmasının arkasında tartışılan ve öyle olduğunu düşündüren faktör olarak birkaç element ortaya çıkıyor. Bunların aslında hepsini Türkiye olarak düşündüğünüzde Türkiye pek orada değil. Özellikle investment motivated saving diye literatürde bir konsept var, investment motivated saving aslında financial intermediation'ın banking sektörden olmadığı ekonomilerde geçerli-- yani sizin bir yatırım fikriniz var, yatırım fikrine ulaşabilmeniz için kendi tasarrufunuzu geliştirmeniz gerekiyor, çok basit ama çok önemli bir fikir. Türkiye'yi düşündüğünüz zaman böyle değil, çünkü Türkiye'de aslında access var, finansal sistemin aslında gelişmiş olduğunu söylemek biçime göre son derece mümkün. Tabi bu arada Çin'de çok konuşulan one child policy var, tek çocukluluktan dolayı bir retirement mekanizması olmadığı için bugün save etmek zorundasınız. Türkiye'de bu konu tam oturmuş değil yani yarınla ilgili sorunlar var ama one child policy gibi dramatik bir şey olmadığı için Türkiye'nin bu konularda Çin ile en ufak bir benzerliği yok diye düşünebiliriz. Corporate sektörün davranışı, tabi bu bizim çalışmada explicitly bakmadığımız bir konu, çok çok önemli bir konu ama data yok. Aslında onu da data konusunda eklemem lazım dı. Hasan hocamız Referans'ta bir yazısında yazmıştı, corporate sector, household sektör ayrımını yapmamız lazım ama Çin'deki corporate sektör davranışı da son derece farklı gözüküyor. Çin'e aslında ayrı bir fenomen olarak bakmak bize yanlış gelmiyor ve Türkiye'nin parametrelerini düşündüğünüzde Çin'le alakası pek yok gibi geliyor bize.

Historic perspective, hemen çok kısa olarak geçeyim, bir defa Türkiye'nin kendi geçmişine bakıyoruz, bir defa söylediğim gibi maalesef 1998'den başlamak zorundayız. Yani 90'lı yıllara götüremiyoruz. 98'den beri yeni milli gelir serisinde tıkanmış vaziyeteyiz. Aslında en zor görünen en önemli seri bu arada onu özellikle yapmadık, sarı olan, private savings'in inflation adjusted olan seri, private savings ve onu orada gözlem olarak gördüğümüz, aslında ne kadar gözüküyor bilmiyorum, şurada baktığınız zaman şu süreç çok ilginç ve buna zaten konuşmalarda değinildi. Yani adjustment'ı yapmassanız serimiz şu, yapıp bu işe daha doğru bakmaya kalkarsanız serimiz bu. Son dönemde çok ciddi bir tasarruf oranında düşüş gözüküyor. Buralarda yine hani, we're hanging in there' kusura bakmayın ingilizce tabiriyle fena değiliz ama şu son 7-8 puanlık düşüş Türkiye'de hakikaten izah edilmesi gereken bir düşüş. Burada key pattern'lar nedir diye hemen özetleyelim, total savings almost flat since 2000, bunu konuştuk. Private and public savings mirror images bundan da bahsettik. Inflation adjusted private savings'te de özellikle Türkiye'yi kendi içersinde anlamaya çalışan bir zaman serisi çalışması. Orada IMF çok bariz bir şekilde bu regresyonları inflation adjusted olarak run ediyor ve 3 faktörü öne çıkarıyor , public savings rate'teki artışı son dönemde bunu hepimiz biliyoruz fiscal adjustment dediğimiz, primary surplus'ların düşen faizlerin arkasında bu var, tasarrufların iyileşmesinin çok ciddi bir offset anlamında negatif etkisi olduğunu saptıyorlar. Bunu konuşmuştuk, enflasyonda çok ciddi bir düşüş olduğu için onunla ilgili çok ciddi bir savings'i azaltıcı bir etki saptıyorlar ve büyümenin artması da tabi bu pozitif bir etki, hepsine baktığınız zaman bu üçünün net etkisi aslında bu 8-10 puanlık düşüşün çok ciddi bir miktarını açıklıyor. Yanlız biz, Türkiye'yi yakından takkip ettiğine inanan insanlar olarak tabi burada biraz puzzle olduğunu düşünüyoruz, dedik ki bu krediye ve faize niye acaba hiç rol yok, hatta IMF ile de bu konuyu tartıştık, paper'da da bunu biraz report edeceğiz ama kredi ve reel faizlere bir rol bulunmamasını biz biraz puzzling bulduk ve bunu bir teknik bir de anekdot olarak motive etmeye çalışacağım. Teknik olan



sebepler aslında ekonomide çok eski ve unutulması çok zor olan bir multi-collinearity fikri vardır, eğer bir değişken açıklanması gereken şeyin çoğunu yapıyorsa ve bununla collinear olan değişkenleri attığımız zaman sağ tarafa onlara açıklayacak birşey pek kalmaz. Bu tarz bir ilişkiyi biz aslında kamu tasarrufu ve faizler arasında görüyoruz, şu son alt panelde gördüğümüz gibi tamamen birbirinin zıttı bir hareket var yani highly collinear gözüküyor. Faizler düşerken kamu tasarrufunun artması olayı. Çok collinear olduğu için kamu tasarrufunu regresyona atıyorsanız zaten faizi, krediyi attığımız zaman onlara açıklayacak fazla birşey kalmıyor. Yani bu kredinin önemli olmadığı anlamına gelmiyor sadece ekonometrik bir sıkıntı olduğu için yeteri kadar bu serilerin kendini gösteremediği şekilde bizim görüşümüz var açıkçası. Bilkent Üniversitesi'nde daha önce yapılan, faizin ve kredinin önemli olduğunu bulan bir çalışma var. genelde dünyada yapılan çalışmalar Türkiye'de faizin ve kredinin önemli olduğunu gösteriyor.

Birkaç tane de size resim göstermek istiyorum. Orada da zaten bizim anectodally Türkiye'de bildiğimiz ve gözlemlediğimiz bir şey. İlk chartımız kredi-GDP rasyoları, Türkiye'de çok iyi biliyoruz uzun süre kronik istikrarsızlık falan olduğundan, aslında finansal sektör çok derin değil de kredi rasyolarına yansıyor. Consumer credit diye yola çıktığımız zaman 2000'lerde hele yeni GDP ile falan çok komik aslında %5'ler %6'lar konuşuluyor toplam tüketici kredisi-Millî Gelir oranı olarak baktığımız zaman. Burada final consumption expenditure olarak çizdik, Merkez Bankası'nın bir çalışmasından esinlenerek, biz replike etmeye çalıştık. Burada bir defa gözlem çok basit yukarı doğru çıkan bir kredi oranı var, bu bizi bir defa şüphelendiriyor. Yani kredi böyle bir ekonomide önemsiz olmuş olamaz.

İkinci bir şey çok karman çorman bir resim fakat bu aslında tüketici güven indeksleri. Bu CNBC-e kanalının private olarak yaptırdığı bir indeks, bir takım sorular bazında bu güven olayı anlaşılmaya çalışılıyor ekonomide. Burada gördüğümüz aslında en çok kredinin stumule edebildiği kanalın artması dolayısıyla güvenin arttığı. Yani burada en çok artan komponent zaten ortalama güvenin de ondan dolayı arttığı gözüküyor, consumer sentiment. Consumer sentiment te burada aslında sorulan sorular itibariyle ölçtüğü şey, durable goods demand'i ölçüyor. Yani siz kredinizi alıyorsunuz, dayanıklı tüketim mallarına yönelik bir talep var, genelde bir euphoria yok, tamamen kredinin dayanıklı tüketim mallarını destekleyen bir doğası olmasıyla artan bir güven mevzu bahis. Eğer güven genele yayılmış olsaydı o zaman daha farklı bir dinamikten konuşuyor olacaktık. Bu bizim için Türkiye'de kredinin önemli olduğunun ikinci bir ispatı gibi geliyor bize.

Son bir gözlemlerle, burada hepimizin aklına gelecek bu terms of trade etkisi. Çünkü Türkiye petrol ithal eden bir ülke, detaylar burada yazıyor. Türkiye'de petrol ithali acayip bir düzeyde, biliyorsunuz geçen yıl 30 milyar dolar kadar net enerji ithalatı olan bir ülke. 37-38 milyarlık bir cari açığımız vardı, bunun 30 milyarını petrolden geldi ve bu bir süredir gidiyor. Dolayısıyla acaba diyorsunuz enerji faturasının millî gelire oranının artmasından ve bundan dolayı cari açığın artmasından dolayı Türkiye çok ciddi terms of trade şok mu yaşadı diye soruyorsunuz. Biz aslında orada enteresan birşey bulduk. Toplam enerji faturasını aldık ve millî gelire oranladık yani cari açık o yüzden ne kadar büyüyor diye baktığımız zaman bu aslında sarı tarafta onu göstermeye çalışıyoruz. Gri olan ise,

Türkiye'nin enerji dışı cari dengesi dolayısıyla aslında enerjide baktığınız zaman çok da dramatik bir azalma yok bu dönemde. Bu da bizler için çok ciddi bir puzzle, ben daha tam vakıf değilim, biraz teknik bir şey. Şu anda da aslında böyle; Türkiye'nin ihracat fiyatları çok iyi gitti son dönemde. Belki mal grubundaki kayma olabilir, yine Ercan ve Zafer'in benzer bir çalışması var, başka bir kontekste quote edildi, bu Türkiye'nin ticaret hadleri as such buradaki petroldeki artışa rağmen çok bozulmuyor, çok ilginç bu ayrı bir konu. Dolayısıyla, enerji faturanıza baktığınız zaman ve bunu milli gelire oranladığınız zaman 3-4 puanlık bir şok beklerdim ben açıkçası, yani Türkiye'deki aslında saving'teki azalış bir terms of trade fenomeni değil gibi geldi bize. Bu chart aslında onun bize bir göstergesi ve aslında cari açığın şu son hareketi yapmasının arkasındaki swing daha çok pozitiflerde olan bir enerji dışı fazlanın negatife dönmesi şeklinde. Bu da yine credit boom, disinflation ve benzer şekilde bize standart aslında bize bir credit boom, bir successful disinflation fenomeni oldu ve bundan dolayı euphoric bir hava estirildi ve bu yüzden private savings belki beklenenden çok daha sert bir düşüş gösterdi şeklinde bir sonuca ve noktaya getiriyor.

Son slaytım, will things better? Şimdi geleceğe bakıyoruz, biraz daha teknik konulara giriyoruz. Burada Caroline'e devredeceğim. Geleceğe doğru baktığımız zaman bizim herhalde önümüzdeki dönemde göreceğimiz, aslında şu anda görüyoruz, 2007'de private savings'te hafif artış var. herhalde bu euphoric faz bittiği için bunu izliyoruz zaten bir iki yıldır Türkiye ekonomisinde, bu kredi büyümesindeki düşüş, reel faizlerin çıkışıyla beraber savinglerde herhalde ileri doğru baktığımızda bir 10 puanlık düşüşten bir adjustment beklemek yukarı doğru, herhalde yanlış olmayacak diye düşünüyoruz. Bu cyclical bir mesele. Tabi aslında ortam improve ettiği zaman tekrar benzer bir sorunla karşılaşabiliriz o ayrı. Şu ana kadar enerji ile ilgili nispeten complacent bir resim çizdim ama bundan sonrası için sıkıntı olabilir çünkü hakikaten enerji faturasının milli gelire oranı da artık artıyor. 3.5'lardan 4.5'larda stabilize olmuştu ama şimdi ciddi bir şekilde bir artış mevzubahis, özellikle bu 200 dolar forecast'leri doğruysa geçmişe yönelik analizlerimiz doğru olmayacak. Private saving'leri bu terms of trade şoku sıkıştırabilir diyorum. Demografik dividend konusu Türkiye'de çok önemli bir konu. Yan nüfus ve bu yan nüfusun bize gelecekle ilgili saving oranı olarak ne söylediği çok önemli ve o noktada sabrınız için teşekkür edip, mikrofonu Caroline'e bırakıyorum.

**Caroline Van Rijckeghem :** Thank you. It's a pleasure being here. I'm going to make three sets of comments. The first will be on the demographic dividend. I'll be using Turkish household survey data for that. Then I'll look more closely at Turkish household survey data to see if there are general trends in the savings data and finally I will discuss policy conclusions.

Minister Simsek mentioned that Turkey has a young population. This is indeed true. The bright side of this is that the population is aging and the youth dependency ratio is projected to decline sharply by 2025. Currently the population age group, which is the largest, is between 15 and 30 years old. By 2025 this means that the population group, which will be the largest, will be in the 35 to 50 year old age category. Here in these slides I want to show you – on the left slide the green line, which shows the population

growth slowing down in Turkey as we move to 2050. It's still positive growth but it's declining as we speak right now. On the right hand side I want to show trends in fertility and dependency rates. The red line shows the fertility in Turkey and it shows that already since 1950 we're experiencing a sharp demographic transition, a sharp transition in fertility. This fertility reduction is followed some 15-20 years later by a sharp reduction in the youth dependency ratio. So right now while the fertility ratio is no longer declining much we still have a sharp reduction in the dependency ratio going on. These charts show the population pyramids. They show for 5-year age groups what percent of the population or actually in millions of people they show how many people are in each of these groups. The top slide shows the situation currently and the bottom slide shows where we will be in 2025. Now in developing countries normally you have a real pyramid. Meaning the bottom is the fattest, has the largest number of people. Here you see the pyramid shape is disappearing. We have a narrowing of the base, which shows this reduction in fertility, this reduction in the youth dependency ratio. And as you can see the bulge is in the population from 15 to 30 years old or so and by 2025 this bulge moves up into the 35-50 year category. So why is this good news for saving?

Well in a life cycle savings model we normally think as children being dissavers – they have no income but they consume, adults, working age adults being savers and then the retirees being dissavers. Now in practice the dissaving part of the retirees is just not there in the data. Even retired people save but they save less than people of working age. So what does that mean for future savings in Turkey given the population structure that we're projecting? It means they will have fewer people who dissave – who consume but have no income – we'll have more people in the category from 35-50, which is actually the category of highest savings rate because people get ready for saving for retirement. So as this population structure changes we should expect major increases in the savings rate. No more expenditures for these expensive children and more saving for retirement and saving for retirement being particularly important in a country like Turkey which has undergone a demographic transition because you can no longer count on your children to support you in retirement. That's a big change that a country like Turkey is going through as well. So in this literature this is called the demographic dividend, sometimes it's called the demographic gift and there's two kinds of demographic dividend: first you have lower child rearing expenditures because of lower fertility rates and that frees up money it could be for consumption, it could be for education of your children, it could be for saving and the second demographic dividend involves more retirement saving because of the breakdown of the family support system.

Now how large is this dividend? We use two different ways to address this issue; first we use existing panel data results. We're fortunate that people have estimated the relationship between the youth dependency ratio and the private savings rate. Second we projected savings using the age profile of savings and the future age profile of population. We needed to get an estimate of the age profile of savings meaning how much do people of different age categories save? We don't have this data in the household budget survey data and this is not a problem for Turkey, this is a problem for all over the world. You have data at a household level. You know savings according to the age of the head of household. That's not very useful. We want to know how much children save because we

are going to project how the share of population of children is going to change over time. And in Turkey in particular it's not useful because we have extended households, which group three generations of people together. How can we find this age profile of savings based on household profile of savings? The first method is to use regression analysis and I'll tell you more about it and this is what's done in the literature. And there's a second method and we were a bit creative here and we just made certain assumptions for how much people spend within a household. So we said children spend less than adults, the second adult spends less than the first adult, so we use those kind of assumptions to extract spending by individual from total spending of the household. As for what the existing panel data results tell us, we're relying on a study by Loayza and others which is part of the World Bank savings study which Murat referred to before, this very comprehensive study. The study suggests that one point reduction in the youth dependency ratio is associated with a 0.7 percentage point increase in the savings rate. What does this mean for Turkey? It implies a rise in the private savings rate of about 5% of GDP by 2025. And so mechanically applying this coefficient result to what we're expecting the youth dependency ratio to do, how much we're expecting it to decline (it can decline by about 7% of the population) we find a pretty high number but the bad news is it's going to take some time. It's not till 2025.

What about the methods based on extracting the age profile of savings. So how can we find out savings by age as a function of just savings at the household level? So what's done in the literature, this is by Deaton and Paxon, is to regress each household's savings on the number of individuals in that household of each different age category. So we regress the household savings on the number persons aged 0-4, 5-9 etc and run this over all the households in the economy. For our household surveys we have 8000 households. We're fortunate in the Turkish case to have such a large sample in the household surveys. So we take this 8000 households savings rates and regress them on the age structure basically of the household. And we can come up then with a coefficient beta, which gives us the contribution of a person of a certain age group to the savings rate. And then the next step is simply to simulate the aggregate savings rate by multiplying all the beta coefficients by the projected number of people in each age group.

So what do we find using this? This chart gives you the age profile from this regression analysis. The blue line gives you the estimate and the pink and the green line around it gives us the ninety-five confidence intervals around the estimate. So we find that we have, as expected, that we have negative savings in the first two age groups from 0-14 and 15-19. Then savings goes up very rapidly and is very large for the 30-34 year old group until you're the 40 – 44 year old group and then goes down and mysteriously goes up again after people are 70 years old. There are two mysteries here: one would have expected more savings later in life as people are over 45 years old. That's what people find around the world. And then one would have expected fewer saving after 70 but as you see these standard deviation bands are reasonably large so one could explain these large positive savings by saying that these estimates are imprecise for the older populations.

What about the final result we get having looked at the age profile? Multiplying the age profiles with the populations in each age group what do we get for the projection for aggregate savings rate? The blue line in this chart gives you the central estimate for the savings ratio. This is based on 2005 savings ratio in the household survey data. In the household survey data this was a 10% savings rate of disposable income. So we see a sharp rise very early on actually. As we speak there is this rise going on in savings because of the change in the population structure. 12% or so by 2010 and then a modest further increase after that. Again we have a large standard deviation band around this estimate. We cannot say for sure that we'll have a savings increase based on this estimate.

What about the second method that we use to find the age profile? Where we assume spending shares. How do we go about finding these spending shares? Well we decided to use the so-called modified OECD equivalency scale. This is normally used in poverty analysis but we thought it gave us at least a benchmark for the kind of weights one should assign to different kinds of persons in the household. We thought the first adult will spend an adult equivalent amount. Additional adults would spend half of what this adult spends and children 0-13 years old we thought would spend something like 30% of what the first adult spent. So these are arbitrary but we thought it would be much better than using simply per capita estimates for spending since children cost less and there are economies of scale in households. So then we derive spending from these equivalency scales and then savings as a difference between individual income, which is reported in the household data, and this calculated individual spending. Here is our age profile based on these assumed spending shares. Here you have I've left the original estimates from method 1 here as well. the light blue, the turquoise line here gives us the results for the second method so that we can contrast with the earlier results and this shows more actually a pattern that one would expect. We have larger dissaving for young people, we have larger saving of the +40 year olds and we have much less saving for the older population. Going to zero or dissaving for the 80+ category.

The turquoise line in this graph again gives us the projection up to 2050 for the aggregate savings rate using this method. It shows a much larger increase than using the first method to get the age profile. We have an increase starting in 2010, which then continues over time.

What's the bottom line based on these results? What can we expect of the future? Panel data results suggest there will be an increase in the savings rate of 5% GDP. From regression analysis to get the age profile we got 2% of disposable income by 2025 with most of the effect already happening by 2010. Finally using our second method for the age profile we got 5% of disposable income by 2025, so a sizeable, not negligible effect, but something slow in coming.

What about the impact of demographics on investment? What we're really worried about is the current account of course. It's no use if savings is going to increase but investment will increase as well. Now there's good reasons to expect that investment is not going to increase as the population ages. This is because for young populations you need schools

and when you have a young population you tend to have an increase of the labor force that's already happening. For that you need infrastructure, you also need growth in the private capital stock to maintain the capital ratio. So as the population growth slows down, tailors off and people simply move from being young persons in labor force to being old persons there's not going to be a reason for an increase in the capital stock investment to keep up with them. So we don't expect an increase in overall investment and this is also consistent with results of the literature, which show very small effects of demography on investment.

Second, we looked at the household budget survey data to ask whether the decline in saving, very marked decline in saving, was shared across households. So we're going to ask what we can learn from the household budget surveys? I already mentioned household budget surveys cover 8000 people. They ask detailed questions on income and spending as well as on assets but unfortunately not on financial assets but you do find all the information you'd ever want on durable goods cars, fridges, etc. The data quality is poor. This was somewhat of a setback. We initially did a lot of regression analysis but in the end we had to abandon it because we just felt so little confidence about the data especially for incomes. Just for those who use this data, spending is measured on a monthly-unadjusted basis; income is measured on an annual inflation adjusted basis so these two are not really comparable. Still everybody just takes the raw data and derives savings based on the difference between income and spending. In the paper we discuss a bit more robustness to changes in the definition.

How broad based was the decline in savings rate? We compared 2004 with 2005 household budget survey data because the big decline in savings happens in 2004. We looked at various groups according to the age of head of household, the number of children, and the location urban versus rural. We looked at proxies for income. We couldn't use income because income was so biased, so underreported that we have automatically a negative correlation between income and savings because income is underreported. So we use things like whether you have access to hot water, the number of rooms in your house. We observed that the decline in the savings rate was fairly broadly based. So in particular across income groups, across age of head of household groups, across urban rural location, we found that there was a large decline in savings rates.

But there seem to be three exceptions. First households with older heads of households with no children reduced their savings by more than other households between 2004-05. Then household with interest income did not reduce their savings and household with heads in the private sector reduced their savings by more. Let me tell you more about these results. This table here shows overall decline in savings from 17% in 2004 to 10% in 2005, the same happened in rural and urban areas. One interesting observation here is that households with interest income did not reduce their saving rates. So this is one of the few rare groups of people where you did not find reductions whereas people who had no interest income reduced their savings rate. Everybody in Turkey sort of understands this, they say yes interest income is such an important part of income for some households as real incomes in Turkey fell these people became relatively poor so they

couldn't spent like everyone else did therefore their saving rates didn't also decline. In literature we talk about substitution and income effects of changes in interest rates on savings so we can say these people had strong income effects, they were adversely affected by the lower interest rates so they had to save relatively much. 60 years olds or over without kids we find slightly larger reduction in savings which is quite interesting. Their savings decline from 16% of disposable income to 8% versus with the general population the decline is from 17 to 10%. So a small difference but why is it so interesting is that all the economic theories tell us that the old are going to be much less effected by the kind of things that happen in Turkey since 2003 and 2004. I'll come back to that. Public versus private savings behavior is also different, in the public sector people did not change their savings behavior as in private sector people did and I initially thought because in the public sector people felt quite uncertain with all the privatization going on of state enterprises so they would want to do precautionary saving and they would maintain their savings but it turned out that this is not correct. It is more likely to be result of some data problems.

More on these exceptions, about households with older heads reducing savings more than others. Why is this at odds with theoretical predictions? In the life cycle theory people are borrowing when they are relatively poor but expect to be rich in the future. This becomes possible with a relaxation of liquidity constraints. But the elderly have no reason to expect higher incomes in the future thus they have no reason to want to borrow on the base of higher income in the future and therefore move their consumption forward. So it is a bit of a mystery to find elderly reduce their savings more than everybody else. Another theory for the decline is of course general improvement and prospects in the economy, the economy is doing well, our permanent income is higher so we can consume more, may be we'll join the EU etc. etc. the elderly will have very few years to benefit from these better prospects so again from that theory they shouldn't be wanting to save less but they do! So people several times today have mentioned that in Turkey the increase of access to installment credits for durable goods. And I think this seems to have affected the elderly just as much as it affected the younger so instead of saving for 2 years to buy a TV, you buy your TV today and you pay it off over the year. This has nothing to do with life cycle savings, this is just bringing forward consumption by one year but that make a huge difference in national saving rates and also elderly will do things like pay for the wedding of their children on credit rather than have save for may be people get married earlier by one year.

I just want to conclude this section by telling you about under reporting about household data in case any of you want to use this data. This is what a raw data in the household budget survey for 2005 show, saving ratio against income and we find this huge lump of people in the left lower corner. We have dis-savings of 20 times income, who could ever dis-save 20 times income, it is just impossible but what this graph reflects is that people are very scared to report their full income but they make less mistake on the spending so both income and savings are under-estimated. So this is why you should never look at savings by income quantile which I've seen many times in Turkish reports Of course in the lower income quantile you've got all the people who under report so they are both poor, looking poor and have low saving rates.

Third, we considered policy options, based on what we've seen and also what people say in the literature. You could do nothing directly on saving and just address vulnerabilities through other macro policies. Why you would not want to do anything on savings is because there doesn't seem to be severe distortion on savings, in some countries there are distortions on savings such as a tax system which taxes income not consumption in which case you have the problem of double taxation of saving. We don't have that in Turkey because we heavily tax consumption and don't tax income much. The second reason not to bother with savings much, I can't quite say there is a consensus on this but there is a reasonable amount of evidence showing that the direction of causality is from growth to saving rather than from saving to growth. How can you address the vulnerabilities in the current account? The standard policy prescription, the old fashioned one, is expenditure switching and expenditure reducing policies so you want to engineer a reduction in absorption--the expenditure reducing part--and you want to switch expenditures to exports through a depreciated exchange rate. How can you do that? Well, the standard is to have tighter fiscal policy and looser monetary policy. The global environment may also do this job by reducing capital inflows and investment. Finally you could limit the vulnerability to capital flow reversals by lengthening government debt maturities. These are still short, 3 years. So you might say that we can't do anything about the current account but let's at least reduce the damage done in case there is loss of confidence. When you have very short maturity of debt of course you get huge crisis.

What about trying to directly raise savings, what are the standard recommendations and do they make any sense for Turkey? First, a shift to consumption taxes is saving friendly because it removes the double taxation of savings but as I already said there is little room for doing that in Turkey. Reduced interest taxation: the hope is that by reducing interest taxation you will increase net returns to saving, therefore people will want to save more. This will be only true if the substitution effect is large enough compared to income effect. In Turkey household saving data suggests there is an important income effect so we should not just expect that if we reduce interest taxation we will stimulate saving. People might say, "great, we are richer let's save less". Also these are costly to the budget of course you are raising private saving but you're reducing public saving so the overall impact on total saving is not known. You could consider USA IRA accounts, which would do similar things. I think this is worth thinking about at least.

Introduction of private pension plants, if you want to encourage people to save you have to give them safe vehicle to do that and private pension plans is a way to do it. Turkey has introduced private pension plans this century. Reduce replacement rates in the public pension system is another standard way to raise retirement saving. If you don't expect the government to pay your pension then you need to save yourself. That's one reason why China saves much. This is done with the May 2008 Social Security Reform but we need to make sure that this gets implemented. Keep emphasizing to the public the funding difficulties of social security in the future. There are funding difficulties in social security. Turkey has tried to explain to the public but not with much success. The idea is that those people realize that even though in theory they will get a pension, in practice there won't be money for it, they'd better save themselves. So this is also done in theory



but could be done better. Two more: switch to a funded pension program. The Şimşek quotes at the very beginning of the paper said that in the medium to long term Turkey will be considering switching from a so called pay as you go to a fully funded pension system. This means that people will have individual accounts in a way wherein they save and then obtain the interest revenue plus capital when they retire. So they would be a direct link between their contributions and their returns. And in a country like Turkey this would be expected to raise the overall savings rate. But this would cause big transition problems. Latin America has gone through 20 years of switching from pay as you go to fully funded systems and the conclusion there is that you can easily get a 10% GDP increase of debt to the government as a result of trying to engineer this transition. Why? Because the government is responsible for all the people who have already been paying in to the system so they've got to pay all these pensions to people who are going to be retiring over the next 40 years but they don't receive any new revenues. All the new revenues are to private pension plans or into some pension program. So it creates government debt. This is really something to be careful about in Turkey.

So this leaves us with increasing public savings. We saw it's not easy to increase private savings. Increasing public savings: Turkey has done well but the overall budget is still in deficit and it may increase. So the issue is really try to prevent any increase there.

So I think I'm out of time for the conclusions. Should I take a few more minutes?

The questions we raised in the beginning: Are savings the issue? Yes but not because of distortions favoring consumption but because of the large current account deficits. Are savings low? Yes they are but they are particularly low compared to the cluster of countries that includes Asia and oil exporters. Compared to Eastern Europe they are not low. Eastern European countries are really the natural comparatives for Turkey. Private savings may be low. We're still looking at the data because we are still not sure if they are really low or they just look low in the data. Why has savings declined? A typical boom following stabilization related to the availability of consumer credit. This seems to be the most sensible. One could also lay the explanation to the global environment of ample liquidity. What are the prospects? Possibly 5% of GDP in private savings over the next five years because of demographics. There may also be some increase in private savings thanks to the social security reforms, which have been implemented. On the other hand we can count pretty much on increases in oil prices and in the credit/GDP ratio which is extremely low: less than 20% of GDP to the private sector. So as Turkey becomes a normal country and offers more credit we should expect more of a reduction in the private savings rate. Can anything be done? In Turkey as elsewhere options are limited. Expenditure reducing and switching policies including a tight fiscal policy and a lengthening of debt maturities may be more effective in reducing vulnerability than measures to directly raised private savings rate.

I have some suggestions for future research but I think since I am out of time that's plenty. Thank you

**Kamil Yılmaz:** I would like to thank Caroline and Murat for such an excellent presentation of their paper. They covered I think almost all the related topics, related issues that is relevant for the Turkish savings at the moment so I will ask maybe we will take 5-10 minutes Q &A and then well continue with the coffee break.

Do you have any questions?

**Question - Ayşe:** You mentioned that there was this puzzle about the elderly dissaving and I was wondering if you investigated whether of not changes in the health insurance provided by the government might have prompted that. I suspect a lot of elderly saving is due to health shocks and in a poor health insurance environment that would have to be higher and I think there has been quite important changes in the number of hospitals they can go to and that I would imagine be a very positive reason for lowering savings rates.

**Kamil Yılmaz:** Any other questions?

**Question:** Actually in the name of being polite I'll go with Caroline. Do we have any measure of the EU convergence story impacting the savings behavior? Is there any comparative study between Turkey and the previous convergence countries? That's one question is do you think the composition of wealth in a country namely especially between real estate and financial assets and any transitions in that would have an impact in savings behavior? The fact that possibly I don't have any data in the last few years if the real estate values in Turkey have increased dramatically – have they I don't know – would they have an impact on the savings behavior. And just a technical suggestion: about the income sensitivity of savings. Can we get any proxy data from banks. Probably they have some data since we can't get anything from the data that you provide. Is there any way to extract? Because I think that's a very essential piece of information that we would need. Is there any hope on that front?

**Question: /Comment:** I just had one comment on the one of the broader issues. You had a substantial discussion of Ricardean equivalents between private and public saving but my interpretation of the data not Turkey specifically but generally speaking on the relationship between private and public saving is that it usually looks like it's the private sector that drives what's going on in the public sector rather than the other way around. So you know the Baro story was the government goes and does something and people see that and they offset it but I think there's some hints of that even in the Turkish data. Broadly speaking I think that what we typically see is consistent with story that basically that the private sector maybe there's a consumption boom or some other kind of boom and the opposite side of that is a decline in savings and that tends to generate revenues for the government and so the government budget goes into the deficit decline and the surplus goes up and that of course means that it would be very dangerous to draw the conclusion that it doesn't do any good for the government to increase its savings rate because the private sector is going to offset it. I think that would be not the right conclusion to draw from the negative correlation between private and public saving. Which this point has another reflection, which is that I think this literature there is refer to substantially in the paper about relationship between growth and saving and my view is

that that literature shows pretty convincingly that growth causes savings instead of the other way around. So it is may be a little bit puzzling why the Turkish saving rate has declined even though the economy has been growing rapidly whereas in most of the countries it seems that if you go through rapid growth than you can experience increase in the saving rate. I suspect though it means that it might not be as difficult for Turkey to increase its saving rate as you might find it to be if you were not a country that growing fast so things like moving to a fully fund social security system might be an easier thing to do when the country is growing fast so you should seize the moment which would be now.

**Question: /Yorum:** Aslında bunları bir not etmek için de söylemek istiyorum. Birincisi, bu tarihsel açıdan bizim tasarrufların artmamasında acaba etik sorunların da etkisi olabilir mi? Mesela varlık vergisi gibi, işçilerin dövizlerinin batırılması gibi, yakın zamanlarda bu İslami holdingler ve bunlar current account'u acaba daha yüksek gösteriyor mu? Bir de üçüncüsü, bu policy recommendation'ların hükümet tam tersini yapıyor genellikle de intihar ediyorlar yani Türkiye'de soft landing olmuyor, bunun acaba sebebi ne olabilir?

**Question:** I think in the same signation that you've made than can we generate problem between savings and growth although you've noted the paper by Rodrik but I think according to the neoclassical growth theory there is also casualty between savings growth so I think if that regression does not take into consideration this .....affect it can result in some unwise and ..... estimate so that is my question.

**Question - Seyfettin Gürsel:** Ben bu household regression'u ile ilgili teknik bir soru sormak istiyorum, orada sadece anladığım kadarıyla yaş önemli bir etken, fakat hane halkının içinde çalışan aile reisinin dışında özellikle kadınların çalışıp çalışmadığına bağlı olarak aile içinde acaba saving ratio veya bir tasarruf davranışı acaba ne ölçüde farklılaşıyor? Burada sözü şuraya getirmek istiyorum, çünkü paralel olarak siz bizden çok daha önce gidip bitirmiş vaziyettesiniz, Merkez Bankası, DPT ve Betam, TÜSİAD birlikte aynı şeye, aynı sorulara cevap arıyoruz, burada benim aklımı kurcalayanlardan biri çünkü literatürde de çünkü sağ tarafa konmuyor genellikle kadın katılım oranı. Tabi bu kadın katılım oranını tamamen tarımı çıkartarak bakmak lazım çünkü tarımda zaten anlamsız, Türkiye için de çok önemli. Acaba orada bir ipucu olabilir mi yani kadın katılım oranının çok düşük olduğunu biliyoruz tarım dışında, acaba bu tasarruf davranışını ne ölçüde etkileyebilir bunu sormak istedim.

.....: I think one important element might be fall of agricultural revenues in our country because agricultural income support policies changed dramatically after 2003 and 2004 and this led to a significant migration from rural regions to the urban regions and the characteristics are very different in the rural regions. The consumption pattern is really different. After migration perhaps household consumption expenditure had to increase and this might be another reason of the fall of private saving rates.

**Question:** Ben iki şey sormak istiyorum, bir tanesi özellikle Türkiye'de gelir dağılımının tasarruf eğilimindeki etkilerini nasıl değerlendiriyorsunuz yani bu son yıllardaki düşmede nasıl bir yere oturtuyorsunuz yani bu nasıl etkilemiştir? Bir diğeri de, Türkiye açısından

baktığımızda servet sahibinin durumunu tasarruflar açısından nasıl değerlendirmek lazım? Yani sonuçta, sermaye ve servet Türkiye’de çok farklı kavramlar olarak ortaya çok rahat konabilir, farklı bir şekilde kalitesini de etkiliyor netice itibarı ile tasarrufun, bunu nasıl değerlendirmek gerekir?

**Murat Üçer:** Ben yine Türkçe’ye döneyim, çok kısa aldığım notlar çerçevesinde, health insurance bence kesinlikle bir faktör, çok haklısınız, ondan bahsetmek lazımdı. Tabii tamamen o yaşlıların budget constraint ini kadar relax etti, mikro data’dan bakmak lazım ama dediğiniz çok doğru Türkiye official olarak universal health care’e yeni geçiyor ama de facto 2-3 yıldır biz bu uygulamanın içindeyiz dolayısıyla orada bakılması gereken şeyler olabilir. Memduh’un sorularına çok kısa cevap vereyim -- EU convergence ile ilgili Türkiye’yi şey yapan saving bazlı bir şey yok ama çok yeni bir current account üzerine bir convergence ülkeleri paper’ı çıktı IMF’ten, orada enteresan bir şey olabilir ama yine çok samimi konuşmak gerekirse inceleme fırsatımız olmadı. Bir panel data rate ediyorlar, norm’ları tayin ediyorlar ve EU içersinde kim daha fazla kim daha az current account ve nasıl bir adjustment path olabilir onu speculate ediyorlar, hoş bir paper ama daha bunu digest edip Türkiye’ye uyarlama şansımız olmadı.

Real estate value’da benim hep düşündüğüm bir şey, wealth effect önemli, mesela Merkez Bankası’nın çok hoş bir finansal istikrar raporu var, orada mesela net hükümlülükler verisi var, orada Merkez Bankası kredi tarafında mesela housing krediyi koyuyor ama asset tarafında housing wealth koyabilecek verimiz yok dolayısıyla aslında net yok yani öyle bir data yok Türkiye’de maalesef ama housing boom’dan Türkiye’de çok büyük bir bubble olmadığını düşünüyorum ben. Fakat Türkiye’de de bir housing related wealth effect oldu, onun da etkisini ölçebilmemiz bence mümkün değil ve o Türkiye’nin muhteşem bir eksikliği. Zaten biliyorsun, Economist’te, OECD’de falan hep böyle muhteşem comparative chart’lar yapıldığında bu real estate konusunda Türkiye oralarda yerini alamıyor, çok ciddi bir sıkıntı.

Professor Carroll in sorusuna gelince -- basically I would say if I may take this question in English, I think you put the causality in a different way. The way we think about this in Turkey is more like we start from fiscal adjustment because country is doing extremely bad in 2001, big financial crises and currency .....banks .....fiscal accounts were in shambels etcç but what happened is that IMF joined the game and they told us “look this is the fiscal adjustment you got to deliver” Government was a bit hesitant during 2002 but then in 2003 during the famous troop motion fiasco, by the way I call this fear driven fiscal adjustment actually in Turkey, in March 2003 when the motion to allow American troops go through Turkish territory failed there was terrible reaction in the markets and next day practically then prime minister Mr. Gül went on stage and declared primary surplus measures equivalent of 4.5% of GDP overnight. This is of course my take on it, so going primary was about 2 or 3% of GDP at the time so they were sort of announcing additional 4.5 so your going primary has become enormous so you got this sort of automatic pilot of primary surplus generation so than everybody started seeing this fiscal track record, then monetary policy started loosening so it is very nice actually text book tight fiscal-loose monetary policy example from 2003 onward because you saw the tight policies, you built the track record, Central Bank is relieved and then they relaxed the

monetary policy and then people started to observe the real boom in 2005. So in a way from a presidence perspective it looks like fiscal first boom later and then there is some revenue issues but that got us into trouble now, not than.

Mehmet, senin sorun delicate bir soru, yani policy response řu anda çok farklı gidiyor, onu hep konuşuyoruz, biliyorsun, onda hiçbir tereddütüm yok ve bu çok ciddi bir sıkıntı. Bir de bu şeyde de çok büyük bir complacency var, yani biz bu işin public sektör tarafını bitirdik, zaten sorun özel sektör, böyle bir lüksü yok Türkiye'nin filan, onu ayrıca tartışabiliriz.

Growth saving correlation, I think Prof. Carol already put it so I am not going to add more yani orada dediği gibi causality runs from basically growth to savings not the other way around and completely agree with endogeneity point as much as I follow the literature. Ve son olarak rural migration issue, Seyfettin hocam I think you are talking about macro aspects of labor data, rural urban as well as labor force participation low in females, we haven't thought through it to be honest but in very first participation we spoke about it so I'll leave to Caroline at this point, thank you.

**Caroline Van Rijckeghem:** I will be very brief, I agree on the elderly saving issue, this is actually the main conclusion people come to, that the elderly save for precautionary reasons in case they get sick. Improved public health insurance would make a big difference so we'll try to explore that issue. On the role of female labor force participation I guess as long as women are voluntarily in the home it wouldn't make much difference in their savings. So suppose women decided to stay at home because they think they can make a contribution to reducing expenditures on child care or home production of food etc. etc. so I don't see it, if it is voluntary why this should affect the saving rates but definitely it gives us great idea and we are going to include it in our age regression to see whether unemployment of the head of household or any other member makes a difference.

**Kamil Yılmaz:** Çok teşekkür ederim. Şimdi oturuma ara veriyorum.

### **Panel Oturum:**

**Ümit İzmen:** Bir kez daha hoşgeldiniz diyorum. Bu oturumumuzda dört tane kıymetli konuşmacımız var. Hasan hoca birazcık corporate sektöre değinecek. Onun için onun sıralamasını değiştirdik. Konuşmada en sona aldık. İlk söz Duygu hanımın olacak. Ben çok kısaca konuşmacılarımızı tanıtmak istiyorum. Burcu Duygan ABD Merkez Bankası Boston şubesinde finansal economist olarak görev yapıyor. Merkez Bankası'ndan önce Avrupa Üniversitesi Enstitüsü'nde araştırmacı olarak bulundu ve Dünya Bankası'nda da danışmanlık yaptı. Yüksek lisansı ve doktora derecelerini John Hopkins'ten aldı. Araştırmaları, tüketim ve tasarrufların mikro dinamiklerini ve bunun makro ekonomik sonuçlarına odaklanmıştır. Özellikle, makro ekonomik olaylara hanehalkı davranışları arasındaki etkileşimi inceleyen çalışmaları vardır. Son dönemde hanehalkı borçlanma ve

borç geri ödeme davranışlarını etkilediğinden mali ve kurumsal gelişmeleri incelemektedir. İlk söz Burcu Hanım'ın. Buyrun.

**Burcu Duygan:** Öncelikle Kamil Yılmaz ve EAF'a çok teşekkür etmek istiyorum bu güzel konferansı biraraya getirdikleri için. Ayrıca Carolina ve Murat'a çok teşekkür ediyorum, çok güzel ve çok zamanında yazılmış bu rapor için. Ben çok şey öğrendim okurken. Bu noktada affınıza sigınarak, ingilizceye donuyorum.

The main disclaimer here is when you work at the Federal Reserve you really have to say that these are my own views and they do not represent the Federal Reserve Bank of Boston or the Federal System in general. So just to provide an overview of the report and what Carolina and Murat looks at is they studied the evolution and determines of private savings rate in Turkey starting with a brief overview of the theory of consumption and savings as well as the empirical literature. They discuss trends in the saving rate while also trying to put Turkey in a broader context looking at where it stands compared to its own historical trends as well as where it fits within the international context. And they look at both macro and micro data which are unfortunately both subject to serious measurement problems. Then the main objective as we said is trying to understand the possible reasons behind the recent decline in Turkish private saving rate and thinking about policy prescriptions. And, why this is a relevant question I think is not a hard to answer in this audience, especially in the light of very high levels current account deficit as Carolin and Murat also outlined which creates a related exposure to changes in the adverse shifts and external financing. It simply puts Turkey in a more vulnerable place essentially which is why we care about what might be happening.

What are their main findings? Basically that the Turkish saving rate is low with respect to its own historical standards as well as by historical standards and the decline seems to be related to macro stabilization so lower budget deficits and associated recording offsets there is question mark there you both talked about it and as Chris mentioned it calling this ricardian offset, it is hard, ricardian is based on very strong assumptions. It is driven from perfect framework and we know that Turkey is definitely not a country with perfect capital markets or no uncertainty so this could be very well be due to habit formation which is a very common thought in consumption that people adjust their consumption fairly slowly in response to changes so we might see a delayed effect but still this does seem to be a factor. Lower inflation is another reason and the rapid expansion of credit. A small note here is that Carolin and Murat looks at inflation as a measure of uncertainty which is absolutely correct but when I kept reading at least from the micro side what will matter for households inflation will matter but earnings and employment volatility is really a key so I am thinking may be more relevant measures like unemployment rates and things that will capture the earnings and employment variability which is what matters from household perspective in terms of what uncertainty is?

Microdata which is very broadly analyzed due to all sorts of data issues also seems to support some of these things. My little notes here is when you look at the households and try to see who might be more liquidity constrained, you look at households who have assets but we know that Turkey is a country where there are all sorts of other ways people

save, having savings in the bank, my guess is that those households are even in minority and there will be all sorts of informal saving issues that nice discussion of that might be something to think about.

They conclude that changes in demographic structure basically aging of population together with the social security reform is likely to create some increases in the public saving rate and could help reduce the current account deficit.

Here I actually wanted to question, why did interest rates declined, why does this matter, the first question to think about is why do people save? Even before Milton Friedman's permanent income hypotheses, Keynes gave 8 reasons why people save and surprisingly since then the only addition to that has been the downpayment motive. The first one is what we call the precautionary motive, this is to build up reserve against unforeseen contingencies, saving for the rainy day. The second to provide for the anticipated future relationship in case of Turkey for example if individuals are expecting future income growth so some life cycle behavior this might be another reason or saving for retirement is a good example of this. To enjoy gradually increasing expenditure, to enjoy sense of independence, some of these are psychological and hard to capture in a rational framework. Saving for business, to leave some money for the kids and the other one what some people call the avarice motive and the next one is down payment motive which is if you are going to buy a house even when the mortgage markets are there you still need that 20% down and you'll be saving for that reason.

The reason I have these up is just so that we can go back and forth, what's been happening in Turkey, why are people not saving, why they should be saving more?

I'll take small D-tour here as people in the audience discussed and Murat and Carolin also mentioned when you compare private savings and China versus Turkey demographics doesn't seem to explain actually whole lot of what might be happening. High productivity growth is quite possible explanation so are liquidity constraints so even in terms of entrepreneurship households in China do have to save to start up their own businesses because the credit markets is simply not there the way they are here even though they are still behind in some ways in Turkey. Especially social security I think is the largest reason. If you think about the pension system in Turkey, actually it is very generous whereas in China you are nowhere near the same levels. A main issue that did not come up in the report might be something to think about is that China has undervalued currency and this has associated implications for the current account surplus whereas in Turkey it is just the opposite we have overvalued currency so something about the exchange rate dynamics I think again is may be a minor but worth thinking about.

Just a brief D-tour also Chris done a lot of marking point on my work and here is a little on, some people in economic literature also wondered how much of this is culture. May be Asians are known to be savers may be this is cultural effect and Chris actually has a paper on culture and its effects on economic behavior and there seems to be some evidence actually when you look at specially immigrants from Asia within US who has access to same financial institutions etc. you still seem to find some sort of effects but that ties our hands that if it is culture than there could be very little for us to do as policy but I think that is only part of the equation. For me it was interesting and I was pleased to

see in the morning discussion that you emphasized how China is not the relevant comparison point us, it is very very different in many ways so I kept thinking that we should really think about the EU convergence question that came up earlier, where we are compared to Greece, Italy, these are also countries that have much more similar structures in terms of redistribution structure to Turkey that we have and new member states especially Eastern Europe keeps coming up.

Going back to Turkey, as I said the main thing that kept coming up both in the IMF study and Murat&Carolyn's paper is one of the key contributors to what we've seen recently is recent period of stability and why would this decrease savings rates while there is anticipated income growth, if your expected income has gone up it is not unlikely that you'll want to increase your consumption today as well and decrease saving and similarly it's been associated with reducerial interest rate so both of those tie in why households save less today. The thing that worries me a little is we are a country with history of crises 1994, 2001 events more recently so I still don't think uncertainty in the country has come down actually and I don't think that the recent stability means that there is reduced earnings uncertainty and therefore I can't think that people are saving less because they are thinking "we don't really have to worry about being unemployed the next day" I think that concern is still there. This is from DIE survey that shows expectations for job opportunities so you see that this is still a volatile picture especially in recent period the percentage of people who expect that it will be harder to find a job is actually going up but it is just moving up and down and it is just to show that unemployment expectations are anything but stable at this point and there is still a lot of uncertainty regarding that. Another minor note, there is a lot of discussions on durables growth so there's been a big growth in spending on durable goods, but looking at 2003 – 2004 data is little problematic mainly because if you put 2001 in there which is the crises year you see that there is a 30% drop. Also durable goods are different from food and beverages for example, non-durables are subject to adjustment costs, which would mean that durable goods behave as some people call in ss band so their adjustment will basically be lumpy so part of what is happening in 2003 and 2004 is that first thing people cut down in the crises were durable goods because that is the easiest thing. When you face with increased uncertainty or bad income prospects easiest thing to cut down is durable goods, you basically postpone your purchases. So I agree that liquidity market story is an important one but reading too much from durable growth is a little problematic because of the way durable goods behave essentially.

Going back to social insurance, this is another reason, we say that people save for retirement which is a life cycle motive but people also save for in case they lose their jobs etc. if there'd be improvement in social safety net in Turkey this might be another reason that people might be saving less even though there is more uncertainty. Even though we have a very generous retirement system especially formal social safety nets are still pretty limited. In the paper that Chris was citing earlier I was sort of computing what was the welfare cost of 1994 financial crises and I see that household would have paid dearly to insure what happened to them and that is a signal that social security like basically consumption insurance is anything but perfect. Although since 1994 there's been some changes and these will have implications unemployment insurance has been introduced



and this has likely lead to reduction savings but also as Ayse mentioned there's been a lot of changes in the coverage of health insurance and this is again something to think about in terms of where to put things. Pension system, you also talked about the sustainability of the social security deficit and the reform.

Liquidity constrains keep coming up as the main thing both in the report and in general and following the 2001 crises there is really been amazing shift in what banks do essentially that there is consumer banking in Turkey is like a new product and disposable income ratios jumped from 7.5% to 29.5% in four years after that. Some of this could be convergence or catching up because Turkey, even though we are quite worried about this Turkey still is fairly low especially if you look in this graphic, you can clearly see that we are going to see further increases in the growth of household credit mainly because of the introduction of mortgages etc. I think credit is only going to grow up further.

Finally as I said relaxation of liquidity constrains having more credit in the economy is not a bad thing at all. This allows some extra insurance for households against employment shocks, it allows being able to borrow against anticipated income growth, motivation for student loans as was discussed earlier. Similarly introduction of mortgages means why we may see actually little bit of reduction in savings because now instead of having to save for whole house all you have to do is save for a down payment although the literature is divided on overall impact of this. My guess is that being able to borrow from financial markets and having such a mortgage system might also reduce savings by for example our parents because they no longer have to worry about you buying a house etc. so this might lead to reduction in bequest.

And finally Chris talked a little bit again about interplay with the precautionary motive even though model with uncertainty liquidity constraints don't matter relaxation of constrains as Chris said is likely to increase lead to consumption boom especially in the short run. As I said even though it is not bad to have more credit, China is good case where the reason they have such high saving rates is because of poor credit markets and poor social security but those are good examples of why not everything that leads to higher saving rates is a welfare enhancing phenomena. So having more credit is not necessarily bad but the thing to keep an eye on to is that real interest rates on credit cards are very very high. I don't mean we should regulate it but it is something we need to think about it and need to understand why the credit card rates are still so very high. At 4.5% almost monthly rates, that really is something to think. I am also little concerned because in the paper there was discussion about very high rise of borrowing even among the elderly because it is OK to borrow if you are expected your future income is higher but elderly borrowing it is definitely clear that their expected income is not going to go up. With all these wide expansion one thing that doesn't seem to come up so much into discussions is financial literacy; educating households about credit card use etc. should be a key policy issue I think as well as proper disclosure of interest rates and all the clauses associated with credit cards etc. this is not just about Turkey even in the US this is one of the things people discuss a lot and especially in a place where credit cards are relatively new this comes out all the more and as I said the reason this could be a concern is as we

recently seen highly leveraged household can lead to serious trouble as we seen in the US.

Finally on income and consumption inequality, there isn't much discussion in this in the report but even though income inequality has been gradually coming down according to the household data in a recent paper actually with Nezh Guner we looked at what was happening to consumption inequality because especially as they mention income data is very very poor and consumption provides better measure of what the current welfare of the household is and consumption equality seem to be increasing over the last decade but this is something we should look in the later years as data is becoming more available. The reason we care about inequality is that because it is signal of how earnings of wealth, welfare volatility earning variations still is very high. In this paper with Nezh what we were looking at is and Murat eluded to this private spending on education has been increasing in the last few years whereas public spending on education is coming down and there is a huge difference between wealthy and poor households in terms of spending on education to, this is only to say that we actually expect inequality likely to go up and this is linked to some of the things Chris has said earlier and it also signals that earnings variations likely to stay up which is why we need more savings to buffer for those and also increased savings is going to be needed to save for children's schooling.

As I said growth stability and lower inflation may explain recent decline we've seen as saving rate, the question does remain whether it is safe to save less, from both micro and macro perspectives. On the micro we really need to better understand micro dynamics of household labor income and I think Seyfettin Gursel's question on what is happening to women labor force participation is going to be interesting. We need to understand how transmission of income shocks to consumption and household portfolios in general. As Chris said the key is we have very good consumption data, income data is not great but hopefully will improve but something like survey of consumer finances that is collected gives us a better idea of what is happening on household portfolios in terms of their debt holdings and savings is really hard to say more without that and in terms of macro perspective, global prospects as I said being in the US, I am a macro economist by training but I learned a lot about banking in the last 8 months that I have been at the Fed just. Global prospects including inflation pressures are going to put a lot of pressure on household sector especially because there is expected monetary policy responsible increased rates, I mean IMF made it very clear that they expect the target to be taken seriously and increase in interest rates is only going to put more pressure on already high interest rates that households face and also for the current account. Thinking about the policy I absolutely agree that there is no easy way to think about policy but key there is we will really need to pay attention to what Chris was talking and what Carolin and Murat talked about is when you talk about reducing taxes on interest income it is going to have very different effects on poor versus the wealthy so we need to understand dynamics of that similarly the financial market structure what could be done in terms of incorporating more of the informal savings. I don't know how much of the data captures housing for example which as in many countries especially in developed world housing is main asset of the household let alone holdings of gold, foreign currency that is probably not in the banking system and or overly generous social security system as we had before

have all sorts of distortions we need to think about when we are thinking about policy. Thank you.

**Ümit İzmen:** Çok teşekkür ediyoruz. İkinci konuşmacımız Ayşe İmrahoroğlu. Kendisi Güney Kaliforniya Üniversitesi'nde finans ve işletme ekonomisi profesörü. İş döngülerinin enflasyonun ve işsizlik sigortasının refahı etkileyen çalışmalarda bulunuyor. 1992'de Sosyal Güvenlik Programlarının kısıtlı imkanları bulunan ekonomilerdeki etkilerini inceleyen çalışmasıyla ulusal bilim vakfı ödülünü aldı. En son yayınları Sosyal Güvenlik Programları ve Bireysel Emeklilik Hesaplarını konu alıyor.

**Ayşe İmrahoroğlu:** Önce Kamil Yılmaz'a ve bütün katılımcılara teşekkür etmek istiyorum, gerçekten bu konulara bilimsel açıdan bakmak hem bu konuların ne kadar zor olduğunu hem policy recommendationlarının ne kadar komplike olduğunu gösteriyor. Murat ve Caroline'ın yaptığı araştırma da benim için çok faydalı oldu. Benim bu konuşmada sunacağım bizim Amerika'da şu anda üzerinde çalıştığımız makaleden alıntılar, co-authorlar Selahattin İmrahoroğlu ve Murat Ungur'la yaptığımız bir paper'ın sonuçlarını size göstermek istiyorum. Burada ben çok daha makro bir perspektiften Türkiye ekonomisi ile ilgili olarak size izlenimlerimi göstereceğim. Dolayısıyla, daha çok growth ve growth'a sebep olan etkenleri göstermeye çalışacağım ve onun için burada İngilizceye dönerek devam edeceğim.

I am going to actually use the lense of neo-classical growth model to understand the growth experience of Turkey. One main idea behind the neo-classical growth model is to say the following, poor countries that have low capital stocks should grow faster than rich and borrowing countries. So rich and borrowing countries may be growing at 1, 2 or 3% and poor countries should be trying to catch up and therefore get closer in per capita GDP terms to richer countries. So initially I want to look at the data and see how Turkey performed which respect to this idea of catch-up, has Turkey caught-up in the last 40 years compared to the world economies? To do that I am going to examine GDP per working age person relative to the US so I am going to take Turkish GDP per person and I am going to divide it by the US GDP per person and I am going to see if there has been a change in that ratio over time and I am going to compare it with other countries. So for example if you had a country that had the same GDP per capita as the US and stayed at the same level as the US you would have this line of 1, there would be no catch-up necessary, they would have started at the same per capita GDP and stayed the same. If you look at bunch of European countries and it is going to be hard to see exactly which countries there are on this graph but the point is not exactly looking at particular countries it is more in terms of looking at some of the trends. So one at the very top is an interesting case and that is Germany. First year there is 1960, Germany starts a little bit higher than the US in per capita GDP terms and then over time converges to similar levels as the US and especially after unification you see the decline of per capita GDP relative to the US. The bottom countries are many European countries and the general pattern is that they start at a level like 20%, 30%, 40% of the US in 1960 and they grow and they catch up little bit relative to the US over time. Where does Turkey stand in this graph? Turkey had 20% of US GDP all throughout 1960's, I was very depressed when I

saw this, this isn't what I was hoping for Turkey but this is what comes out. So the first fact that I realized looking at this data is that Turkish GDP per person relative to the US has been stagnant since 1960's. maybe the neo-classical growth model is incorrect, maybe it is really hard to catch up so I hate giving examples of few countries but I couldn't resist looking at some of them and here are some, these are Japan at the very top blue line, Ireland the black line and then the green line is South Korea. All those countries you see the catch-up, South Korea for example starts lower than Turkey, 10% of the US GDP and it grows about 50% of US GDP and again relative to these countries you can see the stagnation in Turkey which stays at 20% of US GDP. Even though this is depressing I wanted to look at this kind of lens looking through the data one more time and there is a new paper by Q and Prescott and they look at US depression in the 20's and 30's and then they say are there any modern economies that are going through depressions, big downturns in their economies and they say economies are expected to grow under normal conditions so this is sort of going back to saying borrowing rich economy is growing at 2%. So poor economy should grow at least at 2% under normal conditions and if they grow less than 2% for a long time period than they might be in a depression and if they grow higher than 2% than they are in economic boom. And they use this 2% as the trend growth because that has been the average growth rate in the US which in a way a borrowing country according to that definition. So I wanted to see how Turkey fairs with respect to looking at this data how did we do compared to 2% trend? By the way to use their classification of great depression they say downturn must be sufficiently severe about like 20% below trend and the decline must be rapid and they have classified some countries like Switzerland as going through great depression lately. So I am using their definition, their lens to look at the Turkish data.

So this is GDP per working age person and it starts 100 in 1968 and if it had grown at 2% it would have come to GDP per person of close to 210 so more than double. So how did Turkey fair in this comparison? I have three different.....rate of GDP for working age person in that green period is about .5%. than there is this red line after 2001 we see this pick up, a glimmer of hope there may be we are coming closer to the trend but of course it depends on what happens after that and I don't have the exact the data after 2004 and specially after 2008 we will have to see what happens.

I wanted to analyze this period and tried to sort of find out what is responsible for this kind of dismal growth especially between 1977 and 2001. And when I say to investigate what is responsible or who is responsible I am again using the neo-classical growth model to analyze that. So the neo-classical growth model says that there are certain factors that cause growth and those factors are in that equation. So AT is productivity, KT is capital, HD hours worked and ET is employment so basically to produce some output you need these inputs, you need labor, you need capital, you put them together there is some productivity, you get the output. What I have graphed was the output so I want to know which one of these factors failed the Turkish economy during that great depression period? So that is called growth accounting and that is what I am going to do. It allows us to rewrite that equation in a way that now I have YT over NT over there which is per capita GDP which is what we care about. Per person what kind of income did the people in Turkey over this time of period get? And than these factors that could

be responsible for this dismal growth are again TFB factor which is productivity. Capital intensity factor and think of capital intensity that is something that comes through investment and is fueled by savings so our general discussion of savings actually fits into this, it is a piece of this puzzle. So savings in close economy would be directly linked to investment and if we were not accumulating capital it would show as lower output for us. Than employment rate, what fraction of our able bodies are working in this country and ours worked per worker. So I am going to look at these different factors for these three different time periods that I graphed in different colors basically. So the first period is 60 to 77, this actually the status now starting from 1960, that is a period of relatively higher growth so if you look at the bold ones there are bunch of technical issues about how to compute these things so I have bunch of different numbers there but the bold ones, we can take a look at those. So if you look at 1960 to 1977 outputs for working age person on average grew at 3.32%. That is a good growth it is higher than 2%, we are not in a depression in that period. If you look at the factors that are responsible for that growth you have TFB factor at 1.64%, you have capital intensity factor at 3.20% so capital accumulation is healthy, TFB growth or productivity is OK and you have declining employment actually but despite the declining employment other things like capital and productivity were large enough to give us 3.3% growth in per capita output. Than you look at the second period, 1977 – 2001 and the average growth has been 0.5% which is the period now I classify as great depression using .....Prescot definition. In this period you look at capital intensity factor, it is 2.39%. It is lower than above but it is still a good number. You have the TFB factor, a negative number. You have the TFB factor, a negative number. So you have a huge decline in productivity during this period in Turkey. Not a very huge decline in capital accumulation and continuing decline in employment. Than comes this very short period of 2001 to 2004 and again there is a big change in that short period, a change that one wishes could continue because what you see there is a huge increase and output per person which 4.17% growth and the interesting thing is that all of the growth is coming from productivity according to this data that the contribution of TFB growth to this output per person growth is 8.72% so we see a decline in capital intensity, we see a decline in employment and all of that has been overcome by productivity. So that's a kind of data that makes us hopeful that if that kind of productivity growth were to continue we could really have high output growth but that remains to be seen obviously.

This just summarizes what I said, if you compare the first two periods you see that declining TFB growth was the most important difference so if I were to blame anybody I'd be blaming productivity growth for the dismal behavior of the Turkish economy although of course we should talk about what factors cause productivity downturns and I'll come to that in a minute. And between 2001 and 04 you see declining capital intensities so despite the fact that you are not accumulating much capital in that period we're growing and that is because of increasing TFB factor.

This is a graph that shows the same thing just year by year. Again the top one is TFB factor and I guess I'd like to point out that sharp increase after 2001 which was the reason that we saw such a large increase in output per worker in that time period.

Now, I showed you graphs about Korea, Ireland and Japan, I want to show you some of their data using this method. So those I call them growth miracles, I have them in quotes because maybe they are not miracles and that's what should have happened under normal conditions, poor countries should grow unless somebody interferes. How did they do it? This is Japan; I have it divided in 3 different periods because we did see that there is a slowdown in Japan so the first period is 61 to 73 with a very remarkable growth rate of 7.59% on average in per capita GDP. I have this other variable age which is human capital but let's ignore that for a minute but we see there is the capital labor's contribution to growth was 1.46% and contribution of A which stands for productivity was 6.19%. the second period 1973-1990 you see slowdown in per capita output growth down to 2.93% with the same capital labor contribution, 1.46% so they are still investing, they are still accumulating capital but their productivity factor is slowing down and that causing the slowdown in per capita GDP growth. And then comes the 1990-2000 period which is pretty dismal growth and capital accumulation goes on a little bit but again the real reason for dismal growth in Japan in that period is negative TFB growth. It is in parenthesis because it is a negative number.

Let me show you Ireland. This is 61 to 87 with a small sort of boring growth per capita GDP of 2.97% and they have small capital accumulation and small TFB and then comes their period where you see in graphs this huge increase in per capita GDP in Ireland 6.03% growth rate and a lot of it is coming from TFP. So what I wanted to bring to this discussion was that productivity growth is as important as capital accumulation if not more and whatever policy prescriptions we are going to come up with we should really look at the big picture. We can't just pick a particular variable, I understand we are worried about current account deficit and that Turkey may be vulnerable to foreigners pulling their money out but just to combat that we can't do anything and nothing like this of course was mentioned but it is very important to try to see the big picture as well.

This is from my lecture notes for my macro class, these are the factors that contribute to high TFB growth so I didn't customize these for Turkey but one can easily see the connection between some of these things and what is happening in Turkey right now. So the first one says rule of law this is about property rights. People need to believe they have good sound property rights that they can get what they are owned back to be able to produce, innovate and be productive. Policies towards innovation of course goes without saying sound macro economic policies the period of Turkey's dismal economic growth I bet is very much linked to not sound macro economic policies. Strong and stable political institutions and that is not parties, parties can come and go but we need stable political institution and of course education and openness. So these are things that we should be working on but if I were to connect this back to savings, I have a longer term picture here of the saving rate. This is the national saving rate. The red line is the saving rate and obviously we do see the declines in the saving rate in the later periods but when we look at the very long term picture saving rate in Turkey and I don't know if this is my data and I'd like to talk to Carolina and Murat about this and but I still see that this period national saving rate is not low compare to historical standards of Turkey. So I would like to investigate that a little bit more and the one I would like to leave with is actually is something that caught my attention that other experts would talk about which is the

employment to working age population ratio in Turkey according to this data has been going down dramatically and I understand part of this may be is coming from people retiring early, part of it might be coming from the switch from agriculture to manufacturing but that seems to be the biggest difference between the EU countries, US and Turkey. To me that is worth investigating. Thank you.

**Ümit İzmen:** Sayın İmrohoroğlu'na çok teşekkür ediyoruz. Üçüncü konuşmacımız İnsan Tunalı. İnsan Tunalı Koç Üniversitesinde Ekonometri, Çalışma Ekonomisi ve İstatistik alanlarında dersler veriyor. Son dönemdeki araştırmaları nüfus ve işgücü piyasası dinamikleri ile hane halkı anketlerinde kullanılan yöntemler üzerine. TÜİ kaynak halkı verilerini kullanarak yaptığı ampirik çalışmaları aracılığı ile işgücü piyasalarına yönelik politika arayışlarını çeşitli ulusal ve uluslar arası platformlarda katkıda bulunmayı sürdürüyor. Doktorasını University of Wisconsin, Madison'da yapan Dr. Tunalı Koç Üniversitesine katılmadan önce ODTÜ, Cornell ve Tulane üniversitelerinde çalışmıştır.

**İnsan Tunalı:** Ben vakit kazanmak için hemen Burcu ve Ayşe'nin teşekkür amacıyla söylediklerini tekrarladığımı söyleyerek başlayayım.

My slides are in Turkish but I am going to do my presentation in English, it is a compromise. We are talking about the saving rates, why it is low, why is it declining, what are the explanations, where is it heading, what can we do, should we do anything or not, and if we decide to do anything what might be a good idea. I am not going to answer all those questions obviously and I am going to say less than Caroline and Murat on it. I want to offer some evidence on the subject, some of which corroborates the observations and some of which challenges our understanding of what might be going on. Let me begin by looking at some attitudinal survey results. Other speakers referred to the consumer confidence indexes. This one in particular comes from TÜİK's web site and it measures respondents' orientation towards savings -- whether households intend to save in the 6 month period ahead of them. People respond by saying "yes, it is highly likely, may be, not so sure, definitely not" and I just added some reasonable weights to these categories. I tried two different sets of weights and what you see very clearly is that there is gradual erosion in the probability of saving as I label it in this graph. This is very clear over the period 2002 – 2005. In fact the likelihood is lower in 2005 compared to 2004 and remember that's the time when we observed this very large dip in the average savings rate from 15% to 10%.

If there is any relationship between this particular index and the average aggregate savings rate, then we should expect more declines, because this index is actually going down. The second index I want to share with you is more like a confidence index It is designed to find out whether people think that the environment is conducive to saving. There is evidence of erosion in the environment. Notice again the decline is pretty fast from 2000 to 2005 and than depending on which set of weights you use there is either some or more erosion in 2006 and onwards.

By mistake I reversed the order of my presentation. The first one I showed is actually the likelihood of saving, it is one thing to talk about the enviroment and it is another thing to

talk about the probability. I in fact prefer the first one. Notice that interestingly in 2006 there is a little bit of increase early on in this likelihood and it goes down again, so the question is whether this can be picked up in the hard data that we have. By hard data I mean the data coming from the Consumer Budget Survey.

Now I am going to talk a little bit about the distributional conclusions drawn in another report, which has been supported by the EAF and its partners. Presently we'll look at the quintiles of the income distribution rather than averages. The point here is that there is heterogeneity. We've been talking about averages but there is a lot of heterogeneity here that we need to talk about. Just for simplicity let me focus on a few cells here. First of all let me remind you that over 2003, 2004 and 2005 average household income increased at an average rate of about 4.2% per year. Per capita income increased at the rate of about 4.9%. The second figure is below the economic growth rate so personal incomes as reported did not go up as fast as the average income for the whole country, as measured by GDP per capita. Perhaps this a sign of underreporting? Anyway, that's where the aggregates are.

Now let's look at the distributional issues. We've broken down the income distribution into quintiles, each cell represents 20% of the population starting with the poorest. Note that the key increases are in the second and third quintiles. Here looking at the per capita increases in income we see numbers in the 11% range. This is more than double the average over 2003-5. Note that the smallest increase is in the top end of the income distribution as shown here. So it is very clear that during this episode there is improvement in income inequality and that is coming from a higher income share, which is going to second, third and to some extent fourth quintiles in the income distribution. In fact if we go to 2002 this finding is reinforced in the data. Now, this is bound to have some impact on the saving rates, right? And it does, as I will show you. But first let's look at consumption data. The question is, whether people perceive the income increases as permanent or temporary. You would think that this would show in their consumption responses, right? Let's see. In this next table there are two panels, so that the top one is for the household, while the bottom one is for per capita consumption -- so some adjustment for household size has been made. Once again we look at the 5 quintiles. Let me focus on the bottom panel for simplicity. What you see here is that consumption increases of the three middle quintiles, second, third and fourth -- are actually less than the rate at which their per capita incomes increased. So you would think that their savings rate increased... We will see the evidence shortly. Presently when you look at the top quintile you see that their consumption actually increased at a faster rate than their income. There is hardly any income increase for this top group over this period, but their consumption continued to rise. So if any thing, it appears that the top group is interested in consuming, not saving... They are on a spending spree. But the middle groups did not actually increase their consumption as much as their income so they must have saved...

Now of course we do know that there is a link between the savings rate and the income level. Let me share with you some evidence on this. Similar pictures can be drawn using newer available data, in this case I am looking at the 1994 Household Consumption Expenditure Survey which predates the Consumer Budget Survey. All I did was



calculate the average savings rate based on what the State Institute of Statistics reported as the average consumption and average income for 20 cells, each of which represents 5% of the population. As usual the data are sorted from lowest to highest income groups. Lowest income in the graph is on the left. Notice that in 1994 data households at the bottom 30% of the income distribution dissaved. We know that this fraction increased to about 40% in the more recent CBS data. But the fact that poor households dissaved is not new, we have evidence going back to 1994.

Is this measurement error (bad data) or is it reality? I think there is reason to support that this is a reasonable pattern. We can discuss the likely biases in the magnitudes but I think this is a pretty good reflection of reality and it would be nice to look at this picture for other years. Note that these are averages. The points on the graph are not the marginal propensities to save, these are the average propensities to save graphed by income.

Why is this picture important? Because this picture gives us some sense of what we might expect in terms of the changes in the aggregate saving rate. If we know what the average propensities are by income class, in a very mechanical way we can predict what will happen as incomes go up. Recall the fact that middle income groups have been increasing their income shares a lot faster than the others, over the period 2002-5. We might expect the savings rate to go in a particular direction. So that is why this way of looking at the data would be useful... But then of course there are other issues before we proceed in this mechanical way. We can do more careful adjustment for inflation, for example. Caroline told us the problems with the micro data from the Household Budget Survey. Income is adjusted but consumption is not. Since information on the month that the interviews took place is not given, you cannot do this adjustment. So that is probably going bias consumption upward over all relative to income and that might be factor contributing to low savings rates.

Now we return to the earlier source and look at the information on average savings rates. We see there is a lot of heterogeneity: in the bottom 40% the savings rate is negative. The saving rates increase as we move to higher quintiles of the distribution. What is intriguing is that if we compare 2004 and 2005 there is a slow down in income growth, but there is a speed-up in consumption growth... So it could very well be the case that households are not basing their decisions just on their current income, they might be looking at a bigger picture. Between 2005 and 2006 there is very little consumption growth, unfortunately we don't know what happened to income, it is not reported.

I have one more table that I pulled out of this particular source. What I want to underscore in this case is the fact that during this period (i.e. 2003-5) wage and salary income as a share of total income has been rising from a base of 36% per cent to about 39%. So income from wages and salaries is less than 40% of the total. Let's compare this with transfer income, reported towards the bottom of the table. Share of transfers in total income goes from 17.5% to 23%. These transfers are mainly from the government, local as well as central. This pattern is clearly linked with the dissaving that we saw at the bottom end of the income distribution. All this says is that the negative savings rate is consistent with the breakdown of income by source, wages and salaries vs. transfers. But

then of course the effect of the increase in transfers over time on the evolution of the savings rate is also very important.

Now I am going to move onto issues that have to do with the population perspective which figured importantly in Caroline and Murat's paper. In fact what I want to show first was touched upon in Ayşe İmrohoroğlu's presentation as well. There is no doubt that there is a huge employment gap in Turkey. So if you look at the slopes of the black line (which is the population aged 15 and above in millions) and the red line (which is the labor force), as well as the green line (which is the employed share of the labor force) we have clear evidence that the gaps are widening. Let me remind you that if you were to look at other segments of the population, sizable gaps remain. For example, you might correctly stipulate that people in 15 to 19 age group should be in school, and to a large extent they are... So if you were to drop this age group and examine the population aged 20 and above, you would still see the divergence. In fact if you were to exclude the 20 to 24 years olds you would still see a divergence. Why is this divergence taking place? This divergence is happening even after the adjustments that I've suggested, because retirement takes place at very early ages. I won't call this early retirement because there is no such thing as an early retirement clause. Instead everyone can retire early because of the laws that regulate retirement. We know that some measures have been taken, but it will take many years before we see their effect.

The next issue is this demographic dividend business, which we infer from future trends in population shares. In this graph I have four shares: youth are defined as ages 0 to 14 here (which is different from Carolina and Murat's, they used 0 to 18), while elderly are defined as ages 65 and above. Then I have two different definitions of adult (or productive) population. One of them is 15 to 65, which is the entire middle group. The other one is little bit more conservative definition, which restricts productive people to the 20 to 54 age group. The latter is probably closer to the reality in Turkey, given the fact that people retire at early ages, plus the fact that educational attainment is increasing so people do not enter the labor market until later. What we see here is that sure enough the share of the youth is going down: it starts at about 0.4 and it will end up at about 0.2 in 2075. The share of the elderly is increasing. Note that shares of the youth and the elderly are almost going to be the same in 2050, so aging is also an issue. Something that we have to confront, eventually. But the point I want to make here is that even though we agree on the patterns of change, in particular the bulge in the adult share, I am not sure if the first demographic dividend that Caroline mentioned is something that we should rely on. We know that as fertility goes down households substitute quality children for numbers so they actually spend a lot more per children. So I don't expect a dividend in the form of lower expenditures on children.

By the way, given the fact that educational attainment is increasing in Turkey, plus the fact that the elderly dependency ratio is increasing, we might predict an increase in public expenditures, which may have to be financed by increased taxes. Whether people will respond to this by saving more is a behavioral issue that I am not touching on here.

So the key point here is that between 2000 say, and 2030, we have this bulge in the share of the working age population -- whether we define it as 20 to 54 or more broadly it doesn't really matter. The way I see it, this is essentially the opportunity that we relinquishing with the low employment ratios that we have in Turkey.

Clearly this declining employment ratio has to do with this massive transformation from an agricultural to a non-agricultural economy. The evidence that I want to end up with provides a generational accounting of the changes in the employment ratio. This is basically synthetic cohort analysis, which allows us to use cross-section data to track generations over time. What we did here is examine several rounds of cross section data collected during the Household Labor Force Survey. For example, we can go to the 1988 data set and examine 15 to 19 year olds. These are people born between years 1969 and 1973, they are the youngest cohort that we can study using the 1988 HLFSS. Now if we go the 1993 data and look at the 20 to 24 year old group, once again we are looking at the 1969-1973 cohort. Now these are not the same people, but we rely on the fact that the data are representative of the population, so we can take them as being roughly the same as the 15 to 19 year olds we saw earlier, some 5 years later. So basically I follow those born between 1969-1973 over time and see what they've done.

So the key point is this: if you look at females in urban areas, you will see that the younger generations actually have higher employment ratios compared to the older generations. This is a very important finding and you heard it here for the first time... This is a good thing to know. The top figure I shared with you is based on four rounds of cross-section data, 1988, 1993, 1998 and 2003. We repeated the exercise starting with 1989 data just to make sure that these 5 year patterns are there. Notice that it is also very clear in the bottom figure. The blue profile is for the youngest cohort (1970-74), which is above the pink profile which belongs to the next youngest cohort (1965-69). And that in turn is above the yellow profile, which is the next youngest cohort (1950-54), and so on. So the pattern is very clear. There is also some evidence that women are actually spending more time in the paid workforce. This is very good news as well. If you look at males, things are different, which is very interesting. There is some evidence that the younger generations are actually entering the laborforce later. This to some extent has to do with additional educational accumulation and therefore it is a good thing, but then there is also some evidence that younger generations of males are exiting earlier (this can be seen on the right side of the graph). This is a consequence of the liberal retirement law which came into effect in 1992. So there is some evidence that urban males contributed to the decline in the employment ratio.

We look at rural areas next, where we see clear evidence of the declining importance of agriculture. Let me focus on the lower panel here, notice that the lines that connect four points each are all sloped downward. That says the 1970-74 cohort that we picked up in 1989 as 15 to 19 year was employed at a lower rate 5 years later, at an even lower rate 10 years later, and the lowest rate yet 20 years later. This is also true for those born between 1965-69 whom we pick up as 20-24 year olds in 1989. So basically the employment ratio of each generation of females is falling down in rural areas. This is attributable to the declining importance of agriculture. To some extent this is also true for males. In fact if

you were to look at recent cross-section data, you would see that the workforce in agriculture is aging. To sum up, the decline in the employment ratio, or the rising employment gap is mostly a consequence of the decline of agriculture, and the inability to absorb the surplus labor in rural areas in urban areas.

Let me finish with some questions and suggestions for Carolina and Murat. This was alluded to in earlier presentations: I think it is very important to think about how rural to urban migration influences savings. We typically expect the share of economic relations that take place in the market to increase. But do they? Do these households continue with their informal economic relations? If so, this may have implications for their saving behaviors.

Burcu mentioned this: I think self-financed housing is a very important issue. There might be some information about this in the household budget survey, possibly in the form of maintenance investment. This may be a very important form of savings for these households. So perhaps we can learn something about that by looking at survey data.

What can we say about the number of people working in the household and its implication for household savings? This is something that Seyfettin brought up earlier, in a question. The way I see it, the typical pattern was for women to enter the labor force at a young age and to withdraw once they got married. But there seems to be evidence now that they are entering later, and staying longer. This must influence their behavior to some extent; their perception of work may have changed. But then the recent social security reform has some disincentives for entering the labor force, because you have to stay very long to collect the pension benefit. This might actually deter some women from the labor market.

At what point does wealth begin to influence the saving rate? In the development economics literature there are a lot of asset-based indices of wealth that people construct just by looking at what type of durable assets households own. Perhaps this is doable with Turkish data as well, because there is a very rich documentation of asset ownership in the Household Budget Survey.

How about relations between income distribution and changes in income distribution and savings? I think this is very important -- perhaps a third simulation method which could complement the ones that Caroline and Murat have could be based on a very simple look at the data via the quintiles of the income distribution and the changing shares of income and its implications for the saving rate. This may be a different way of documenting/accounting for the changes in savings rates over time.

Finally, much has been said about credit card debt, the fact that it is increasing and this is how individuals have financed the consumption boom. I'd suspect that there are limits on how much people can borrow and spend -- but I don't know for sure. This is surely something worth looking at. So let me stop here, I thank you very much for your attention.

**Ümit İzmen:** İnsan Tunalı'ya da çok teşekkür ediyoruz. Dördüncü konuşmacımız Sayın Ersel. Hasan Ersel, Ankara Üniversitesi SBF'den mezun olduktan sonra aynı üniversitede öğretim üyesi olarak çalıştı. SPK baş iktisatçısı ve Merkez Bankası Araştırma ve Planlama Genel Müdürü olarak görev yaptı. Merkez Bankası Başkan Yardımcılığı görevinde bulundu. Yapı Kredi Bankası'nda genel müdür başyardımcısı ve ardından yönetim kurulu üyesi olarak görev yaptı. Halen Türkiye Ekonomi Politikaları Araştırma Vakfı'nın mütevelli heyeti ve merkezi Kahire'de olan Economic Research Forum adlı kuruluşun yönetim kurulu üyesi. ODTÜ ve Boğaziçi Üniversitesi'nde ders vermiş olan Sayın Ersel halen Sabancı Üniversitesi'nde hocalık yapıyor. Referans gazetesinde köşe yazıları var. Ayrıca beş yıl süreyle klasik müzik programları yaptığı Açık Radyo'da da halen iktisat programlarına devam ediyor. Buyurun.

**Hasan Ersel:** Ben de çok teşekkür ediyorum. Bazı slaytlar hazırlamıştım ama göstermeyeceğim ve kısa kesmeye çalışacağım.

Biraz anılarımla başlayayım. Ben memur bir ailenin çocuğuyum. Biz maaşla geçiniyorduk. Sonra 60'larda kırtasiyecilik yaptım bir süre. Bizim evin düzeni değişti. Şunu gayet iyi hatırlıyorum. Akşam yemek yerken masada bir kişi daha var diye hissedirdim. Dükkan. Çünkü dükkanın mutlaka bir ihtiyacı olurdu. O akşam not almamız gerekirdi. Ertesi gün sipariş yapardık. Stok yatırımları mutlaka yapmanız lazım. Tasarruf eğilimimiz değişmişti. Yani aynı aileydik, annem öğretmen, babam emekli subay. O yüzden ben bu Kaldor Pas..... modeliyle karşılaşınca hiç yadırgamadım. Muhakkak tasarruf eğiliminde bir farklılık vardır diye düşündüm. O nedenle de ben bu özel tasarrufun öbür bölümüne bakacağım. Yani şirketler kesimi ne oluyor diye. Veriler o kadar önemli değil. Çünkü Caroline ve Murat'ın karşılaştığı problemler aynen geçerli. Ama bu .... geçmeden evvel iki noktaya değinmek istiyorum. Bir tanesi tüketici kredileriyle ilgili. Bu da bankacılık döneminden kalma. Tüketici kredilerini alıp, kullandığımız zaman bir şeye dikkat etmemiz lazım. Tüketici kredileri yani bankaların açtığı tüketici kredileri olmadan evvel tüketiciler peşin parayla mı alıyorlardı? Hayır. Türkiye'de bazı geleneksel mekanizmalar vardı ve var olmaya da devam ediyor. İşte tüketici kooperatifleri olabilir bunlar. Bir de unutmayın, sonuçta müşterisine taksitle satan firmalar var. O ağı izlerseniz, o ağ bankacılık sistemi kayıtlarından çıkmaz. O ağa bakmak için şirketler kesimi bilançosuna giderseniz ve ticari kredilere bakarsınız. Ticari krediler önemli miktarda böyledir. Yani ana firma bir şeyi üretir, onu bayiine verir. Bayi onu satar. Sonuçta bayi o satışı krediyle yaptığı zaman, o parayı da o kadar ay sonra merkeze ödediği için aslında merkezdeki firmanın açtığı ticari kredinin tüketici kredisine dönüşmeme şeyidir. Bunu niçin söylüyorum. Türkiye'de tabii bankacılık çok gelişti, iyi oldu. Yalnız birden fazla bankayla mevduat dışı ilişkisi olan banka müşterisi sayısı nüfusun kaçta kaçdır. O soruyu sorduğunuz zaman, bugün Türkiye'de daha bankacılıkta gidecek çok yer olduğunu görürüz. Ama aynı zamanda da toplam tüketimi açıklamada yahut oradaki oynamaları açıklamada finans sisteminin açtığı tüketici kredilerinin sınırını da görürüz. Alpay Filiztekin'le beraber biz şuna bakıyorduk. Harcanabilir gelir rakamlarını. Ben onu tekrar yapayım dedim bu yeni serilerle. Dolayısıyla, çok dü

güvendiğim bir şey değil. Şöyle bir olay var: 2005 yılında Türkiye’de bir acailik var mıydı? Bu serilerden bir şey çıkıyor mu diye baktığımda, ilginç bir şey çıktı. Harcanabilir geliri hesapladım. Faiz ödemelerini aldım. Transferleri aldım. Net faktör ödemelerini aldım. Bunları GSYİH’den düşürdüğünüz zaman özel harcanabilir gelire ulaştığınızı gördünüz. Rakam reel olarak baktığımızda, nominal olarak da aynı şey. 2005 yılı özel harcanabilir gelirin en az arttığı yıl. Bu seride 2002’den 2007’ye kadar olan seride. 2002 yılında ne olduğuna bakıyorum: Gördüğüm şey şu: Vergilerin GSYİH’ya oranı 1 puan artmış. Yani öyle dehşet bir şey değil. Faiz gelirlerinde GSYİH’nın 3 puanı kadar düşüş var 2005 yılında. Bu önemli bir nokta. Transferler 1 puan artmış ama çok önemli değil. Yalnız artmış olduğuna dikkati çekerim. Çünkü bir sonraki yılda 2006’da 2 puan daha yükselecek. Ben onu seçim diye yorumlamıştım ama öyle değil galiba. Bir de net faktör ödemelerinde - % 2 oluyor. O da, dönemde böyle bir rakam yok. Yani en fazla olduğunda % 1 oluyor. Yani 2005 yılında harcanabilir geliri etkileyen bir olay olmuş. Bunu söylemem mümkün. Ben şirketlere bakalım dediğim zaman, kapitalist tasarruf eğilimi, ama şöyle baktım: Pure kapitalist, şirkettir. ...

..... fon akımı tablolarında. Buna baktığımız zaman, böyle bir rakam çıkarabiliyor muyuz? Evet, çıkarabiliyoruz. Ama bu rakamın neyi tam gösterdiğini çok iyi bilmiyorum. Çünkü Merkez Bankası’nın şirketler datasından aldım. Bu data büyük bir data. Türkiye’deki bütün büyük şirketleri kapsıyor. 7.103 firmadır. Satışlarına falan baktığımız zaman, Türkiye’de şirketler kesiminin önemli bir şeyini kapsadığını görüyorsunuz. Ama ne kadarını kapsıyorsunuz cevabını bilmiyorum. Şimdi bunun hareketine bakayım dedim. Nasıl hareket etmiş bu tasarruflar? Bir tane ilginç bir nokta var. Ben bunu GSYİH’ya oranla söyleyeceğim. Bir de kendi kendime şirketler kesiminin harcanabilir gelirini de hesapladım ama bunu kendi kendime yaptım derken şunu da ekleyeyim. 2005 yılı için Merkez Bankası kişisel harcanabilir gelirin yani hanehalkı harcanabilir gelirin toplam harcanabilir gelirin % 67’si olduğuna dair bir rakam veriyor ve her yıl için de onu kullanıyor. Ben de onu kullandım. GSYİH’ya oranlayınca ilginç olan şey şu: 2003 yılında şirket tasarruflarının GSYİH’ya oranı % 6.5’miş. 2004’de bu % 10.9’a yükselmiş. Ama bir sonraki yıl, 2005’de % 6.6’ya düşmüş. Fakat olay orada değil. Bir sonraki yıla geçiyorsunuz ve % 3.6’ya düşüyor. Burada benim dikkatimi çeken nokta şu: 2003 yılında özel yatırımların GSYİH’ya oranı % 15.5. 2004’de % 19’a yükseliyor, 2005’de % 20.7’ye yükseliyor, 2006’da % 22.3’e yükseliyor. Özel yatırımlar yükseliyor ve bu olay oluyor. Bu arada tasarruf oynuyor. Tasarrufun oynadığı yılların da bir özelliği var. 2004 yılına bakalım. Türkiye’ye ödemeler dengesinde 17 milyar dolarlık giriş olduğunu görüyoruz. Ama 2005’e sıçrayalım ve 43 milyar dolara çıkıyor. Öyle gözüküyor ki, bir dönemde yani 2004’de olup bitende özel kesim bu finansmanı yani yatırım hacmindeki artışı finanse edebilmek için tasarrufunu kullanmış ama daha sonraki dönemde bu tasarrufuna ihtiyacı olmayan bazı başka mekanizmalar olmuş. Yani dışarıdan kaynak girişi olmuş. Bu açıklamamla fazla bir şey getirdiğimi düşünmüyorum. Ama bir şeyi söylediğimi düşünüyorum. Bizim bu verilere çok daha iyi bakabilmemiz ve değerlendirebilmemiz lazım. Merkez Bankası yasal nedenlerle çok sınırlı kullanıma izin veriyor. Vermiyor değil, veriyor ama orada kullanmak gerekiyor. Yalnız bunun ötesinde bir şey var. Çünkü onların da sonuçta kriterini unutmamalım. Merkez Bankası kendisine herhangi bir şekilde ulaşabileceğini düşündüğü firmalarla ilgili bilgi toplar. Bu dışarıda bir çoğunda bırakabiliyor tabiatıyla. Daha geniş bir şeye ihtiyacımız var. Dolayısıyla iki şey söyledim. Birincisi, 2005 harcanabilir geliri etkileyen önemli bir şey var. 2005 yılının

bir özelliği daha vardır. Mevcut siyasi iktidarın reform programına devam ettiği son yıldır. Ondan sonra vazgeçmiştir bu işten. Nitekim, 2006'dan itibaren serilere bakarsanız, vergi oranları efektif olarak hafif azalmakta veya aynı kalmakta fakat özellikle hanehalkına yönelebilecek transferlerde yükseldiği yıllardır. Teşekkür ederim.

**Ümit İzmen:** Sayın Ersel'e de çok teşekkür ediyoruz. Soru almak için bir parça vaktimiz kaldı. Sorulara geçmeden önce ben değerli konuşmacılarımızın her birisine ayrı ayrı teşekkür etmek istiyorum. Çok geniş bir spektrumu ele aldık. Sabah oturumundaki tartışmaları çok iyi bir şekilde desteklemiş ve devam ettirmiş olduk. Gayet sıkı bir zaman baskısı altında mikrodan makroya, şirketler kesiminden hanehalklarına, tasarruf konusunu ciddi biçimde masa üzerine yatırdık sayelerinde. Veri sorunu bu toplantıda da bir kez daha önümüze çıkan temel bir problemimiz oldu. Şimdi derseniz soruları toplu halde alalım.

**Question – Cihan Yalçın:** Ben Ayşe Hanımın yaptığı büyümenin kaynakları ile ilgili birkaç ekleme yapmak istiyorum. Merkez Bankası'nda çalışıyorum. Son dönemde Merkez Bankasında bazı araştırmacılar bir çalışma yaptılar, oradaki büyüme kaynakları ile sizinkiler biraz farklılaşıyor. Belki nedenlerden bir tanesi onlar biraz daha sermaye stoku verisini yenilediler, ayrıca sermaye stokunun kapasite kullanım oranını da adjust ettiler, bu durumda büyümenin kaynağı asıl olarak yatırımlar gözüktüyor. Toplam faktör verimliliğinin katkısı biraz daha düşüyor. Böyle bir açıklama yapmak istedim. Bir de Hasan Ersel hocamızın üzerinde durduğu firma verileriyle ilgili, bu konuda birkaç çalışma yaptık. Doğru irs varlıkların toplam bilançolara oranı son yıllarda arttı özellikle 2005 yılına kadar arttı, asıl Erdal Özmen ile birlikte bir çalışma yaptık, özellikle financial assets tutma oranları firmaların 90'lı yılların ikinci yarısında çok yüksekti, bu bir anlamda bir saving behavior gibi algılanabilir ve bu dönemde fixed investment da düşüktü oran olarak da ve bunu ekonometrik olarak da test ettik ama daha sonraki dönemde bu eğilim bir şekilde değişiyor, crowding out döneminden crowding in dönemine geçiyoruz ve burada da saving behavior'da bir düşüş olduğunu söyleyebiliriz. Teşekkürler.

**İnsan Tunalı:** Burada bir şey söylemek istiyorum, 2004 işi çok bozuyor. O yıl enflasyon muhasebesi var diğerlerinde yok. Ben bu hesabı yaparken çok kaba bir yöntemle o 2004 yılındaki enflasyon muhasebesinin etkisini giderdiğime kendi kendimi ikna ettim, yani mümkün olmadığını siz de biliyorsunuz. Diğer dediğiniz noktaya da katılıyorum, onun için kompozisyon üzerine etkilere hiç girmedim sadece network'taki oynamaya baktım, çünkü kompozisyon değişiyor ve o da önemli bir nokta. Finansal varlık cinsinden tasarruftan reel tasarrufu arttırmaya geçiyor yani tasarrufun kompozisyonu o şekilde değişiyor, o dediğiniz de çok doğru. Bence o verilerin bu halinde bile oradan çıkarılacak çok şey var, onu söylemek istedim.

**Ümit İzmen:** Başka soru var mıydı?

**Christopher Carroll:** This is more comment than a question, it is to associate myself strongly with what Ms. Ayşe İmrohoroğlu said that in the end the most important thing to get right is growth and saving is something that if you get fundamentals and growth right

than this saving sort of will take care of itself to a large extend and I also thought that her list of factors are crucial for growth was right on target. Rule of law, one small difference I might have is that I think I would put openness second.

**Ümit İzmen:** Teşekkür ediyoruz.

**Question:** Growth ile ilgili bir soru, şimdi bizim tarzımız ülkelerde bu tip listeyle Ankara karşılaştığı zaman bunalıma girmemesi mümkün değil. Yani bir prioritization gerekiyor. Çok kısa sormak istediğim şu, bir parça yeni okumaya başladım, Rodrik Housman ve Rascow, Growth Diagnostics tarzı bir çerçeveleri var, orada daha farklı bir tree diagram yapıp şey yapıyorlar. Hatta Housman'ın 2005'te verdiği bir comment var, diyor ki, growth diagnostics felsefesi ile yaklaşırsak growth'a aslında low savings'in growth için en büyük obstacle olduğunu şey yapıyor, o zaman savings'e konsantre olalım deniyor. Burada size sormak istediğim ve aslında Türkiye'de biraz tartışılması gereken belki how do we prioritize policies that targeted to improve TFP that is very very necessary but one of the problems in these kinds of countries şey olmuyor, yani prioritize edemiyoruz. Yani nereden başlayacağız, rule of law dediğimiz zaman, bir education dediğiniz zaman we all very much agree ama practitioner olduğum için özellikle struggle ediyoruz. Bu konularla ilgili düşüncelerinizi alabilir miyim? Çok kısa uzatmadan.

**Ayşe İmrohoroğlu:** Let me start with Cihan's comment first, actually I would like to see that report, that would be great, so if you could send it to me. As Chris said and that is related to your question "how do we prioritize these different factors" and he wanted to put "openness" as a second one. My list was not meant to have any priorities really. I put them all there together in a way because I do realize it is very different for different countries. It depends on where they are in the development cycle in terms of how they can prioritize. But as far as I can see for the Turkish economy sound macroeconomic policies I would put at the top. We have had such unsound macroeconomic policies, textbook case of what not to do, we have done and they are not hard to stop. We have realized that inflation was not hard to stop. After 20 years of inflation we were able to stop it, there was pain but certainly worth the trouble so that I would put at the very very top. I realize education is very important but certainly that's much longer goal. It's results would be seen in the long run. It is not some thing that's going to affect the short run movements. In Turkey it seems like the families and the private investment on human capital education is immense and the government is not doing as much as the private families are doing. It is hard to prioritize but if you ask me I would start with sound macroeconomic policies because I think that is the lowest hanging fruit, it is easy to do. They just need to do it consistently.

**Ümit İzmen:** Ayşe Hanım'ın yorumlarına katılmamak mümkün değil. Ben tüm katılımcılara sabırları için ve sonuna kadar bizlerle kaldıkları için teşekkür ediyorum. Tüm davetli konuşmacılarımıza da ayrıca bir kez daha teşekkür ediyorum. Hoşçakalın.