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VULNERABILITY TO EXTERNAL FINANCIAL SHOCKS: THE CASE OF TURKEY

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Abstract

For many observers, Turkey's performance during the "2007+ global financial crisis"[1] was puzzling. In the first half of the 2009, Turkey was one of the worst affected countries in the world. In addition, the Turkish government was too slow to react, and the measures taken seemed inadequate. The purpose of this paper is to answer the following two questions: First, why was Turkey affected so much by the crisis? And second, why was the government's reaction late and "less than adequate"? The paper is organized as follows: In the following section the concept of vulnerability is briefly discussed. The second section is devoted to another methodological issue. Here a simple framework is introduced to analyze the channels and the manner in which a shock such as the 2007+ crisis affects an economy. In the third section, Turkey's experience with the 2001 crisis is discussed. The purpose of this section is to give some historical insight to explain why the government was confident (even over-confident) of Turkey's resiliency. The fourth section briefly surveys the developments in the Turkish economy after it was hit by the global crisis in the last quarter of 2008. In the fifth section, in the light of these discussions, the government's reaction is analyzed. In this section the emphasis is on the uncertainty that the 2007+ crisis had created. Therefore it is assumed that the government was taking decisions under complete uncertainty. A simple framework is introduced to show that a rationale can be attributed to the government's behavior. The paper concludes with the evaluation of the government's decisions.

ملخص

كان أداء تركيا بالنسبة للكثير من المراقبين خلال عام 2007 و فترة الأزمة المالية العالمية من الأمور التي تثير الحيرة. وخلال النصف الأول من 2009 كانت تركيا من أكثر الدول التي تأثرت بتلك الأزمة. لقد تباطأت الحكومة التركية كثيرا في اتخاذ الإجراءات اللازمة لمواجهة الأزمة, كما أن التدابير التي اتخذتها لهذا الغرض كانت علي ما يبدو غير ملائمة. والغرض من هذه الورقة هو الإجابة عن هذين السؤالين: أولا: لماذا تأثرت تركيا إلي هذا الحد بالأزمة؟ ثانيا: لماذا اتسم رد فعل الحكومة التركية بالتباطؤ والقصور؟ وللإجابة علي هذين السؤالين تناقش هذه الورقة مفهوم ضعف المقاومة ثم ننتقل إلي تقديم إطار مبسط لتحليل القنوات و الطريقة التي تؤثر بها صدمة كالتي حدثت في 2007 و الأزمة المالية العالمية علي الاقتصاد. ثم تنتقل الورقة بعد ذلك إلي التركيز علي تجربة تركيا في أزمة 2001 لتعطي نظرة تاريخية متعمقة وتفسر لنا الأسباب التي دعت الحكومة التركية إلي الثقة (بل قل الإفراط في الثقة) في قدرتها علي النهوض من كبوتها. ثم اتبعنا ذلك باستقصاء موجز للتطورات في اقتصاد تركيا بعد أن ضربته الأزمة المالية العالمية في الربع الأخير من عام 2008, ثم عدنا في ضوء هذه التطورات إلي تحليل رد فعل الحكومة التركية. ثم اتبعنا ذلك في نهاية الأمر بتقويم مستوي الشك الذي خلقة الأزمة التي حدثت في 2007 وكذلك الأزمة المالية العالمية, كما افترضنا ان الحكومة كانت تتخذ قراراتها وهي في شك كامل من أمرها. كما طرحنا إطارا مبسطا لندلل علي أن أساسا منطقيا يمكن أن ينسب إلي سلوك الحكومة. ثم نختتم الورقة بتقويم قرارات الحكومة التركية.

[1] 2007+ crisis for short. The choice of "2007+" to label the recent global financial crisis is based on the following arguments: The US housing bubble which peaked in 2005-6 is seen as the major trigger of the financial crisis which was felt globally in 2007. It is not easy to pinpoint exact starting or ending dates for such a widespread and enduring event. Many researchers, for example Soros (2008, p. viii), suggest that it was August 2007 when the crisis became truly global. This view is based on the fact that during this month central banks of the countries in the center (US, EU and Japan) started to inject huge liquidity to the system. On the other hand, even for those who are reasonably optimistic, the global financial crisis was not over in early 2010. Dominique Strauss-Kahn, managing director of the IMF, while pointing out that the global economy is picking up speed, in his speech at Davos, On January 30, 2010, also warned that the probability of a double dib recession is not negligible due to the fragile and asymmetrical nature of the recovery.

I. The Concept of Vulnerability

Vulnerability is a term which is widely used by different disciplines, such as economics, sociology, anthropology, environmental science and health, each assigning different meanings to it. Therefore in the literature there are a multitude of definitions for vulnerability.[2] In this paper, vulnerability is defined from an economic point of view. It is defined as the exposure of an economy to exogenous shocks, arising out of economic openness. A shock, by definition, is a change in external environment that affects the functioning of the economy in question. If it temporarily or permanently disables the workings of the economy significantly; then the economy is said to be *vulnerable* to such a shock. On the other hand, if an economy has the policy induced to withstand or recover from a shock it is said to be *resilient* to it.

In many instances, vulnerability is visible and can be defined explicitly. For example, small low-income (or least-developed) economies are identified as "vulnerable economies" and this term is widely used by the international institutions.[3] However, in some cases the vulnerability of an economy may not be that explicit. An economy may perform rather successfully under "normal" conditions, but may be excessively sensitive to particular external shocks. Such a "latent vulnerability" may create more problems than the explicit vulnerability, since the signals that the economy transmits under normal conditions may not be sufficiently alarming for the economic decision-making bodies. In such economies those signals can easily be interpreted as "temporary nuisances" and therefore the necessary decisions may not be taken. The main question of this paper is whether the "latent vulnerability" concept can help explain why the Turkish economy was affected so badly during the 2007+ crisis and also the reasons behind the apparently inadequate policy response of the authorities.

Vulnerability may be analyzed both with respect to its sources and by distinguishing its various effects on the economy. Obviously such analysis needs to be done by explicitly taking into account the multi dimensional nature of the vulnerability concept. With respect to sources, in general, researchers pick one source and analyze its effects. (Such as political shocks, natural disasters, climate change, financial crisis). In order to capture the diverse effects of a shock on the economy, economic vulnerability indices are developed.[4] In this paper, a much less formal approach is used. The focus will be on the financial shock that Turkey received due to the 2007+ crisis.

II. Three Channels and Three Waves of the 2007+ Crisis

An external financial shock such as the 2007+ crisis not only affects the financial sector of a country but can easily spread to the real sector as well. The financial crisis led to a sharp decline in the international financial flows, which inevitably, affected the behavior of the financial institutions in developing economies. Some of them, like the Turkish banks, faced tighter financial constraints since they were net borrowers from the global financial system and in turn they tightened their lending practices.

Real sector firms in developing countries faced much tighter financial constraints than financial institutions because the new global environment constrained their external financing capabilities and they were also affected by the change in the behavior of domestic financial institutions. Therefore, the total effect on the economy as a whole may be much stronger and more widespread than is observed from financial sector accounts. In other words, financial

[2] See Alwang, Siegel and Jørgensen (2001) for a survey of the use of the term in different disciplines.

[3] See, for example, Cali, M. and D. W. te Velde (2009).

[4] See, for example Briguglio et. al. (2009) and Guillamount (2009).

sector's well known tendency and capability to amplify the business cycles, once again, was effective. [5]

From the above perspective the effect of a financial shock on an open economy at the periphery, such as Turkey, can be analyzed by focusing on the following three channels:

1) **Finance Channel:** It works by affecting the external borrowing of the banking system and the real sector (and if applicable government).

2) **Trade Channel:** This channel operates through a decline in world demand for a country's exports. This may reflect as a decline in export prices and/or physical volume. Obviously, similar effects are also applicable for imports, due to the change in domestic demand.

3) **Expectations Channel:** Change in global environment may affect the behavior of domestic agents, notably banks. That may lead banks to curb lending, consumers to reduce their demands and producers to revise their production plans downward.

A second methodological issue is related to the nature of the external shock. It may be analytically easy and occasionally convenient to examine such a shock as a single isolated event. However it omits the fact that, the relevant decision makers (governments, banks, corporations, households etc.) react to this shock, and their reaction, in turn creates new shock waves, large or small. Obviously such reactions can not be neglected in analyzing a shock that is capable of triggering the 2007+ crisis. Therefore it is more fruitful to treat the episode as a series of waves, rather than a single shot event. It seems that, for a country at the periphery (such as Turkey), distinguishing the three major waves may serve the purpose.

1) **The initial wave:** The direct effects of the recession in the USA and the EU (the center) on Turkey.

2) **The secondary wave:** The indirect effect through the economic relations of Turkey with other countries which was also affected by the crisis at the center (such as Russia, MENA countries, etc.).

3) **The tertiary wave:** The direct and indirect effects of the measures taken by other countries on Turkey**.**

III. Turkey's Success Story: 2001 Crisis and Its Aftermath

Turkey is not foreign to economic crisis. The has country suffered from five major (1929, 1958, 1978, 1994 and 2001) crises, along with various less significant ones since the establishment of the Republic in 1923. Such an experience does not necessarily qualify Turkey as a country that knows how to deal with crises. Especially if one takes into account the fact that, except for the 1929 crisis, all others were home made. In other words Turkey went into crisis when the global economy was functioning reasonably well. However, the 2007+ crisis was a global one, and therefore a completely new experience full of uncertainties for Turkey.

In Turkey the 2001 crisis and the developments in its aftermath were fresh in the memories of policy makers as well as the economic agents. To a degree, it can be argued that, Turkey was haunted by the memory of its "success" in recovering from the 2001 crisis. Policy makers were confident that the measures taken in response to the 2001 crisis significantly increased

[5] This problem was first pointed out by Irvin Fisher (1933). Later, Bernanke & Gertler (1989) discussed the issue and offered an explanation known as ***"financial accelerator theory"***. More generally ***"pro-cyclicality"*** of the financial sector became a major concern and research area, especially after a series of crises in 1990s that hit both developed and developing countries.

the resiliency of the economy, especially against financial shocks. At the same time, the performance of the economy in the aftermath of the crisis increased the confidence of the private decision makers to the policy makers. In order to clarify the relevance of these points, the measures that Turkey took in response the 2001 crisis and its subsequent economic performance are summarized below:

i) Financial sector restructuring: Due to the rather poor state of the banking sector, the financial reform program had to be undertaken urgently. The measures that were deemed necessary were taken in 2001. It was estimated that the initial fiscal cost of the Turkish banking crisis was $ 48,5 billion; that is 20,2% of the GDP![6]

ii) Increased Transparency and Strengthening of Public Finances: First, the long overdue problem of duty losses of the state owned enterprises were taken under control. Second extra budgetary funds that were created in the late 1980s and seriously damaged the budget discipline were abolished. Finally a series of legislative changes were introduced to discipline public borrowing and public tenders.

iii) Enhancing Competition and Efficiency in the Economy: Progress was made in the liberalization of services and network industries (in banking, telecommunications, electricity and natural gas sectors). Competition Board's capabilities were enhanced. A series of measures aimed at reducing protection, eliminating anti-export bias and promoting foreign direct investment were taken.

4) Strengthening the Social Solidarity: The program envisaged measures in the areas of job security and social council to ease the likely tensions in the future.

Notice that all these measures aimed at restructuring the economy. The economy's reaction to these measures was, in general, quite positive. When one looks at the performance of the economy for the 2002-7 period, the following points can easily be detected.

i) Turkey not only recovered quickly from the crisis but was also able to sustain a significantly higher rate of growth (average rate of growth during this period was 7%) than its long run growth performance, which was around 4,4%.

ii) Turkey was able to bring down its inflation rate from high two digit levels to a single digit level in a relatively short time.

iii) Public sector finances improved considerably and continuously after the implementation of the program. Budget deficit sharply declined until 2007 and sizeable (although less than targeted) primary surpluses were created, uninterruptedly.

iv) Between 2005-2007 the volume of privatization reached to $ 26,7 billion. Using the proceeds of the privatization, Turkey was able to reduce its domestic debt significantly.

These rather positive developments were also accompanied by some visible weaknesses.

i) The high unemployment rate recorded during the 2001 crisis did not decline in its aftermath. The effect of the strong growth performance of the economy during the 2003-2007 period did not help Turkey to reduce its unemployment rate.

ii) Despite the sharp increase in Turkey's foreign trade, the current account deficit remained high and even its ratio to GDP increased.

iii) Private saving rate declined visibly. Since Turkey was able to draw considerable amounts of foreign private savings, a reasonably high investment to GDP ratio was sustained. However, capital inflows led to appreciation of the TL which in turn negatively affected both the balance of payments and industrial performance.

These negative signals, however serious they might be, did not lead the authorities to take measures to deal with the remaining, serious structural problems of the economy. In fact,

[6] For a thorough review of the measures taken and the results, see BDDK (2009).

from an economic policy point of view, the post 2002 period exhibits rather interesting peculiarities. First of all, the 2002 elections led to a drastic change in the political scene. The political parties that formed the coalition government which launched the 2001 program were practically wiped out. A new party, AKP (acronym for the Adalet ve Kalkınma Partisi [Justice and Development Party]) won the elections and formed a single party government, which Turkey lacked for a long time. Second, the new government, after a short period of hesitation, decided to continue with the program that was initiated by the previous government.7 This decision exhibited a positive but rather unusual stance on behalf of the government, since the opposite had seemed much more likely in light of Turkey's recent political history. However this attitude itself, was also controversial. Turkey's rather ambitious and comprehensive 2001 program[8] was quite modest with respect to its horizon. It explicitly recognized that its purpose was to realize a speedy recovery from the crisis and establish the necessary foundations for a new sustainable growth path for Turkey. It, therefore, explicitly pointed out the need for a new program to replace it within a few years. The program was implemented under a standby agreement with IMF. Although the program itself matured in around 2006 and the extended IMF standby ended in 2008, the then ruling AKP government did not introduce a new program to put the economy on a new sustainable growth path.

The government's apparent complacency on the economic front was in contrast with its initial reformist attitude concerning political and social areas. One answer to this rather puzzling behavior may be as follows: First, it is true that the government made considerable progress in launching a set of political and social reforms during its first two years of tenure. These reforms were Turkey's commitments under EU membership negotiations and were deemed necessary by the public, which, then, was strongly in favor of Turkey's EU membership. Second the immediate economic and social costs of these reforms were negligible. Therefore the government was able to launch these reforms without facing any damaging political cost. This was not true for most of the structural economic reforms that were postponed. Their social and economic costs were much higher and had to be paid in advance. In other words, those who paid for the reforms (current generation/voters), in general would not enjoy their fruits. Therefore launching such reforms was, at the very least, not politically appealing for the government.[9] Reform episodes of democratic countries indicated that governments do launch such costly structural reforms, but only when they have no other alternative route to choose. The AKP government, especially until 2005, did not feel such a pressure, notably, due to the general perception that the economy was performing well.

As was indicated above such a perception was not exactly correct. Turkey was still suffering from structural problems, and the economy was giving some negative signals. However, except unemployment, all other signals were warnings of possible future adverse developments, but had no visible effect on the current welfare of the people. Current account deficit was high, and it was signaling the existence of a structural problem.[10] However, it was not an issue for those who were enjoying the benefits of imported goods. High current

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[7] Political instability can also be considered as major source of economic instability Luckily, Turkey was enjoying the existence of a relatively stable political environment during the 2003-7 period. For the relation between political instability and vulnerability see, for example, Bussie & Mulder (2000).

[8] The program which was announced on April 21, 2001 was labeled as ***Strengthening the Turkish Economy-Turkey's Transition Program*** which clearly emphasized its transitory nature.

[9] This problem is not a peculiarity of this government, and for that matter, of Turkey. Almost all democratically elected governments hesitate to launch costly structural adjustment programs. They undertake them only when they have no other option. Recent experiences of the USA and some European countries can be given as fresh examples.

[10] See Togan & Ersel (2007) for a discussion of the sustainability of Turkey's current account deficit.

account deficits were, at most, considered as a problem for the future generations that would be in the position of paying external debt of the country. Therefore in the minds of the people, potential dangers of current account deficit were highly discounted.

The decline in the private savings rate was not a binding constraint for investments, since the private sector was able to borrow extensively from abroad. Currency appreciation was a problem for some exporters, which was felt notably after 2005. In the meantime, the increasing dominance of export industries that rely heavily on imported intermediary imports (such as automotive industry), reduced its negative effect on exports. In fact, Turkey's exports increased at a very high rate during this period.

Unemployment was obviously a different problem and felt by many. It was considered by many, as a temporary phenomena rather than being structural. In other words, it was expected that the employment, in line with world experience, would eventually react positively to output growth and quite possibly with low elasticity. However social tolerance for unemployment could not be expected to remain high indefinitely and it started to fade away, notably, after 2005.

Strong performance of the Turkish economy can hardly be attributed solely to the success of the 2001 economic program and its implementation. Turkey enjoyed the benefits of the rather exceptionally favorable global economic environment during 2003-2007. The world economy was growing at a significantly higher rate than it did before and world trade was expanding rapidly. These developments were also coupled by a dramatic decline in inflation in developing countries as well as a huge expansion in liquidity on a global scale, from which the developing countries started to enjoy the benefits after 2002.

Such a favorable external environment enabled Turkey to reduce its inflation without any output loss[11], and enjoy a high rate of output growth notably, during the 2003-7 period. The positive impact of world economic development on Turkish recovery was clearly visible from rapid expansion in foreign trade and an unprecedented increase in foreign direct investment. However, the success of these policies may, also, have led to complacency. The government, failed to benefit from the high policy credibility due to success of the policies that were followed to deal with the 2001 crisis. The government chose the less risky "policy tinkering strategy", which was much less damaging for policy credibility, instead of furthering its efforts to launch, costly but much needed, structural reforms.

This political decision was also reflected in Turkey's relationship with the IMF. During 2008 Turkey engaged in a lively debate on the benefits of making a standby agreement with the IMF. The government's reluctance to sign an agreement with the IMF led to speculation that the government was deliberately trying to postpone the necessary decisions concerning structural reforms (which were no doubt part of the conditions of a standby agreement with the IMF) to the aftermath of the local elections (which took place on March 29, 2009).

This may indeed be the case, but it doesn't fully explain the government's apparent confidence in the economy as well as in its ability to sustain the credibility of its policies in a changing global environment. The crisis began to affect the Turkish economy in the last quarter of 2008, which was hardly unexpected. Therefore the apparent inaction of the government cannot be attributed to the surprise effect. The global nature of the crisis and its contagion potential was quite evident by then. Therefore, one needs to look further to explain the reaction of the government.

It seemed that the government was quite satisfied with i) Turkey's quick economic recovery after the 2001 crisis and ii) The apparently strong banking system that was created after its

[11] In Togan & Ersel (2005, pp. 21-22) it is reported that the "sacrifice ratio" was not different from zero.

restructuring during 2001-2 and the better supervision/regulation capability that was created. On the other hand the government observed that, its decision to continue to implement the 2001 economic recovery program, in fact, considerably increased its credibility in the eyes of the public. These three factors, may, also, have strengthened the government's self confidence. Under such circumstances, the government seemed to be convinced that it had a freer hand in 2008 than the policymakers had during the 2001 crisis.

IV. 2009 Economic Developments

Unfortunately, the effects of the crisis on the economy were much worse than anticipated by the government.[12] The economic performance of the Turkish economy starting from the last quarter of 2008, but notably in 2009, made it clear that both the government's and public's confidence in the economy and the policies were not fully justified. These developments are summarized in the following table:

Macro Variable	Direction of Change
GDP Growth Rate	Sharply declined and became negative
Unemployment	Sharply increased and remained around its new high level
Foreign Trade	Both export revenues and import expenditures declined sharply
Financial Inflows	Declined sharply

The following observations can be made on the 2009 developments:

i) In the last quarter of 2008 the GDP declined by 6,5 %, which was not only large but was also the first decline in the GDP after 23 consecutive quarterly increases. The first quarter of the 2009 was much worse. The GDP declined by 14,7%. Such a decline in quarterly GDP was not recorded in the recent history of Turkey, even during the notorious 2001 crisis. The economy continued to shrink, albeit at lower rates in the following two quarters, 7.9% in the second quarter and 3,3 % in the third quarter.[13]

ii) In 2009, the value of export revenues and import expenditures declined by 22,6% and 30,3% respectively. The quantity and price indices indicate that most of the decline in foreign trade can be attributed to the decline in prices. When 2009 third quarterly data is compared with the same period of 2008, the prices indices indicate a 21.9% decline for exports and 25,9% decline in imports. The decline in oil prices was the major reason behind the sharper decline in the latter index. Quantity indices, on the other hand, reveal more modest decreases. During the same period, export and import quantity indices declined by 11,9% and 12,5% respectively.

iii) Unemployment rate jumped to 15,6% in the first quarter then came down to 13% in October 2009, which was still 2% higher than the 2008 average. A similar pattern was also observed for urban unemployment rate (which is more correlated with the economic cycle) which was 16,4% in October 2009. The average of this figure for 2009 was 13,6%.

iv) The 2007+ crisis, as expected, led to a sharp decline in financial inflows to Turkey. In order to see this effect in full, 12 month periods before and after October 2008 (the month at which the effect of the global crisis on Turkey became visible) are compared. Turkey's financial account of the balance of payments indicate US$ 51,1 billion inflow for the October 2007-September 2008 period. This figure declined to $ 2,2 billion

[12] In fact, the 2009 budget which was accepted by the parliament in December 2008 was based on 4% growth of GDP projection. More curiously, even in January 2009, the government was still defending this obviously unrealistic growth rate as its target.

[13] The fourth quarter official GDP estimates were not available at the time this paper is written (Early February 2010). Private forecasts indicate that the fourth quarter growth will be positive, due to base effect. It is quite likely that the decline in GDP in 2009 as a whole might have been around that the country experienced in 2001 crisis.

outflow for the October 2008-September 2009 period.[14] This magnitude of variation in external finance is quite large for an economy with a GDP of approximately US$ 780 billion. Foreign borrowing of the non-financial corporations was US$ 37,3 billion during the October 2007-September 2008 period. They ended up paying back US$ 10,4 billion in the following twelve month period. Bank borrowing exhibited the same pattern, but with smaller magnitudes: Banks were able to borrow US$ 16,2 billion during the twelve month period that preceded October 2008 and paid back US$ 3.4 in its aftermath. Foreign direct investment also declined from its US$ 19,2 billion level to US$ 10,3 billion.

It would be unfair to claim that the government did nothing. First of all, the government was keen on trying to convince the public that the expected effect of the crisis on the Turkish economy was not going to be as bad as feared. In other words, its efforts were concentrated mostly on *the expectation channel*. The government's efforts to influence expectations were moderately successful. The "real sector confidence index" sharply declined in the last quarter of the 2008 and increased slightly above its August 2008 level in May 2009. In the second half of 2009, the average of the real confidence index was even slightly higher than its August 2008 level. Secondly, the government did take some economic measures. However they were piecemeal measures. Their announcement were scattered in time and they were not well coordinated and focused. Therefore, they were either dismissed by the public or were not considered as part of a well articulated program to deal with the crisis. As a result of this perception, credibility of the government was damaged.[15]

In a sense, the puzzling disarray in policy responses was not surprising. The "2007+ crisis" was truly global and created an uncertain (as used by Keynes) environment for Turkey as well as the other countries.[16] Almost all projections of international organizations as well as national authorities concerning economic growth, trade, wealth effects etc. at the national and global levels turned out to be wrong. Frequent and confusing revisions were announced by the national governments as well as by the international institutions. Under these circumstances, expecting policy makers to pick the "best policy response" among the "feasible ones" is obviously unrealistic. In such an uncertain environment neither the concept of "best" nor the "feasible set of policies" are well-defined. However, this doesn't necessarily imply that, the policy decisions were irrational. On the contrary, one needs to redefine "rationality" under complete uncertainty to understand the revealed responses of the policy makers.

Turkey's experience in the second half of 2009 was, more or less, in line with the "three wave hypothesis", suggested above (in Section II). The effect of the crisis on the countries in the periphery, notably Middle Eastern countries and Russia, in turn affected Turkey's exports to these countries (secondary effect). Turkey's iron and steel exports to Dubai which had increased dramatically in 2009 stopped abruptly following the real estate crisis in Dubai. This crisis also affected the construction activity in Egypt, since a considerable number of projects in this country were undertaken by Dubai firms. In early 2010, exporters expressed their concerns regarding continuation of Turkey's iron and steel exports to Egypt. The tertiary effect started to become visible in early 2010 when Greece went into its own crisis. Although Greece's problems can not be totally attributed to the global financial crisis, its financial

[14] It should also be pointed out that during October 2007-September 2008 Turkey's international reserves increased US$ 4,7 billion, whereas it declined US$ 4,3 billion during October 2008-September 2009 period.

[15] In the 2009 March local elections the ruling AKP, was less successful than expected. AKP was hoping to increase its support above its election victory in the 2007 general elections. However, the voters disappointed the AKP, as its support declined 6,5 percentage points from its 46,6% level in 2007 to 40,1% in 2009. There are some survey results that indicate that economic factors, indeed, negatively affected the support for the AKP.

[16] For a discussion of the 2007+ crisis and critique of the policy responses, notably in the USA, see Stiglitz (2010).

problems and the similar concerns expressed for Portugal and Spain indicated that the recovery in the European Union would be much slower than initially anticipated and the European Union would have to take some extra measures to deal with the situation they are facing. These developments are likely to affect Turkey's economic performance negatively.[17]

V. Explaining the Government's Behavior under Uncertainty: A Simple Framework

Even though the discussion above partly explains the 'over-' confident stance of the government, it can hardly demonstrate the reasons that prevented the government from launching a concerted action plan to deal with the crisis. The authorities, with a lag, realized that the global financial crisis that hit Turkey in the third quarter of 2008 was exceptional. It was, not only a huge shock, but also created a completely uncertain environment. Under such circumstances, it was practically impossible to figure out the possible effects of alternative policies on the economy. The authorities neither had the time nor the information to consider all the possible outcomes. However focusing on only "good" and "bad" outcomes is both feasible and, as will be shown below, makes sense.

For this problem, the "good state" can be defined as follows: The effect of the global crisis on the Turkish economy will not be too different from what Turkey experienced in 2001. In other words, the new shock is qualitatively the same as the one that Turkey had in 2001. The measures taken after the 2001 crisis and Turkey's strong economic performance in its aftermath considerably increased the economy's resiliency against such shocks. If that is the case, then there is no need to launch a new comprehensive and socially costly program to deal with the shock. Piecemeal policy measures plus managing the expectations of the private decision makers would be sufficient. In this framework, the "bad state" refers to a shock which is qualitatively different from what the country experienced in 2001. If the shock is of that nature, some extra ordinary measures had to be taken. Since, the nature of the shock is unknown, finding the appropriate measures and implementing them, would be costly and time consuming. Under such circumstances, securing the support of the international institutions such as the IMF, becomes a necessity rather than a policy choice.

How did the government make a choice between these two cases under uncertainty? Since the minutes of the government meetings are not available, it is not possible to give a satisfactory answer this question. All we know are the revealed actions of the government. However it is possible to conduct a counterfactual exercise to try to figure out how a rational government would have taken decisions which led to the observed outcomes.

Consider the following table where there are two states (good, bad) and two policies (old policy, fiscal stimulus):

	Good State (I)	**Bad State (II)**
Continue with the existing policies (1)	Net Benefit of implementing (1) under (I)	Net Benefit of implementing (1) under (II)
Launch a fiscal stimulus program (2)	Net Benefit of implementing (2) under (I)	Net Benefit of implementing (2) under (II)

Using this table it is possible to derive the minimum information requirements of the government for making such a decision. It is evident that, the government needs to figure out the net cost of implementing policies in each state. On the other hand, the government also has to figure out which state is more likely to occur. Quantifying these attributes is difficult but not impossible. In fact governments frequently face these kinds of problems. What is

[17] The European Union is still Turkey's most important trade partner. More than 50% of Turkey's trade is concentrated in these countries. On the other hand European banking system and financial markets play a dominant role in satisfying the external financial needs of Turkey.

important here is the inevitably subjective nature of these assessments. The former type of valuations requires wild estimates on behalf of the government, whereas the latter simply reflects government's optimism (or pessimism). In a series of papers circulated at the Cowles Commission in 1951[18], Leonid Hurwicz demonstrated that that a rational decision making criterion that uses the above mentioned information set, can be found. He suggested the following criterion which is named after him: "Choose the alternative that has the maximum pessimism-weighted value".

Suppose that government's decision making process can be approximated by the "Hurwicz Rule". Then, government's decision to continue with the existing policy implies that in the eyes of the government either the expected benefit of launching a new program was not high, or the government was attributing a low weight to the occurrence of a bad state, i.e. its pessimism coefficient in Hurwicz's terminology, is low.

These findings may help interpret the rather puzzling behavior of the government during this episode. Judging from the Prime minister's speeches, apparently, the government's pessimism coefficient was low. The Prime minister repeatedly argued that the effect of the global crisis on Turkey would be minimal. Although the government's concern in managing expectations cannot be ruled out as a factor behind these declarations, their reiteration did not help the cause. Public opinion shifted towards assessing the government as "too optimistic", and became increasingly apprehensive. This manifested in, for example, the sharp decline in the real sector confidence index in the first quarter of the 2009.

After the 2009 March local elections, the Prime minister reshuffled the government. The new economic team seemed much more concerned about the negative consequences of the global crisis. However, the government did not launch a fiscal stimulus package, comparable in relative terms, to those launched in developed countries. Instead the government announced a three year medium term program in September 2009. The medium term framework was quite moderate with respect to its targets; it envisaged a slow recovery and its focus was on the fiscal balance. The sharp increase in the public sector deficit in 2009, due to a decline in tax revenues[19], warned the authorities that, the cost of launching a sizeable fiscal stimulus package was going to be prohibitively high. An increase in the public debt to the GDP ratio would alarm the financial markets, both domestic and foreign and might severely damage the credibility of the policies. Referring to the framework introduced above, this meant the "net benefit" of launching a fiscal stimulus program, indeed, might not have been as high as expected.

VI. Conclusion

The above discussion aimed to demonstrate that, once the uncertainty surrounding the events is properly taken into account, a rationale can be attributed to the behavior of the Turkish government during the crisis. But this, by no means implies that the government was correct in all its decisions. The government was late in recognizing the severity of the 2007+ global financial crisis and it was wrong in assuming that the measures taken after 2001 crisis made Turkey resilient to any shock. However, the government correctly detected that the expected benefit of launching a fiscal stimulus program, like the US did, maybe negligibly small or even negative. Given the relatively underdeveloped nature of the domestic financial markets and the present state of the global economy, an increase in public sector deficits may easily

[18] See Hurwicz (1951)

[19] This was not an unexpected outcome. Turkey relies heavily on indirect taxes, such as special consumption tax and value added tax, which are highly correlated with the volume of economic activity. According to Ministry of Finance, tax revenues gave positive signals only towards the end of 2009.

create the “debt sustainability problem” for Turkey once more and damage the credibility of the economic policies.

What remains unanswered is the government’s reluctance to approach the IMF for a standby agreement. It is evident that such an agreement could have helped Turkey in easing the pressure, due to the increase in public sector deficit, on domestic financial markets; strengthening the foreign exchange position of the central bank; and may have closed Turkey’s credibility gap in the eyes of foreign investors. The possible requirements of such an agreement would be undertaking certain reforms that may have helped to increase Turkey’s resilience to such crises in the future. It seems that, the government had some worries concerning the political costs of carrying such reforms when the country was heading toward an election in 2011. It is the author’s view that, this is the biggest mistake of the government during this crisis.

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