

Evaluating performance of Cyprus before and during the crisis

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Introduction

“The financial crisis that began in the summer of 2007 was an extraordinarily complex event with multiple causes”. (Ben Bernanke)

World economic crisis influenced all economies but in every particular country it was different. It happens because at the time when it began economies were in various stages of development, thus having different structure and imbalances, which was formed long time before. These factors determined flow of crisis and particular problems in different economic sectors. Also these are key elements for changing the situation for better, which may be used by governments.

Cyprus was one of financial centers in Europe due to double taxation treaties with numerous countries. It created significant capital flow in the country and also changed economy structure. That is why the first chapter of the work will be dedicated to pre-crisis period. This will help in understanding nature of problems in economy during economic crisis. Second chapter will describe processes in economy of Cyprus during economic crisis. It also will focus on the most vulnerable sectors of economy and their connection to economic growth of the country. The third chapter will show actions of government and the impact on the country growth recovery with connection to external political and economic events.

Chapter 1. Pre-sequence of economic crisis in Cyprus (1996-2007)

Economy of Cyprus during 1996-2007 period showed growth at average annual rate of 3.89%. For example average annual growth rate for Greece during same period was 3.93%, and for Germany only 1.62%. From 1996 till 2007, economy of Cyprus showed maximum growth rate in 2000 when it was 5.67%; it showed minimum growth level in 1996 – 1.62%. Main increase in GDP was influenced by joining European Union in 2004, for example in average during 2000-2003 this indicator was 3.81%, and later during 2004-2007 it increased to 4.41%.

Source: the United Nations Statistics Division; author's calculations

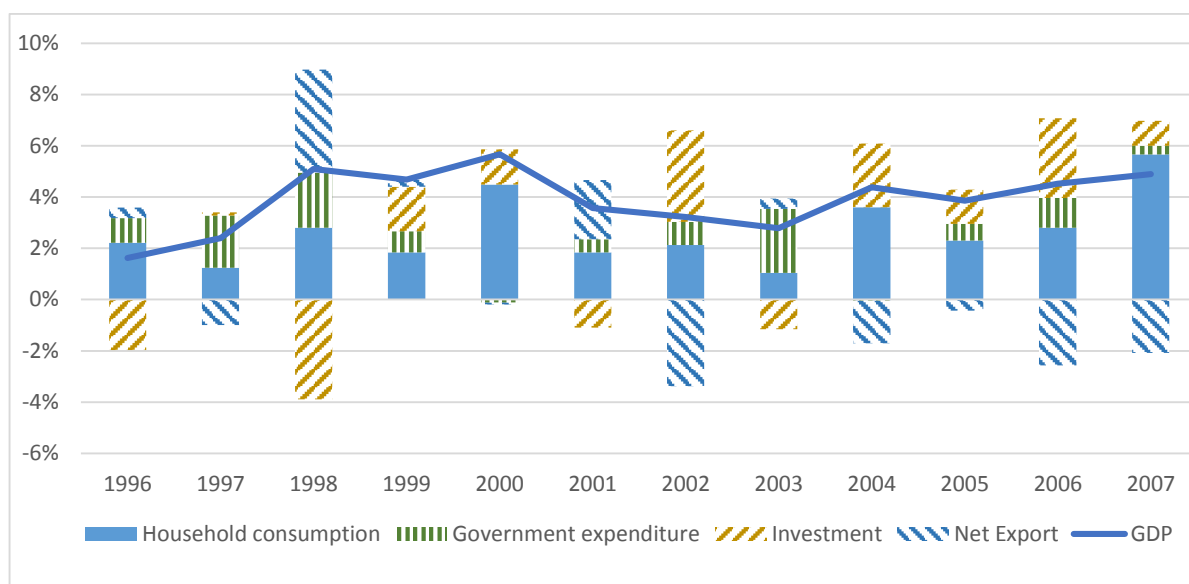


Figure 1.1 decomposition of Cyprus GDP by expenditure 1996-2007

To find out main driver of GDP growth during 1996-2007, its decomposition by expenditure will be used. Economy of Cyprus during given period showed rapid growth mainly because of household consumption. This contribution of the factor in average gave 2.67% input in GDP; it is more than all other components in sum. Maximum value of household consumption input was in 2007 – 5.67%, minimum value in 2003 – 1.04%. For example, average input of government expenditure at the same period was only 0.99%, investment input – 0.55%, and net export gave negative contribution equal to 0.31% in average. Second best economy driver maximum input in GDP was in 2003 – 2.5%, worst was in 2000 with negative value 0.12%. Investments are third by contribution with maximum result in 2002 – 3.57%, minimum contribution was equal to “minus” 3.89% (negative contribution) in 1998. Net export did not play significant role in average during 1996-2007, but in 1998 it showed maximum contribution equal to 4.02% and balanced bad result of investments in this way; later in 2002 there was

opposite situation when factor showed negative contribution of 3.38% and was balanced by investments maximum result.

According to that decomposition, consumption and investments increased in 2004 after joining European Union. When comparing average annual inputs of investment during two periods 2000-2003 and 2004-2007, it increased almost in tree times from 0.68% to 1.97%. Same situation could be observed with household consumption that increased from average annual input 2.37% during 2000-2003 to 3.6% during 2004-2007.

From the point of view of classic macroeconomic theory steady growth during 1996-2007 is well explained solely by increase in consumption. Figure 1.1 shows short-term model, where movement of IS line represents household consumption and government expenditure continuous increase. General government total expenditure was in average annually €3 bln. during 1996-2000 or 34% of GDP, during 2001-2007 it was already €5.41 bln. or 38.8% of GDP. Also credits for households from December 2005 to same month in 2007 increased by 38%, that reflexes increase in consumption. Further it gives boost in money market, because monetary policy of Cyprus was independent before 2008. Overall these shifts give steady GDP growth according to the model.

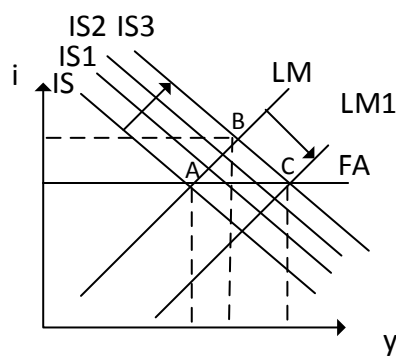


Figure 1.2 IS-LM model for Cyprus

economy 1996-2007

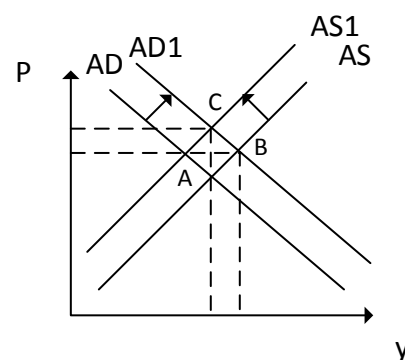


Figure 1.3 AD-AS model for Cyprus

economy 1996-2007

In middle term macroeconomic model, GDP always returns to natural level in contradiction to short-term model. In economy of Cyprus, there were multiple stimulations that gave shift from natural level each year. Fig. 1.2 can describe increase in output, where each IS line movement represent 1996-2007 increase in consumption, government consumption, and investment. This movement also result in changes of AS-AD model on graph 1.3, AD line shifts to AD1 position. That represents boost in GDP growth and affects price growth, inflation in

Cyprus during 1996-2007 period was in average 2.61% annually. Second shift represents reaction on previous price growth which gives increase in price expectations and results in a change of AS line position. This second shift represents the main idea of middle-terms analysis that GDP growth returns to natural level eventually which will be observed in Cyprus after 2008 (GDP growth dropped dramatically). Increase in price level index also did not take place because economy growth itself was not so big during the period that is why significant reactions of inflation were not observed. AS-AD model describes processes in Cyprus economy quite precise: AD line shift belongs to 1996-2007 period and second line movement to period after 2008 period, when economy growth returned to near natural levels.

Source: The Conference Board (<https://www.conference-board.org>)

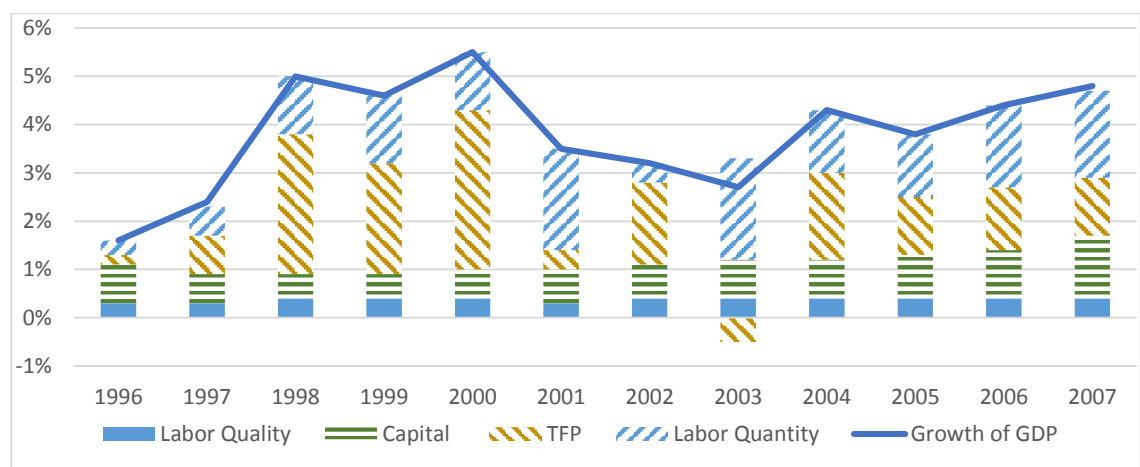


Figure 1.4 Solow's decomposition for GDP of Cyprus 1996-2007

Solow decomposition on Fig. 1.4 shows that main driver of Cyprus economy during 1996-2007 was total factor productivity that was 1.38% in average annually. Input of labor quantity was 1.28% in average annually, mostly it was connected with increase of immigrants in country during the period especially after joining European Union. Total population grew by 17% from 0.66 mln. people in 1996 to 0.77 mln. in 2007; during 2004-2007 in average increase was 1.8% annually, comparing to 2000-2003 when this index was 1.1%. Capital average annually input during 1996-2007 was only 0.77%. Because Cyprus is treated like safe haven for firms because of low taxation it has rather big capital inflow, but the problem is that this money do not help economy, and third position among other factors prove it. Labor quality input was the least in amount of 0.38% in average annually.

During period before crisis, economy of Cyprus accumulated certain rather high level of development due to two factors: taxation haven for companies creates investment flow and joining European Union gave boost of consumption and labor inflow. At the same time, these

benefits caused negative effects: inflow of investment creates additional volumes of currency in banking system that do not go into economy but make very hard to reveal real problems in banking system. High levels of consumption caused significant grow of household's loans that increases risks of banking system and made additional pressure on net export. European Union gave much benefits for Cyprus but, at the same time, independent monetary policy was lost after joining Euro Area; in future it will cause additional problems.

Chapter 2. During economic crisis (2008-2014)

During crisis, economy of Cyprus showed moderate decrease equal to -0.97% in average annually from 2008 till 2014. At the same time, Greece economy fall in average 4.12% annually (total decrease was -28.8%), for Germany this indicator has positive value 0.78%. Maximum increase of GDP during 2008-2014 in Cyprus was in 2008 3.62%, minimum negative value in 2013 - 5.36%. The interesting things about changes in GDP during crisis are as follows: in 2008 there was no significant decrease, first problems appeared in 2009, than again two years of positive GDP values 1.39% and 0.26%, finally in 2012 it dropped by 2.38%. Most countries in Europe had problems earlier than Cyprus, also they did not show growth during crisis time, except Poland. Analysis of this time shift will help in understanding economic imbalances that created crisis in economy.

Source: the United Nations Statistics Division; author's calculations

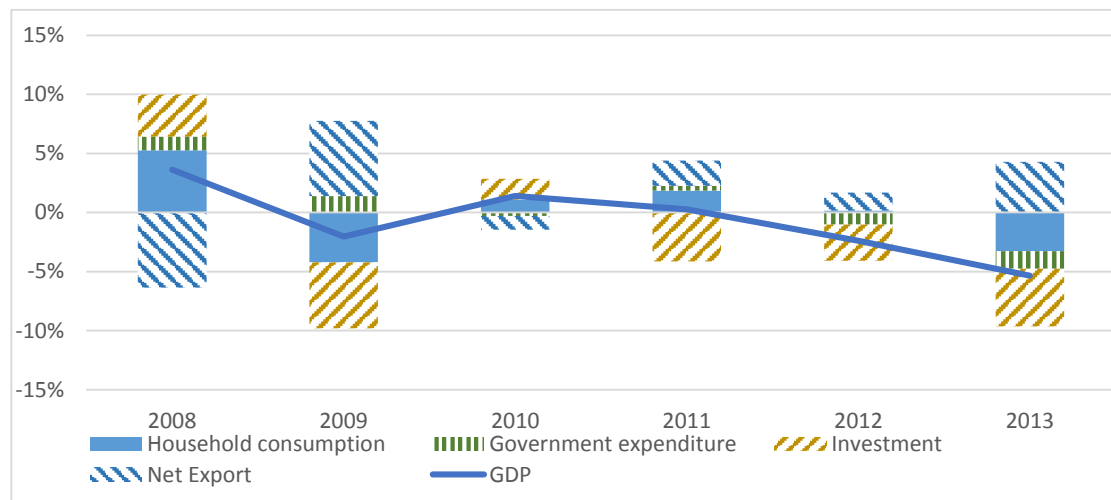


Figure 2.1 decomposition of Cyprus GDP by expenditure 2008-2013

Decomposition of GDP by expenditure shows that, during crisis 2008-2013, main driver of economy was net export: annual contribution in average was 1.14%, with maximum positive contribution equal to 6.37% in 2009 and minimum negative value 6.36% in 2008. Because net export factor consists of import and export to understand it's changes better to look on indexes separately. Such approach shows that in 2008 there was a huge drop in exports from 2.47% in 2007 to -1.83% year later - total loss of 4.3% share of GDP in one year. Next interesting year was 2009 when net export showed best performance due to significant drop in import share from 4.53% in 2007 to -10.18% in 2008, that is total 14.71% of GDP share. Cyprus joined Eurozone in the 1st January 2008, and all export goods price in euro instead of pounds, which were cheaper, thus exports became less competitive. Next thing is decrease of imports in 2009 that fall

by 17%; it was not concerned with government regulations but with drop in consumption. Information from World Trade Organization shows that such significant drop was caused by lower import volumes of manufactured goods like automotive goods -€0.6 bln. (-52% y/y), also fuel import -€0.7 bln. (-35% y/y).

Comparison of decomposition of GDP by expenditure during pre-crisis period 2002-2007 and crisis 2008-2013 shows significant changes in structure. Average contribution of main GDP factor, households' consumption, decreased from 2.93% to 0.14%; it reflects negative effect of economic crisis on consumption. This changes also caused shift in net export inputs from average -1.62% during 2002-2007 to 1.14% during 2008-2013. Main cause was not change of exports from -0.24% to -0.88%, but change in import input from 1.38% to -2.01%. Government expenditures factor showed small input during crisis in value of 0.02% comparing to 0.92% before crisis. These changes can be explained by problems in borrowing on international capital markets that did not let government make fiscal stimulations; moreover, they had to cut expenses according to IMF program (more detailed look will be taken in chapter 3). Investments also changed due to economic crisis, average input of the factor during 2002-2007 was 1.72%, and it reflexes position of Cyprus in international investment market as a tax heaven for companies. Later during 2008-2013 when crisis started, risks estimated by investors became much higher and cause capital outflow thus investment contribution in GDP decreased to -2.05%.

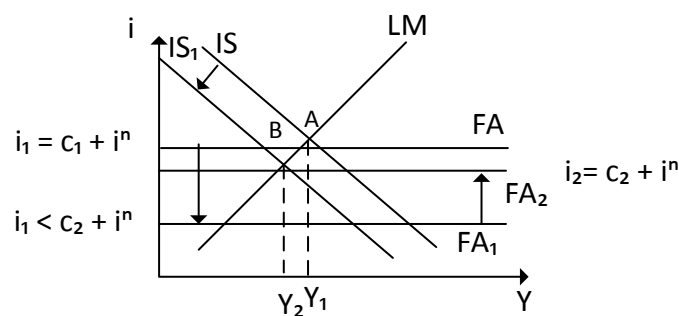


Figure 2.2 IS-LM model for Cyprus economy during crisis

Shift of IS line to IS_1 position results in output decrease and represents economic crisis influence. Also FA shift to FA_1 is second effect of crisis that represents leak of investments to safe haven that was taken place not only in Cyprus but everywhere except Germany and USA that were treated by investors as low risk zones. In the model on this stage, economy of Cyprus has no equilibrium point but because it is a short term model of economy it must be balanced. Short-term macroeconomic model for economy of Cyprus differs from classical view because there is no independent monetary policy after joining Euro Zone. It means that there could be no

movements of LM line that represents monetary changes. Due to this fact new balance of economy may be found in new point, B, after FA line shift. Line FA_1 moves to FA_2 position in real economy of Cyprus it was concerned with IMF program signed by government that in result caused improvement of investors' expectations. At the same time, world crisis caused serious drop in interest rates especially in safe havens because all investors moved their capitals there. It means that spread of interest rate between world and Cyprus economy changed to acceptable by investor. In result it caused some investments inflow back to Cyprus and as a result positive change for financial account. Model shows that GDP of Cyprus could not restore to the same levels after economic crisis.

Source: The Conference Board (<https://www.conference-board.org>)

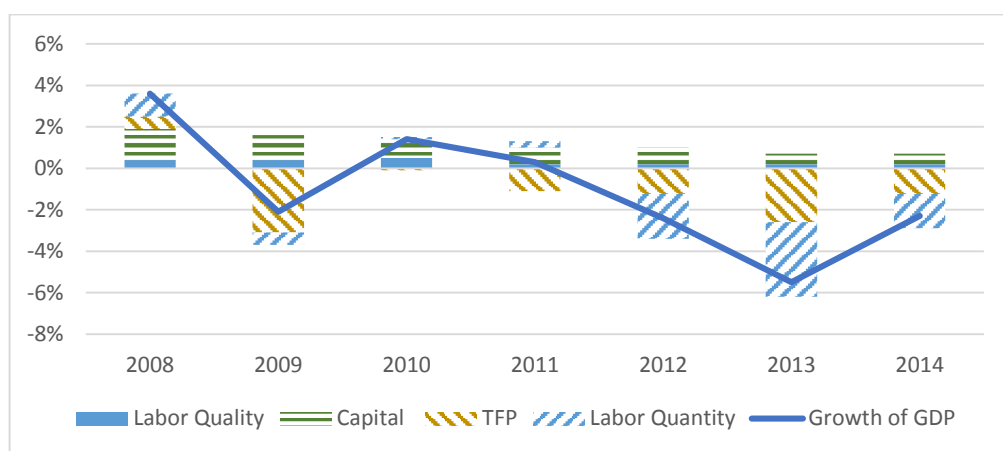


Figure 2.3 Solow's decomposition for GDP of Cyprus 2008-2014

Decomposition of GDP by Solow's model on Fig. 2.3 shows that main driver of GDP during 2008-2014 was capital; its input was 0.89% in average during given period. Second factor by average output was Labor Quality with value equal to 0.3%. Other two factors in average during 2008-2014 showed negative input in GDP. Total factor productivity caused drop of GDP by 1.24% in average annually. Labor quantity factor caused drop of GDP by 0.94% in average annually. This drop can be described by increase in average unemployment that during 2008-2014 was 9.58% comparing to 4.27% during 2001-2007. At the same time population rose by 2% annually from 0.797 mln. people in 2008 to 0.891 mln. people in 2014; thus Cyprus had 0.365 mln. unemployed people in 2014.

Analysis of economic changes in Cyprus shows that crisis started from the same reasons as in other countries - enormous consumption and real estate bubble, which caused instability of banking system and finally GDP started to decrease rapidly. GDP decompositions by expenditure and using Solow's model show significant role of consumption; at the same time, it

was stimulated with high loan stocks. Amount of household loans before crisis rose rapidly from €12 bln. in January 2006 to €19 bln. in the end of 2007; moreover, amount of loans continued growing even after global crisis started until mid-2012 when it exceeded €27 bln. The same situation could be observed with loans to non-financial corporations that increased from €19 bln. in January 2008 to €32.8 in January 2013. These values reflect high pace of construction business - its value added to GDP in average increased during 2002-2007 approximately by 13%; further, during 2008-2013, its annual drop was 15% with minimum value in 2013 equal to -35%. Both these factors caused significant loans crisis (capital inadequacy) in banking system. Moreover, in 2011 EU council organized Greek debt write-down and because banks in Cyprus held lots of Greek securities this operation means loss of €4.5 to €5 bln. of capital. Next what caused banking system failure was increase in capital requirements by European Banking Associations, by new rules tier-1 ratio should be 9%. These factors led to lack of capital in two largest banks of Cyprus approximately in amount of €2 bln.

Chapter 3. Government actions during crisis

Most valuable government actions during pre-crisis period were as follows: organization of double taxation treaties with numerous countries, which caused huge capital inflow later, especially from former Soviet Union countries like Russian Federation. Next country joined European Union in 2004 and then monetary Union in 2008.

Further significant change was in January 2008 when Cypriots elected communist president Demetris Christofias. Athanasios Orphanides the former governor of the Central Bank of Cyprus gives such assessment to this event (the Economist, 2013): 'If one thing has become clear over the last five years in Cyprus, it is that the euro area, which is not just a market economy but a currency union with strict rules, is not compatible with a communist government. Why is this important? This government took a country with excellent fiscal finances, a surplus in fiscal accounts, and a banking system that was in excellent health. They started overspending, not only for unproductive government expenditures but also they raised implicit liabilities by raising pension promises, and so forth.' In other words government showed ineffective spending in times when they should cut expenses.

Government problems started to appear in 2011 when investors attached attention to Cyprus after fiscal failure in Greece. Ministry of finance stated that forecasted deficit target were completely not possible to fulfill. Moreover, two days later on 6 May 2011 the ministry announced deficit for the first quarter, and it was much more than expected. Earlier Moody's reacted on problems in Cyprus and downgraded rating to A2 from Aa3, later in July it was decreased to Baa1 with negative outlook. In fact Cyprus already lost its access to international capital markets in May 2011.

In July 2011, explosion of containers with ammunition destroyed power supply station that produced half of electricity for country. This was one of many episodes of government inactivity that led to significant problems. Later, European Banking Authority made stress test for EU banks, and both largest Cypriot banks passed tests. At that time, government could have a deal with troika but that would implement additional restrictions on expenditure that communist governments could not agree. At the same time government of Russian Federation proposed a loan in amount of €2.5 bln. without any additional restrictions. The loan allowed government of Cyprus accumulate more deficits without any changes in economic course. Later in October 2011 when the Greek debt write-down happened government faced huge problems in banking sector estimated €2 bln. of help to two biggest Cypriot banks.

Later in 2012 president decided that if banks that suffered from Greek write-down would not be able to find additional capital themselves, state will provide it. Such situation happened with Cyprus Popular Bank in July when it get €1.8 bln. through new shares that were bought by state. European Commission approved the deal because the bank was second largest institution thus it's failure could have significant negative consequences for Cyprus.

Downgrading of Cyprus rating below investment grade in June 2012 made it's government debt securities not eligible for collateral according to ECB rules. But ECB made exclusion for Cyprus; however, it also tried to convince government go into program with troika and make structural changes. Formally, government of Cyprus contacted with troika but there were no active work since bail-out that included cutting of the expenditure.

In February 2013, communist candidate was defeated in election, and new conservative president Nicos Anastasiades began active work with troika to get bail-out terms as soon as possible. On 15-16 March during meeting with European council, he was told to haircut the deposits; in other case, there will be no bail-out and economy will stop. Such demand from the EU was a result of many other bail-outs earlier likes Spain or Greece; government of Cyprus was avoiding structural changes for too long, and it resulted in the break of patience from other EU countries. They decided that Cyprus people should also pay for its rescue in amount of €10 bln. package from now. Haircut was established as 9.9% for shareholders, bondholders, and depositors that held accounts in Bank of Cyprus and Cyprus Popular Bank with more than €100 thousand and 6.7% for the rest. Later on 25 March, the president and EU finance ministers agreed to shut down Cyprus Popular Bank and cut 47.5% of uninsured deposits in Bank of Cyprus. Non-EU depositors that lost more than €3 mln. due to haircut was given opportunity to apply for Cypriot citizenship, this proposal was addressed mostly to business people from Russian Federation. This agreement would bring additional €4.2 bln. of help as well as €10 bln. from "troika".

Conclusion

Cyprus before crisis had stable economic growth due to two factors: taxation heaven that attracted capital and joining European Union in 2004 gave increased consumption and labor. These two factors gave significant inputs in GDP and boosted economic growth during pre-crisis period. But at the same time higher consumption level resulted in significant increase in loans for households thus making banking sector vulnerable to risks. Also decomposition of GDP by expenditure and using Solow's model showed that capital flows had no significant effect on economic growth of Cyprus. These factors helped economy hold on at the beginning of crisis, later banking system became main problem as a consumption bubble. Additional problem that appeared was overheated real estate market, it caused additional pressure on banking sector.

Government that was before crisis showed balanced policy because they passed all requirements at first to join European Union and then even harder restrictions to become a member of Eurozone. In fact at the beginning of crisis Cyprus had quite healthy economy without excessive debt. Than communists candidate won elections and began increasing debt and spending. At the time when everyone were aware of world economic crisis and cost optimizations as a first step to deal with, new government of Cyprus were throwing significant amounts on social needs. More problems caused inactivity in dealing with economic problems that grew rapidly. Unwillingness to cut expenses and begin changes to stop economy from falling, had a high price resulted in deposit haircut that hit country prestige hard, despite the fact that government changed in 2013. Also the time for small financial inflows were lost and Cyprus needed more than €10 bln. for rescue till that time. As a result the period of useless spending brought significant delay in restoration, IMF forecasts positive growth for Cyprus only in 2015.

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