



Income distribution dynamics and health patterns amid Cyprus economic downturn

Abstract

Empirical data exhibit that high unemployment has led to uneven income distribution in Cyprus during the crisis period 2011-2014. This observation is supported by the deterioration of specific inequality indicators. Meanwhile, a 2014 OECD study had validated the inverse relationship between economic growth with income inequality. Uneven income distribution can lead to further undesirable outcomes on other economic indicators and may also adversely impact the health sector of the reference economy.

The Cyprus economy has found itself at a very challenging pace confronting with higher economic and social needs that could only be streamlined by the welfare reform upheld by the introduction of the Guaranteed Minimum Income (GMI) as part of the Macroeconomic Adjustment Programme agreed with the International Monetary Fund (IMF), the European Central Bank (ECB) and the European Commission (E.C).

Nevertheless, the positive impact of the last welfare reform shall be fully realized by citizens in 2015, whereas, due to time inconsistency, the income and wealth of households have been affected in earlier years.

This paper¹ supports the view that the efficient implementation of the welfare reform in conjunction with policies to strengthen growth prospects to combat unemployment, can bring back the Cyprus economy to a sustainable and steady growth path under social cohesion and fiscal sustainability conditions. Moreover, it emphasizes the need for an efficient reform of the health sector including measures to raise the quality of health care, universal coverage and equity by safeguarding sound public finances.

Keywords: income distribution, income inequality, unemployment rate, welfare reform, public health spending

¹ The views expressed herein are those of the author and do not necessarily reflect the views of the Ministry of Finance or the Government of the Republic of Cyprus.

I. THEORETICAL BACKGROUND

Income distribution indicators reflect the state the socioeconomic environment is found. During economic crises that lead to adverse economic and social consequences, especially when the roots of the crisis are mainly related to the domestic financial market, it could extend to income redistribution, which in turn can influence other social expenditures, like public education and health care and welfare spending.

The measures of income distribution are concerned with the indicators s90/s10 displaying the relationship of income between the wealthiest decile over the poorest decile. The higher this outcome is, the more uneven the income distribution is. The same is true for the indicator s80/s20 where the income distribution is divided into 5 quintiles.

Another estimate is the Gini coefficient that is defined as the relationship of cumulative shares of the population arranged according to the level of equivalised disposable income, to the cumulative share of the equivalised total disposable income received by them. Gini coefficient measures perfect income equality when Gini becomes 0 and perfect income inequality when it takes a value of 1.

The essential reasons² that led Cyprus to an unprecedented economic crisis is the significant weaknesses in the regulatory and supervisory framework of financial institutions, the adoption of inappropriate economic policies including inter alia employees' wages and welfare policies.

A previous OECD³ study (OECD, 2014), which was held in 2014 identified inter alia the inverse relationship between economic growth with income inequality, as depicted in Table 1 further down. Inequality might reduce economic growth if greater inequality becomes unacceptable to voters, so they insist on higher taxation and regulation leading to lower incentives to invest.

During negative economic growth the income distribution becomes more inequitable due to the failure of economic policy to redistribute the lower GDP produced with an equitable manner and due to the systematic absence from the economic policy objectives of the notion of social cohesion.

Furthermore, inequality can lower economic growth if the financial market is imperfect and a minimum

² Clerides, S. (2014). [The Collapse of the Cypriot Banking System: A Bird's Eye View](#). Cyprus Economic Policy Review, Vol. 8, No. 2, pp. 3-35.

Pashardes, P. (2011). [The Cyprus Economy: Reform or Shrink](#). Cyprus Economic Policy Review, Vol. 5, No. 2, pp. 91-95 (2011)

³ OECD "Focus on inequality and growth", 2014.

critical amount of domestic demand is absent. Therefore, it is obvious that when negative growth occurs and income inequality is intensified, there are political economy aspects entering the “political arena”, which may change dramatically the way the political authority will deal with it.

There are incidences where inequality might boost growth if it provides the incentives to work harder, invest and undertake risks and fosters aggregate savings and capital accumulations since the rich have lower propensity to consume and thus, higher propensity to save.

Conditions of sustainable social cohesion can prevail in an economy when the unemployment rate is retained at relatively low levels with the employment level to be high and all relevant inequality and poverty indicators tend to remain stable or falling.

One significant policy implication that arises from the OECD study is that widening income disparities lowers the outcomes of individuals from low socioeconomic background. Higher inequality diminishes the opportunities to public health and education of disadvantaged individuals in the society.

Government intervention is deemed necessary to reverse the situation to enhance trustworthiness without causing fiscal flux in the Cyprus economy. The implementation of the program of economic adjustment agreed with IMF, ECB and the E.C was proven valid to bring the economy back to conditions of economic stability ensuring sound public finances and to restoring the soundness of the Cypriot banking sector and gradual regaining depositors and market confidence by thoroughly restructuring and downsizing the banking sector and through strengthening supervision. Also, it aimed to implement structural reforms to support competitiveness and sustainable and balanced growth.

II. INCOME DISTRIBUTION ESTIMATIONS FOR CYPRUS

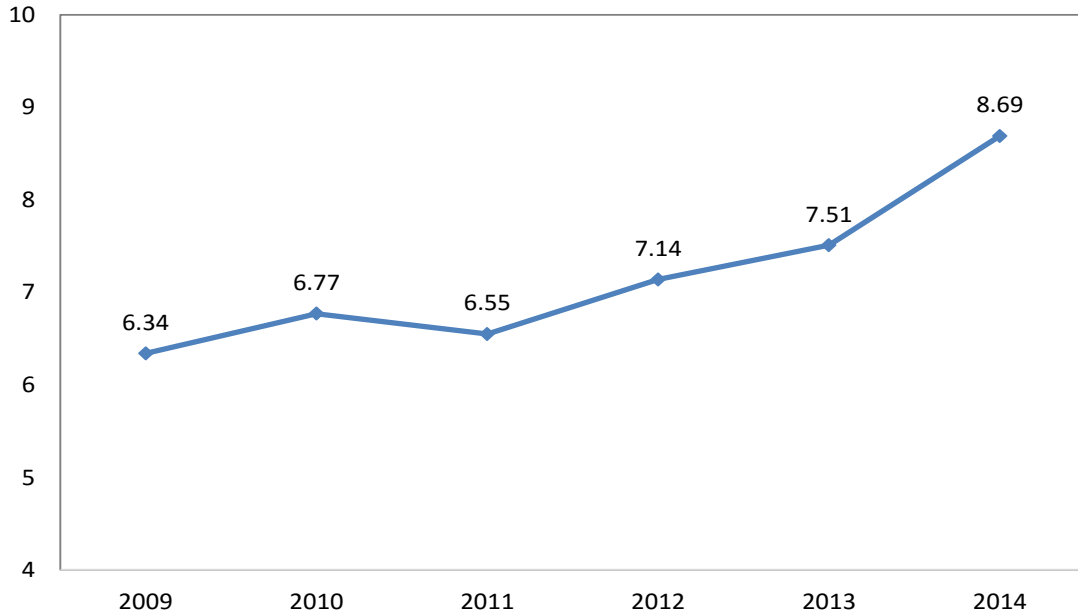
The basic indicators measuring income inequality are summarized below:

- a) S90/S10,
- b) S80/S20 and
- c) Gini coefficient

Historical data for the years 2009-2014 reveal that income distribution in Cyprus has become more uneven compared with previous years and it is very much related with the impact of the financial crisis that hit Cyprus from 2011 onwards.

The above indicators exhibit a continuous and gradual deterioration for Cyprus in the reference period 2011-2014 attributed mainly to negative growth and high unemployment. As Figure 1 depicts, the s90/s10 continued its upward trend as a result of the impact of the financial crisis. In 2014, which can be considered as the worst year due to the fact that is based upon 2013 data, the top 10% decile possessed 8.69 times more income compared with the lowest 10% decile, which implies that the top 10% has improved its income place by 37.1% compared with pro crisis level in 2009.

Figure 1: s90/s10, 2009-2014



In Table 1 below, Cyprus GDP growth over the years 2009-2014 is illustrated in association with the fluctuation of the Gini coefficient revealing the inverse relationship of the two variables and enhancing the argument that negative growth, under certain conditions could lead to enlargement of income disparities and thus to expansion of income inequality.

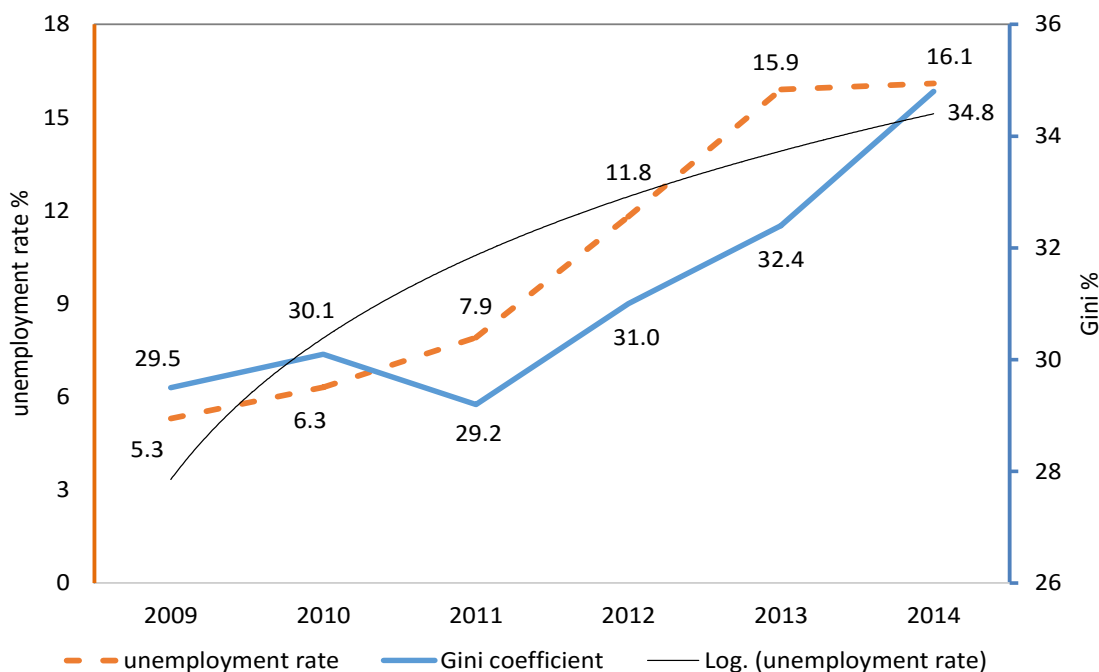
Table 1: GDP and Gini coefficient, 2009-2014

	2009	2010	2011	2012	2013	2014
GDP % change	-2.0	1.4	0.3	-2.5	-5.9	-2.5
Gini coefficient	29.5	30.1	29.2	31.0	32.4	34.8

Furthermore, Figure 2 brings together the unemployment rate with the Gini coefficient exhibiting a positive correlation meaning that in periods of time when the unemployment rate is increasing, one of its repercussions is the increase of income inequality, since households are possibly more exposed to higher financial risks and higher indebtedness due to lower income. The determination coefficient for the years 2009-2014 is estimated to 83% implying that the relationship between the unemployment rates with the Gini coefficient is statistically significant. From the graph it seems that after 2011 the Gini coefficient pursues an accelerating trend. Data on unemployment rate exhibit that its peak was in 2015 when it stood at 16.1% of the labour force. For 2015, it stood at 15.0% and is forecasted to pursue a downward path thereafter.

The reduction of the unemployment rate is expected to speed up from 2016 onwards based on the European Commission⁴ winter forecasts, especially when the economy achieves its potential growth rate.

Figure 2: Unemployment rate and Gini coefficient



The improvement of social cohesion conditions is difficult to achieve due to the high unemployment rate, thereby it needs time since unemployment is a lagging indicator. Unemployment needs more time to begin decreasing when growth picks up because some firms may not react instantaneously by adding labour, since during the crisis they may have not reduced wages and labour substantially maintaining underutilized labour (L. Levine, 2010). Henceforth, this implies that growth needs to be entrenched for a series of quarters before firms react accordingly by expanding their productive capacity.

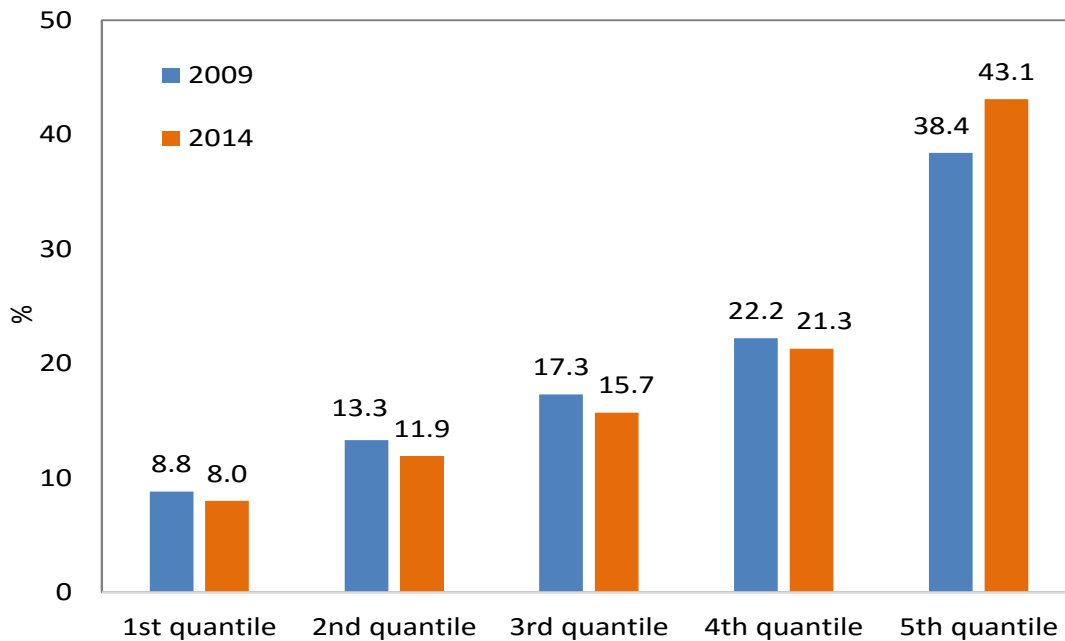
In the meantime, Cyprus had implemented a radical welfare reform as part of the Macroeconomic Adjustment Programme, under which the given economic and social circumstances had plenty of merits. The Guaranteed Minimum Income (GMI) philosophy is based upon providing the minimum required financial means to targeted vulnerable households, after a scrutinized means tested procedure, so as targeted households to be in the position to live a decent life mainly through finding a job in the market place and without becoming dependent on public assistance.

⁴ European Economic Forecast, February 2016, European Commission.

Based on these evaluations, it seems that the economic effects upon the indicators influencing social data, such as income inequality indicators, the relative poverty and the material deprivation of specific age groups will need more time to decline, once these indicators are time lagged second order indicators.

Figure 3 represents income distribution comparing the years from 2009 with 2014. The distribution is divided into 5 quintiles revealing that all income groups are worse off but the top 20%. From these data is pinpointed that all quintiles are worse off in 2014 except for the highest quintile, which has improved its position.

Figure 3: Income distribution in quintiles, 2009 vs. 2014



III. IMPLICATIONS OF THE FINANCIAL TURMOIL ON CYPRUS PUBLIC HEALTH SPENDING

The impact of the recent financial crisis that hit the Cyprus economy has unavoidably affected the money the government spends for health care. The government in its effort to implement a fiscal consolidation programme, it managed to reduce public health expenditure over 2011-2015 by €111 million, thereby sticking to policies included in the Macroeconomic Adjustment Programme. The largest reductions were cuts in personnel expenses (€36 mln) and cuts from the Medical Treatment Scheme Abroad (€25 mln).

In reality, as unemployment tends to rise due to the financial crisis, as happened in Cyprus, falling incomes and greater indebtedness reduce household financial security leading to changes in the level of stress, changes in health related behaviours and changes in access to health services. This pathway can lead to less

tax revenues via cuts in public health spending. The same is true with a cut in public spending that results in higher user charges or longer waiting times shifting some costs to households adding to their financial insecurity vicious circle. All the above sequence will most likely lead to lower per capita public spending⁵ on the health system.

As a result, a fiscal flux is highly plausible to be experienced in the health sector when per capita levels of public spending on health do not rise to meet increased demand for health services or fall while demand remains stable or increases. If fiscal pressure is not managed carefully is likely to undermine all aspects of health system performance, such as health outcomes, financial protection, equity in financing the health system, equity of access to health services, patient satisfaction, quality and efficiency in health services delivery, transparency and accountability (WHO 2000, 2010).

The impact of the financial crisis on the health system in Cyprus seems to have some of the elements described in theory and this process has led to a disequilibrium in the public health sector as demand was rising while per capita public spending was not rising at the same level to meet increased demand.

For Cyprus, based on WHO estimations, the percentage change in per capita public spending on health for the years 2011-12 was reduced by 1% compared with 2010-11. In fact, the above policy has contributed to the pro-cyclicality of public health expenditure since in 2009-10 the per capita public spending had also exhibited a decline by 3.5%. Recent and preliminary data on total public health spending on 2014 exhibit a larger reduction by 16.6% compared with 2013.

Cyprus belongs to the group of countries identified as being at moderate to high risk due to the highest out of pocket spending on health. Nonetheless, Cyprus is one of those countries that increased user charges on health as part of the macroeconomic adjustment programme agreed as from August 1st 2013. In fact, Cyprus increased user charges in health services such as outpatient drugs, diagnostic tests and the emergency department through raising copayments paid to public health providers entailing excessive demand and contributing to the reduction of health care inputs.

Moreover, the change in self-reported unmet need for health care due to cost, both for the whole population and for the poorest fifth of the population had increased between 2009 and 2013 raising at the same time the requirement the welfare reform to be implemented efficiently for GMI recipients.

⁵ European Observatory on Health Systems and policies, World Health Organization, Regional Office for Europe Economic Crisis, Health Systems and Health in Europe Impact and implications for policy.

Figure 4: Unmet self-reported health care needs due to cost by income quintile

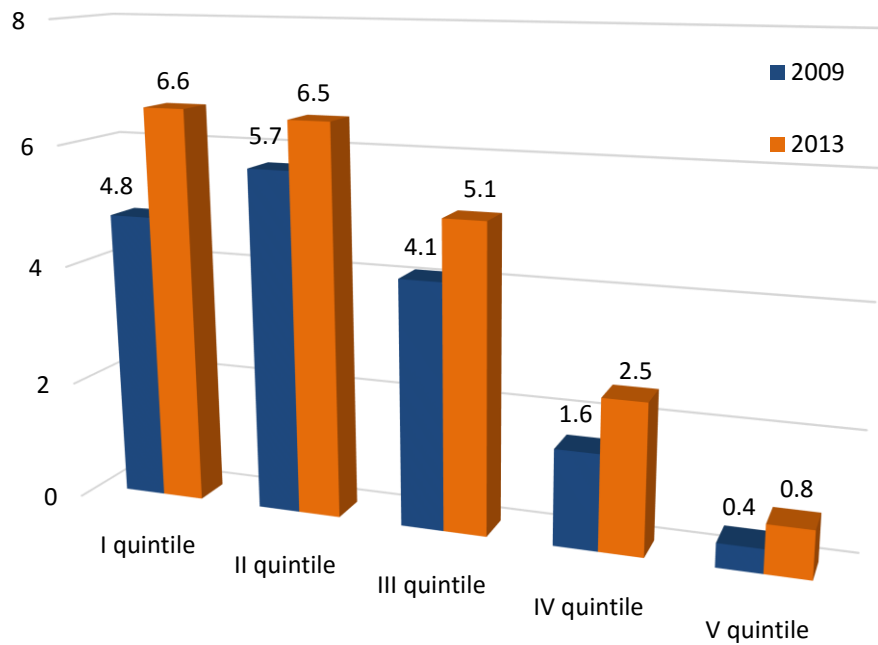


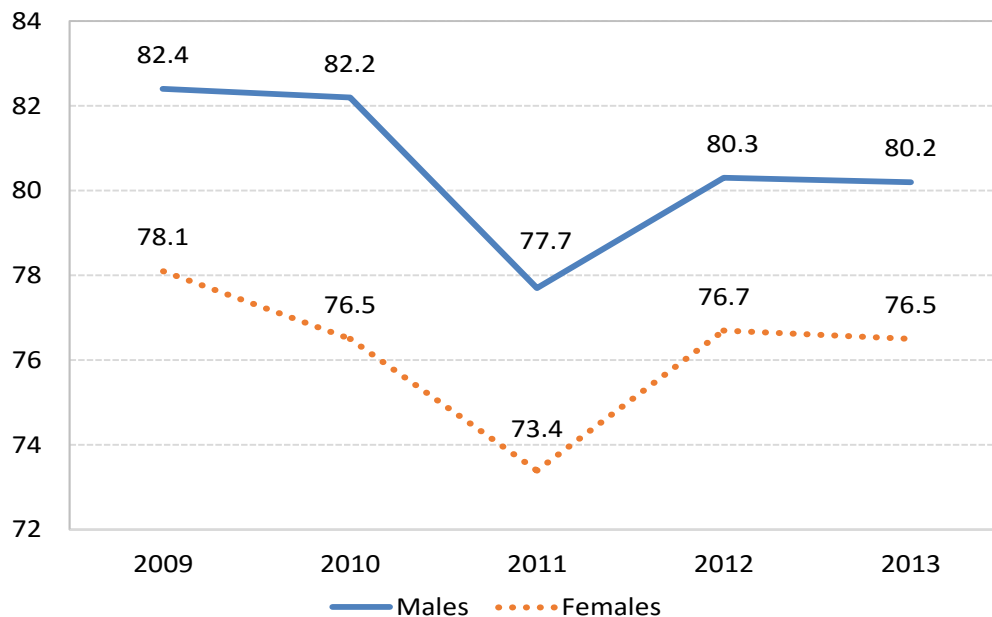
Figure 4 reveals the increase of unmet self-reported health care needs due to cost for all income quintiles indicating that all income quintiles are worse off comparing 2009 with 2013. This indicator⁶ is defined as the share of the population aged 16 and over reporting unmet needs for medical care due to being too expensive. Self-reported unmet needs concern a person’s own assessment of whether he or she needed medical examination or treatment (dental care excluded), but did not have it or did not seek it because they could not afford it. Moving one step further, the s80/s20 indicator on unmet health care needs, the distance between the top 20% with the bottom 20% quintile had a value in 2009 of 12 whereas in 2013 the same value was 8.25 indicating that the gap has become narrower. This is due to the fact that the top 20% quintile doubled its score, whereas the bottom 20% increased by 37.5% instead between 2009 with 2013. Additionally, unmet health care needs are reflected into the long waiting lists at public hospitals which reduce efficiency in terms of accomplishing medical treatment on time needed.

Moreover, yet another indicator which is related to the health status of the population of the Cypriot health system is concerned with the healthy life years at birth in percentage of total life expectancy for both males and females. Figure 5 presents this indicator for the years 2009-2013 indicating that healthy life years at birth as a ratio of total life expectancy was higher for men than women in spite of the fact that males healthy life

⁶ It should be noted that this indicator despite describing personal perceptions of those asked on health care cost and not based on hard data, still contains a direct feedback on the health care cost of households.

years at birth shrank more than women between 2009 and 2013. The basic reasons why persons in Cyprus live the bulk of their life expectancy in healthy years seem to be attributed to both environmental, dietetic and economic factors.

Figure 5: Healthy life years at birth in % of total life expectancy



A thought to inspire the financing of this policy is to impose a non-taxed contribution rate to public and private sector employees to finance in a way the free access to public hospitals services. This process could initiate the NHIS introduction until autonomy is completed in a period of time of three to five years. In addition, employers should be exempted in a first stage to avoid adding to the labour costs and to preserve competitiveness with retaining unit labour cost low.

This policy would be valid as long as the contribution rate is of temporary nature until phasing in a NHIS and facilitate its introduction in association with promoting some other cost containment measures to bolster hospitals productivity.

IV. POLICY MEASURES TO ACHIEVE EFFICIENT SOCIAL COHESION UNDER POST-CRISIS ENVIRONMENT

In policy making terms, income inequality can be combated through specific policy measures thereby raising growth in some areas and reducing devastating effects from poorest households through:

- Effective implementation of the GMI reform in order to provide lower income groups with the necessary economic means to support their needs thereby reentering the labour market,
- Associating the provision of GMI with active labour market policies and with the coordination of programmes offered by the Human Resources and Development Authority,
- Provide incentives to foreign enterprises willing to invest in Cyprus to attract foreign investment necessary

to facilitate employment to increase,

- Reduce tax wedge on labour,
- Provide economic incentives and stimulating specific economic activities to transfer private capital investment expenditure to higher value added sectors to pick up the economic engine of the economy,
- Provide incentives to voluntary and non-governmental organizations to enable them dealing with labour and health activities,
- Increase labour market participation through rationing Active Labour Market Policies on different groups of workers and through enhancing training of employees by primarily bringing the after high-school education closer to labour markets' needs,
- Run more scholarships at all levels of public education, especially, for higher education and university level.

For the public health system, although it can be of zero deficit it may still be inefficient. Hence, some policy measures may raise efficiency of the health care sector and can make it be more efficient, equitable and with higher quality, such as:

- Promotion of the public hospitals autonomy so as hospitals admissions and length of stay to be more appropriate as well as the use of the infrastructure, the staff and the efficient use of hospitals property and capital,
- Promote public hospitals accreditation from internationally recognized bodies so as quality of health care provision to become more efficient, patient friendly and of high standards,
- Higher use of generics so that prices of medicines to be at affordable levels and make medicines more inexpensive for all households by reducing the profit margins of pharmacists and reduce the inflated health sub-sector,
- Improve procurement processes in the public health sector,
- Minimization of waste and medical errors,
- In a way to reduce waiting lists for public healthcare services in Cyprus, the competent Ministry in 2013 has expanded the system of referring patients to the private sector through the use of "coupons". The reduction of congestion in public hospitals is expected to benefit mostly low income patients without resolving the problem of health care efficiency but at least, utilizing higher capacity in the private health sector by enhancing the coordination between public and private sector.

V. CONCLUDING REMARKS

Based on the abovementioned, the economic policy in Cyprus should safeguard robust public finances necessary to maintain internal macroeconomic stability. Such policy has to combine efficient social cohesion with fiscal consolidation to have a positive impact on the long run fiscal sustainability. Efficient social cohesion policies must be income targeted due to the widening of income disparities, while a cautious labour tax reform could reduce the financial burden on employment and thus, raise growth prospects.

It is clear enough that as the economy is exiting the financial crisis, government intervention is necessary to facilitate the return to sustainable growth, reducing the unemployment rate and containing poverty so as to improve the conditions of social cohesion.

It is worthwhile mentioning that pursuing the above mentioned policy could reduce unemployment more rapidly by relating active labour market policies with some fiscally neutral policy adjustments in the labour tax-benefit system so as to face persistent unemployment and encourage job mobility and creation. These measures could have a positive policy impact on reducing long-term unemployment, which entails a critical social aspect on those experiencing its repercussions.

The Cyprus economy is at good pace after exiting the Economic Adjustment Program to return to sound growth, which can confine uneven income distribution and thereby foster social cohesion.

It should also be emphasized, that Cyprus is among the countries of the EU that has experienced the most sustained pro-cyclical approach to public spending on health, which contained total health spending to GDP at reasonable levels. However, in the near future, the opportunity cost of public health spending should be contained to increase public health expenditure efficiency.

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REFERENCES

- [1] Memorandum of Understanding on specific economic policy conditionality, 7th final review, 12.9.2015.
- [2] Clerides, S. (2014). [The Collapse of the Cypriot Banking System: A Bird's Eye View](#). Cyprus Economic Policy Review, Vol. 8, No. 2, pp. 3-35.
- [3] IMF (2015). Causes and Consequences of Income Inequality: A Global Perspective. IMF Staff Discussion Note, June 2015.
- [4] J. Stiglitz "The price of inequality", 2013.
- [5] IMF (2015). Causes and Consequences of Income Inequality: A Global Perspective. IMF Staff Discussion Note, June 2015.
- [6] L. Levine "Unemployment and Recovery", 2010.
- [7] OECD "Focus on inequality and growth", 2014.
- [8] OECD (2015). In It All Together: Why Less Inequality Benefits All. Paris: OECD Publishing.
- [9] Pashardes, P. (2011). [The Cyprus Economy: Reform or Shrink](#). Cyprus Economic Policy Review, Vol. 5, No. 2, pp. 91-95 (2011).
- [10] R. Layard, S. Nickell and R. Jackman, "Unemployment", 1991.
- [11] WHO "Economic crisis, health systems and health in Europe, impact and implications for policy", S. Thompson et al, 2015.
- [12] WHO "The crisis and its implications for household financial security, government resources and health expenditure" J. Cylus and M. Pearson, 2015.

RELEVANT WEB SITES

- [1] www.mof.gov.cy
- [2] www.sws.mlsi.gov.cy
- [3] www.cystat.mof.gov.cy
- [4] [www.eurostat/data/Statistics/A to Z](http://www.eurostat/data/Statistics/A%20to%20Z)
- [5] http://ec.europa.eu/economy_finance/publications/
- [6] <http://ec.europa.eu/social/BlobServlet?docId=15077&langId=en>