Forecasting Labour Market Needs, an Ageing Population and Educational Choices in Cyprus

Peer Review on “The Ageing Population and Educational Choices”
Finland, June 14 -15, 2010

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in consortium with GHK Consulting Ltd and CERGE-EI
Date: 27/05/2010

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This publication is supported for under the European Community Programme for Employment and Social Solidarity (2007-2013). This programme is managed by the Directorate-General for Employment, Social Affairs and Equal Opportunities of the European Commission. It was established to financially support the implementation of the objectives of the European Union in the employment and social affairs area, as set out in the Social Agenda, and thereby contribute to the achievement of the Lisbon Strategy goals in these fields.

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1 LABOUR MARKET SITUATION IN THE PEER COUNTRY

This paper has been prepared for a Peer Review within the framework of the Mutual Learning Programme. It provides information on Cyprus’s comments on the policy example of the Host Country for the Peer Review. For information on the policy example, please refer to the Host Country Discussion Paper.

As in Finland, in Cyprus, the international crisis that began in the latter half of 2008 did not directly involve the banking sector. The conservative and tightly-supervised Cypriot banking sector did not have significant direct exposure to high-risk products and the crisis reached Cyprus through the eventual decline in international demand, especially for tourist services and for winter/holiday homes. While the initial shocks were in these sectors, the crisis spread to other sectors and unemployment has broadly risen. The government’s early handling of the crisis was appropriate and timely: it moved cautiously within the parameters of the European Economic Recovery Plan (EERP) Pillars I and II by attempting to stimulate the sectors initially affected (tourism and construction) through temporary measures, by emphasising infrastructural projects (Pillar I and II respectively) and by supporting employment through various schemes. It also increased liquidity in the banking sector and sought to affect market psychology positively.

These measures could not stem the international decline in demand. Real GDP growth turned from 5.1% and 3.6% in 2007 and 2008 respectively to -1.7% in 2009. While this was the first negative growth for 35 years, it was much milder than the -7.8% Finnish experience in the same year. For 2010, as Finland recovers with an expected growth rate of 1.1%, the economy of Cyprus is expected to shrink by a further 0.5% (European Commission 10 May 2010), perhaps returning to positive growth at around 1.25% in 2011. The Harmonised Unemployment rate rose from 3.6% in 2008, to 5.3% in 2009 and was 6.2% in the first quarter of 2010. These figures are considerably lower than Finland’s current unemployment rate of 9.2%, but it must be remembered, that Cyprus is traditionally a low unemployment country which employs large numbers of EU and third country workers, representing over 20% of the total workforce.

As the crisis deepened, the 3.4% of GDP fiscal surplus of 2007 (mainly the result of land transfer fees related to a housing bubble) declined to a 0.9% surplus in 2008 and a 6.1% deficit in 2009. EU expansionary fiscal policies, which were in any case meant to be temporary, have been thrown into reverse with the first signs of ‘green shoots’ and the Greek experience has raised fears of a similar fate in Cyprus. The current effort is, therefore, to contain the deficit. On 14 May 2010, long overdue measures to reverse the deficit were announced. EUR 80 million reductions in government expenditure were announced for 2010 and a 1000 person reduction in employment in the civil service is planned. The child and student subsidy programmes will finally be targeted at those with lower incomes. Some indirect tax measures are planned and a bill to raise revenue through a zoning violation amnesty has been presented to the House of Representatives. A bill to strengthen the tax authorities’ capacity to fight tax evasion was also introduced. These measures amount to reductions in government expenditures of EUR 175 million. The plan is to keep the budget deficit to 6.1% of GDP in 2010, reducing it thereafter.

Particularly relevant for the current Peer Review is the reduction in the support for tertiary education institutions (EUR 9.3 million of a EUR 131 million budget, or 7%). These institutions either train directly or contribute more generally and indirectly to the training of nursing staff. A plan to establish a Medical School at the University of Cyprus, which will be very costly, must implicitly be called into question (given that a EUR 4.9 million, or 6.2%, reduction in its budget has been implemented for 2010). At the same time, Cyprus is not well-placed in the EU rankings on the impact of population ageing (10 May 2010, Fiscal
Policy and Economic Sustainability Table). Relative to the EU-27 average rating of 4.6 for the projected “Increase in age-related spending” and 2.3 for the projected “Increase in pension spending”, Cyprus scores 10.7 and 10.8, respectively, after Luxemburg (18.2; 15.3) and Greece (16.0; 12.5). Finland’s ratings are 5.9 and 2.6, marginally above the EU-27.

Policies to deal with the deficit should cover ageing-related issues (e.g. pensions and health care funding). In addition, new initiatives should deal with the outdated structure of ministries, the wide variety of programmes run by government with marginal or no impact but substantial administrative cost, the targeting of social programmes so as to benefit the poor, the wasteful consumption of energy and water encouraged by inappropriate pricing mechanisms, and plans to meet areas of severe future demand and new strategic directions.

2 ASSESSMENT OF THE POLICY MEASURE

2.1 Demographics and the relative severity of the issue in Finland and Cyprus

The Host Country Discussion Paper notes (p. 13) that “… we have, concurrently, almost the most significant demographic ageing profile in the world …”. Eurostat data on old age dependency ratios (actual or projected number of persons at and over 65 relative to actual or projected number of persons between 15-64 multiplied by 100) for 2010 are, indicatively, 31.17% for Germany, 30.99% for Italy, but only 25.7% for Finland and 18% for Cyprus. So, currently, neither Finland nor Cyprus is in dire straits. What is important; however, is how, by 2025, these numbers change to 39.53%, 37.97%, 40.64% and 24.93% respectively, implying increases which correspond to 8.36, 6.98, 14.94 and 6.93 percentage points respectively for these four countries. Therefore the dependency ratio for Finland does increase by the most percentage points in the source table.

This raises the question - why is there such a rapid increase in the old age dependency ratio for Finland? These projections naturally build in a number of assumptions. It is not clear how Finland sees births, deaths, and net immigration figures evolving over the coming decades. It does seem to be the case that the current net immigration rate of around 1 in 1000 is relatively low. The Host Country Discussion Paper suggests some pessimism on the likelihood of attracting immigrants to Finland (p. 13, bottom). But this pessimism does not seem warranted. Finland, a member of the EU and the Eurozone, a country of a high standard of living, vast land mass and resources and a small population should be well-placed to attract significant flows of immigrants if this policy were handled well. Cyprus attracts about 6.5 immigrants per 1000 (data from the Cyprus Statistical Service (CyStat) for the period 2007-2011) and Canada 10 per 1000. So, if it is the low net immigration rate that causes the high dependency ratio for 2025, then an appropriate policy for Finland might mitigate this problem.

2.2 The forecasting tools in Finland and Cyprus

The Host Country Discussion Paper provides a very fine review of the traditional methods of forecasting in Finland, the Long Term view (LT) approach and the new VATTAGE efforts, as well as the various actors involved. For this reason, we will review the analogous institutions for Cyprus.

The agency responsible for forecasting future labour needs in Cyprus is the Human Resource Development Authority (HRDA). The Planning Bureau of the Ministry of Finance, other Ministries (such as the Ministry of Health) and the Cyprus Statistical Service input into the forecasts. The general approach to forecasting has been influenced by the models followed in other countries, notably Finland (a process similar to the LT approach), the UK and the Netherlands. The HRDA is a semi-governmental agency, established in 1974, with a strong tripartite culture. Its budget draws on a 0.5% payroll levy on employers and semi-governmental organisations and goes through the Minister of Labour and Social Insurance. The HRDA is also responsible for initial and continuing training in Cyprus. In light of this
dual role, it is particularly well placed for dealing with labour needs and it has played a major role in this regard.

In Cyprus, the HRDA forecasts total employment by sector (44 sectors) and occupation (27 occupations) but it also goes further than that to calculate the gross requirements of 90 mid-level occupations and 104 high-level occupations. It is not clear whether it is possible, given data availability, to calculate ‘wastage’ at the fine occupational level, taking the existing age structure into account. If this is the case, then gross requirements in Cyprus could be fine-tuned and improved.

The forecast horizon adopted in the HRDA forecasts for Cyprus stretches to 2018 (the latest general forecast covers the period 2008-2018). This is similar to the horizon adopted in the pre-VATTAGE period by the Ministry of Education and the Finnish National Board of Education and seems more reasonable than forecasts to 2025. In Cyprus, regional disparities are not very large and typically are not a source of great concern in our forecasting exercises.

One reason that the forecast horizon is important is that, where labour markets are concerned, a decade is a very long period of time. The number of foreign workers (initially third country but now those from EU Member States as well) grew substantially over the two decades to 2010 in Cyprus. While this development reflected the strong underlying demand for labour, especially unskilled labour, the explosion in the net immigration rate was not anticipated. CyStat reports that over the period 2002-2008 the net immigration rate was 8.3 per 1000. By contrast, the rate of Natural Population increase was 3.5 per 1000, suggesting that most population growth was through immigration. About 20% of the total workforce is now foreign workers, a number that would be higher if the daily flows of Turkish Cypriots to the south from the north and illegal immigrants from abroad were taken into account. These developments are difficult to predict in a long-horizon forecast and in a context (e.g. VATTAGE) which might exclude additional qualitative information.

Following a request from the Council of Ministers, the HRDA undertook a forecast of the needs with respect to nursing staff, over the period 2005-2015. This effort was carried out within the general methodology of the Finnish LT system and the general forecasting procedures followed by the HRDA (see the 2006 Peer Country document for Cyprus). It concluded that, between 2005 and 2015, the employment of health and social care personnel would entail a net rise from 13,247 to 16,291 individuals (3,044 individuals), or approximately 2.1% per annum for the eleven years in question. While this is a net increase, the study also forecast what in Finnish studies is called the ‘wastage’, (i.e. the retirements, withdrawals, etc, involved over this period). These would add a further 2.9% annually, meaning that the gross need in nursing and social care personnel would be more like 7,500 individuals between 2005 and 2015. Thus, each year, about 700 new graduates would be needed, a number that exceeds the annual number of graduates from the School of Nursing in Cyprus. At annual rates this is a fraction of the annual cohort of about 9,000 pupils, as compared to the approximately two cohorts required to cover the forecast additional needs in the health and social care sector in Finland (p. 11). As is stated in the Host Country Discussion Paper, the Finnish problem is very severe. Thus, while Cyprus has an ageing population problem, the situation is not as severe as it is in Finland.

Traditionally, Cypriots obtained tertiary education and professional qualifications abroad. Thus, there was no need to worry about the implications of skills training for domestic educational institutions. By contrast, the assumption in Finland is that all education and training will be covered domestically. It should be noted that the tertiary education landscape in Cyprus has changed dramatically in the last two decades. Three public and several private universities are now operating and approximately half of those pupils in each cohort that receive post-secondary education do so in Cyprus. The connection between future labour needs and university places in Cyprus is one that has now become important and our forecasting exercise could provide useful advice on the likely future demand by field. It should be noted that the School of Nursing has now been absorbed into

1 http://www.mutual-learning-employment.net/uploads/ModuleXtender/PeerReviews/16/Cyprus.pdf
the Technological University of Cyprus. Its capacity to meet the projected increase in nursing and other care staff to 2015 is limited and will have to be supplemented by Cypriot graduates from abroad and foreign workers.

The government, in various documents, notes that it wishes to encourage the development of high-value-added services in the business consulting, education and medical areas. These plans, if successful, would imply an enhanced need for accurate forecasting by sector and occupation and an enhanced capacity to meet these needs domestically.

2.3 Likely resolutions

It is unlikely that the increased demand for new nursing and social care personnel in Cyprus can be met from domestic sources only. This is not because the total number of about 700 required each year is large, relative to the graduating pupil cohort. Rather, it is because vocational and technical training has not been attracting the prestige that it should have. Plans are in place for reforms that might improve this situation. Until then, additional immigration would be needed to fill this gap.

3 ASSESSMENT OF SUCCESS FACTORS AND TRANSFERABILITY

The traditional LT system of forecasting in Finland in its general form is one followed in a number of countries, including Cyprus. The challenges faced by the HRDA in this respect are fairly severe, arising mainly from the limited number of data points that can be used to build up these forecasts. This limited information is used to estimate econometric relationships that drive the rest of the forecasting process. This means that the entire forecasting exercise is built on limited information. There is a strong element of trends continuing in this type of forecasting; this may fail to take on board new developments.

The VATTAGE model is much more ambitious and complete in its orientation than the LT methods used in Finland and Cyprus to this point. Every effort to develop models of this type should be made. However, it is extremely unlikely that such efforts can be brought to fruition in the near future in Cyprus. Data availability is likely to be an impediment in these efforts. There is also an issue of trained personnel. Most Ministries in Cyprus need to build up their research departments in order to cope with the increasingly technical demands from the EU, the ECB and the international banking/finance monitoring institutions. This will not be easily achieved in the current climate of fiscal austerity, unless severe restructuring of government departments is carried out. This is needed, given the diminished role of agriculture, industry and conventional tourism in an economy, which, like Finland, is increasingly oriented towards services and aspires to develop high value added services. In that case, the rich pool of talent in governmental organisations may rise to the task.

One issue with models like VATTAGE is the extent to which they are suitable for detailed labour market forecasts on their own. To do this, they would need to build in much more detail at the labour input level, increasing the complexity of the model. It is one thing to forecast a greater share of health and social care services and another to comment on whether it is midwives or palliative care nurses that will be needed. This sort of detail does not play to the strength of aggregate applied general equilibrium models.

Until recently, each graduating cohort selected educational programmes offered abroad according to personal preferences and aspirations, individual assessments of where areas of labour market strength and high rewards would be in the future but with a strong bias towards general and high-level professional education. As a higher proportion of each cohort remains in Cyprus for their tertiary education, it is increasingly important to anticipate future needs and to adjust domestic educational programmes accordingly. A related issue involves the need to make professional education and the trades more socially and professionally attractive. Young people tend to shun professions such as plumbing,
electrical work, carpentry and the like, because of their low social status and the fact that real incomes in these self-employed professions are often understated for tax purposes. Thus, the signals given to young persons are sometimes inappropriate. In addition, the system of professional qualifications is only just getting developed (with a significant input from HRDA). Finally, Technical Schools are in the process of reform, hopefully increasing their effectiveness and attractiveness.

4 QUESTIONS

- The VATTAGE model is a well-laid out general equilibrium macroeconomic model with internal consistency and an optimising logic. It is not clear how it was used to generate the predicted rise in the share of employment (Table 2 on p. 11 of the Host Country Discussion Paper) of the service sector (Social from 7.5% in 2005 to 10.4% in 2025 and Health from 7.1% in 2005 to 9.8% in 2025). It is difficult to see whether this is the result of projected demographic change (population ageing), or a continuation of current trends away from industry (its share of employment declines from 18% in 2005 to 12.4% in 2025) which may be due to increased productivity and globalisation (the transfer of manufacturing to Asia and elsewhere). Has VATTAGE been used to forecast labour across different age cohorts?

- As noted above, the 65+ dependency ratio for Finland does increase by the most percentage points in the source table but from a lower point in 2010. One reason may be different implied projections about immigration. Hence, the following question:

- The statement (p. 13, bottom, of the Host country document) that “Finland has no significant hope of tapping into immigration …” is puzzling. Why such pessimism? Does Finland want to increase immigration beyond the current 1 in 1000 intake? Australia used to pay the passage of immigrants. Have such policies been contemplated?
### ANNEX 1: SUMMARY TABLE

#### Labour market situation in the Peer Country
- Pre-crisis record of strong growth and fiscal health reversed.
- Crisis causes negative growth in 2009 of -1.7% and a 6.1% of GDP budget deficit.
- Harmonised unemployment rose from 3.6% in 2008 to about 6.2% in 2010Q1.
- Expansionary fiscal policy under the EERP reversed.
- Reductions in expenditures, indirect tax increases, targeting of benefits, zoning amnesty, anti tax evasion measures aim to maintain fiscal deficit to GDP at 6.1% in 2010.

#### Assessment of the policy measure
- Supplementing the LT forecast method with models such as VATTAGE is a good idea.
- Their strength lies in the integrated, GE, handling of complex issues.
- Not clear that VATTAGE is a good tool for detailed analysis of labour market needs.

#### Assessment of success factors and transferability
- Severe data limitations make the construction of aggregate models such as VATTAGE difficult in Cyprus.
- The construction and use of such models increases the organisational and technical requirements on the government machinery. Severe restructuring of units is needed.
- Alliances with universities may help governmental and semi-governmental organisations.

#### Questions
- How were the VATTAGE projections of an increased share of employment in Social and Health services generated? Do they reflect assumptions on demographics?
- Why is the dependency ratio in Finland growing so much by 2025? What are the implied assumptions?
- Why is the immigration rate low in Finland?
REFERENCES


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Internet: http://www.mutual-learning-employment.net/uploads/ModuleXtender/PeerReviews/16/Cyprus.pdf