LABOUR MARKET FLOWS
IN MALTA

BOX 1: LABOUR MARKET FLOWS IN MALTA[1]

This Box summarises a study on labour market flows in Malta and their use in forecasting unemployment rates.[2] Labour market statistics are very useful in gauging the state of the economy, and can be used to assess a wide range of behavioural and socio-economic factors linked with individual labour market situations. The use of labour market flow data, for instance, helps to understand the dynamics between employment and unemployment levels as they qualify the changes in employment status.

The analysis focuses on the post-2002 economic environment, modelled as a two-state model, and using aggregate unemployment duration figures found in the LFS instead of micro-data. The flow rates in the study are calculated following established methods in the literature.[3]

The modelling framework posits that changes in the unemployment rate derive from workers who were employed in the previous period, and separated from work, less those who were unemployed who have found a job. The framework thus assumes the existence of only two states, with unemployment originating from non-participation in the labour force being excluded. A caveat of the approach is that unemployment will be described accurately only if one assumes that all the inflows originate from employment.[4] This approach is limited in the sense that state switching from inactivity to activity is an important element in determining unemployment levels. However, in light of data constraints given the unavailability of LFS micro-data, this more standard two-state framework provides a useful and simpler benchmark. This notwithstanding, one has to consider that the Maltese economy has experienced significant structural change over the past decades. Female participation rose from 35.8% in 2000 to 59.7% in 2017. Moreover, foreign worker numbers surged from relatively low levels in the early 2000s to more than 32,000 foreign full-timers and more than 5,000 foreign part-time workers by end-2017. The unemployment rate in Malta fell considerably in recent years, with the decline being attributed to both the cyclical component (short-term unemployment – under one year), as well as changes in longer term unemployment segments (see Chart 1).[5]

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[1]   Prepared by Reuben Ellul. The author is a Senior Expert within the Economic Analysis Department at the Central Bank of Malta. The author would like to thank Dr A. G. Grech and Mr B. Micallef for their comments and suggestions to an earlier draft of this study, as well as an anonymous peer reviewer at the Banca d'Italia. The views expressed are those of the author and do not necessarily reflect those of the Central Bank of Malta. Any errors are the author's own.

[2]   A more detailed discussion on the topic is available in Ellul, R. (2018), "Forecasting unemployment rates in Malta: A labour market flows approach", Working Paper 03/2018, Central Bank of Malta. For the sake of brevity, this Box focuses only on estimations of the labour market flow rates.

[3]   The evolution of the number of unemployed over time is modelled as $\frac{du_{t+\tau}}{d\tau} = s_{t+1}(1 - u_{t+\tau}) - f_{t+1}(u_{t+\tau})$. Persons can either be unemployed or employed. $u_{t+\tau}$ is the unemployment rate at instant $t+\tau$. Time t indexes the period (e.g. a quarter), τ is a continuous time measure within the period. s_{t+1} and f_{t+1} are the job separation and finding rates, respectively. For further details see Ellul, (2018).

[4]   For example, inflows may also originate from those entering the labour market for the first time without being previously in employment. Besides, unemployment could also be affected by outflows from the unemployed to non-participation in the labour market, either because they reached retirement age or because of the discouraged worker effect or emigration.
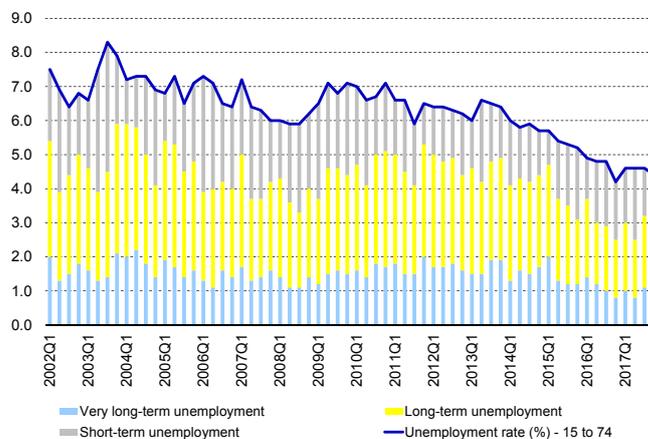
[5]   This Box is based on information available until the end of September 2018. The unemployment rate cited in this Box may differ from more updated estimates published by Eurostat after this date.

In its annual review on labour market and wage developments in Europe, the European Commission (EC) computes job finding and separation rates for EU countries, for the period 2002Q4 to 2016Q4. Most empirical studies define that fraction of unemployed persons who flow out of unemployment as the 'job-finding rate' and the fraction of workers who leave their jobs as the 'aggregate separation rate'. Job finding rates are presented as a quarterly series, and smoothed with a moving-average procedure.[6] The finding rate estimates in this study follow closely the figures computed by the EC, when expressed as a four-quarter moving average (see Chart 2). Differences may result from different estimating periods, the optimisation procedures implemented and input data precision levels.[7] The estimated

Chart 1
UNEMPLOYMENT RATE
(per cent of active population)

Very long-term unemployment Long-term unemployment
Short-term unemployment Unemployment rate (%) - 15 to 74

Source: Eurostat.

Chart 2
JOB FINDING RATES
(four quarter moving averages; per cent)

Job finding rate - MT (EC estimate) Job finding rate - MT
Job finding rate - EU (EC estimate)

Sources: EC; author's calculations.

separation rate is not as close as the EC estimate pre-2006, but moves closer to it thereafter (see Chart 3). This might again result from differences in the estimation procedure, or underlying data differences in vintages or definitions.
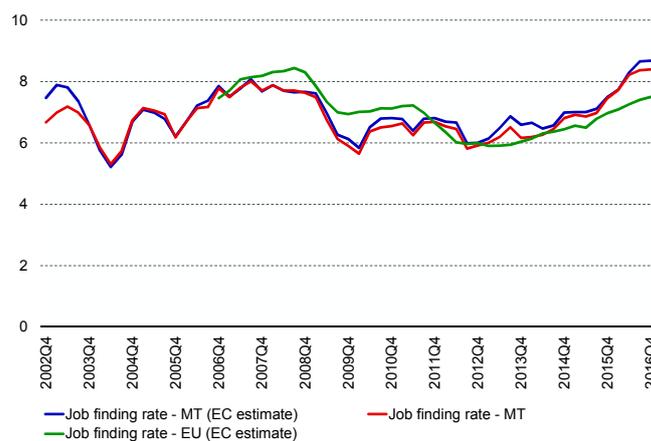
All in all, the flow rates in this study appear to be comparable with the EC's estimates for Malta. Both measures indicate that job finding rates for job-seekers with spells of unemployment shorter than 12 months have started to recover from early 2013 onward. This meant that by mid-2016, job finding rates exceeded the pre-crisis level, and that the average

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[6] Average of four-quarters: reference quarter and previous three quarters.
[7] The author acknowledges and is grateful for the data shared by the economists at Unit.A.3. – Country reform – DG Employment, Social Affairs & Inclusion, within the European Commission.

unemployment duration continued to drop. The decline in the unemployment rates observed from 2013 onward was linked to reductions in the job separation rates and increases in job finding rates. Thus, both the separation and the finding rates have improved, especially for people with short unemployment durations. Rates at which jobs losses occur have persistently fallen. Job finding prospects have risen consistently for the past four years.

Chart 3
JOB SEPARATION RATES
(four quarter moving averages; percent)

Job separation rate - MT (EC estimate) Job separation rate - MT
Job separation rate - EU (EC estimate)
Sources: EC; author's calculations.
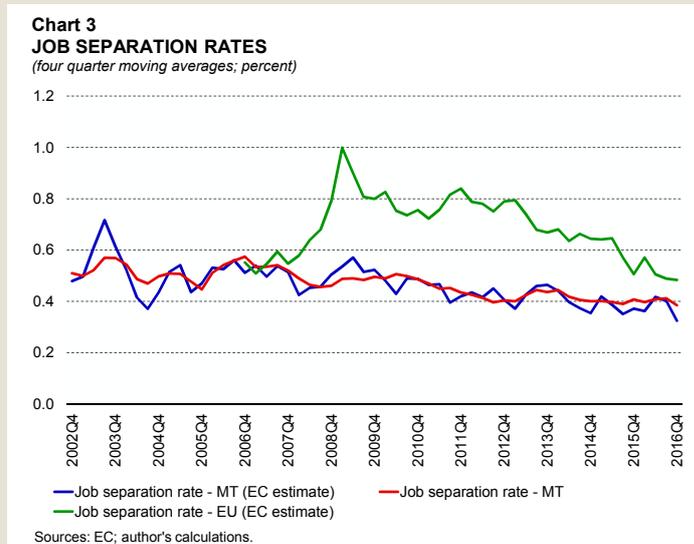
The estimates show that the average job-finding probability in Malta, for the period 2001Q2 to 2017Q3 stood at 6.9%, while the average separation probability stood at 0.46%. While the job-finding rate in Malta tracks developments in the EU closely, the Maltese labour market did not experience the surge in separation rates seen in the aftermath of the financial crisis in the EU and has remained significantly below the EU estimate in more recent years. Another striking result of this calculation is the increase in job-finding probabilities from 2014 onwards in Malta. In fact, the job-finding rate in Malta diverges from the EU rate after 2014. This surge in job-finding prospects may be linked with various active labour market policies which have been put in place to aid job-finding in Malta. These have included a number of targeted training schemes designed to make target groups more employable, and national apprentice schemes.[8]

The observed trends may result from these active labour market initiatives, as well as efforts to reduce the reliance of the long-term unemployed on unemployment benefits, the tapering of social benefits and the curtailing of abuse and fraud, which may have reduced undeclared work and encouraged people to enter the formal economy. The active labour market policies and a clampdown on benefit fraud may have affected the unemployment duration composition. Changes in the duration composition of an unemployment pool will influence the pace of changes in unemployment. The literature suggests that the long-term unemployed are less likely to search effectively for jobs.[9] Those unemployed for longer spells face lower job-finding rates.

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[8]   See Micallef, B. (2016), "Empirical Estimates of Okun's Law in Malta," in *Applied Economics and Finance*, v. 4, n. 1, pp. 138-148; Micallef, B. (2015), "Estimating the impact on potential output of structural reforms to increase the female participation rate," Policy Note November 2015, Central Bank of Malta.

[9]   See Krueger et al. (2014), "Are the Long-Term Unemployed on the Margins of the Labor Market?", *Brookings Papers on Economic Activity*, Brookings Institution Press; and Kroft et al., (2013), "Duration Dependence and Labor Market Conditions: Evidence from a Field Experiment," *Quarterly Journal of Economics*, v. 128, Issue 3, pp. 1123–1167.

The estimates of separation and job-finding rates are useful indicators for policymakers. For example, if job-finding rates were to drop to mid-2000s levels, the long-term unemployment share may return to levels seen in the aftermath of the 2004 slowdown. The concern, then, would be that the Maltese labour market would once more converge to a higher (and perhaps more persistent) unemployment equilibrium.

Policymakers have to continue their efforts to increase the matching efficiency of the Maltese labour market, and further improve training schemes and other active labour market policies. These are particularly crucial in view of Malta's ageing population, slowing demographic dividend from the eventual deceleration of female participation, and the expected path of the labour market's contribution to supply-side growth. Adequate re-training should be provided to workers, especially those who find it difficult to thrive in fast-growing 'new' industries. Policies which drive labour market flexibility and the gradual weaning-off of able persons from social benefits should continue to be implemented.

Finally, the falling job separation rate may also be an indicator of labour market tightness – although migrant workers appear to have provided enough human capital for various industries to thrive, without compromising job prospects for Maltese workers. However, this foreign component appears to be more prone to job turnover and can create added costs to employers who need to find adequate replacements for staff who leave.