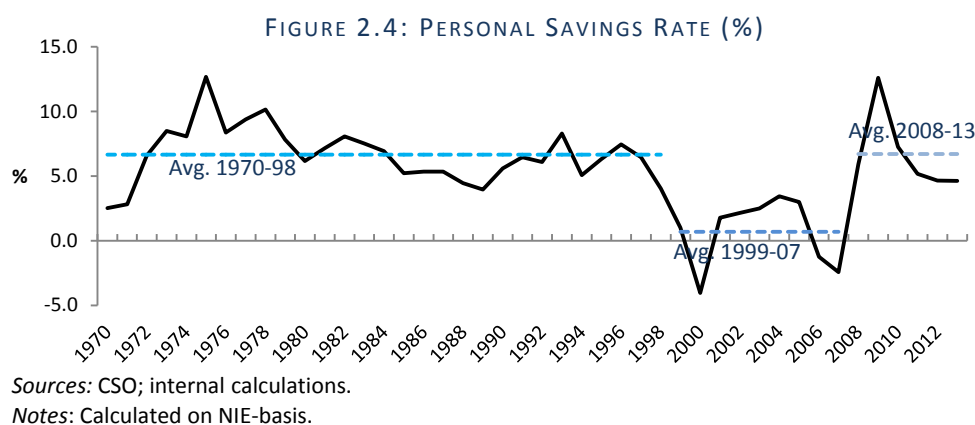


After three years of contraction, **personal consumption** is likely to show a rebound in 2014 (see Table 2.1 forecast summary). Income data present a mixed picture of recent trends in earnings. Annual data from the NIE showed strong income growth in 2013, but other CSO data suggest an annual decline in labour costs during 2013 and on into early 2014 (Box A).

Consumer spending growth is projected to accelerate in 2015, though headwinds remain. The pace of employment growth slowed during 2014 and a continuation of this trend could result in weaker earnings growth than projected. This could dampen consumer spending along with the ongoing negative drag from household deleveraging. In addition, CSO data on savings rates released after the endorsement suggest that savings rates have already descended from recent high levels.¹⁶ Unless these converge on 1999-2007 levels (Figure 2.4), there may be limited space for reduced savings rates to further fuel consumption growth.



BOX B: ESTIMATES OF CAR SALES

Roughly 3 per cent of annual consumption relates to the purchase of private transport equipment. Having contracted for several years, newly licensed private cars expanded by 30 per cent in the first eight months of 2014. An analysis of the determinants of vehicle purchases can help to shed light on whether or not car sales are likely to continue to improve in the coming years.

MODELLING THE STOCK OF CARS IN THE ECONOMY

Hennessy and Tol (2011); FitzGerald *et al.* (2002) and DKM (1998) suggest that convergence to a “saturation rate” forms a central part of forecasting the stock of cars likely to be in the economy at a given point in time. This saturation rate can be crudely understood as the number of cars per 1,000 of the population at which point demand for new vehicles

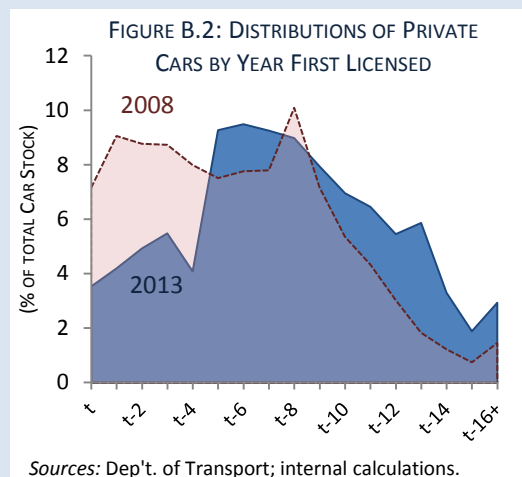
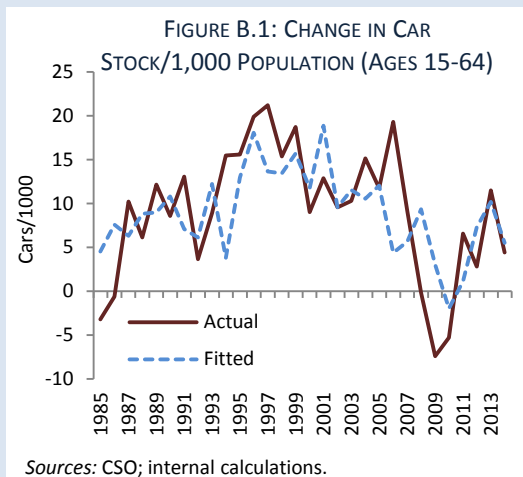
¹⁶ The data on the savings rate were released on 9th October after the endorsement had taken place. Note that while NIE measured savings rates are shown here, the CSO’s *Institutional Sector Accounts* provide another measure of household saving that includes depreciation, CGT and net non-life insurance premiums/claims. The latter series is only available from 2002 onwards and hence the long-run average is distorted by the Celtic Tiger period.

stabilises. At this point, the increase in the total stock of cars is deemed to be directly proportional to the changes in the population or demographic components. FitzGerald *et al.*¹⁷ (2002) estimate the following model of the Irish car stock for a given saturation rate of 0.80

$$\Delta \ln \frac{0.8}{Cars_t / Pop_t - 1} = 0.286 - 3.17E^{-05} \frac{Y_t}{Pop_t} - 0.155 \ln \frac{0.8}{Cars_{t-1} / Pop_{t-1} - 1} - 1.63E^{-05} \frac{Y_{t-1}}{Pop_{t-1}}$$

where Y is the level of disposable income and Pop is the population aged 15-64 years. The model adopts a logistic functional form¹⁸ with an error correction procedure used to predict the car stock per member of the critical 15-64 age group at time t ($Cars_t / Pop_t$). Using the approach in FitzGerald *et al.* (2002), we re-estimate the model for the period 1985-2013:

The coefficients we find (shown above) are similar to those on the lagged dependent variable, albeit are of a smaller order of magnitude for the income variables compared to previous studies. The signs are identical to previous studies and all coefficients are significant.



The model estimates fit the data reasonably well as can be seen in Figure B.1, with the change in the actual car stock per 1,000 of the population (aged 15-64) overshooting that estimated during the pre-bubble period and undershooting it in the early-crisis period 2008-2010. Since then, developments have been more aligned with the model's predictions. The stock bottomed out in 2011 in line with real incomes. Income growth in the last two years then contributed positively to the expansion in the car stock. Based on current income expectations, this should continue beyond 2015.

OTHER FACTORS: AGEING FLEET AND CONVERGENCE ON EU NORMS

There is further evidence to suggest that an expansion in car stocks could be expected to continue. In addition to support offered by models of car stocks and income expectations, the necessity of replacing an ageing car fleet and a likely convergence on international levels of ownership suggest further potential growth in 2015. The proportion of private cars aged over 10 years old is nearly twice as high as in 2008 (Figure B.2) – this will necessitate new purchases if the stock is to be maintained. Also, the share of cars per 1,000 persons in Ireland is below that of the assumed saturation level and below that of other European economies (Figure B.3).

¹⁷ This saturation rate is determined based on a consideration of international experience.

¹⁸ This functional form allows for an 'S-Shaped' curve where demand for vehicles slows as the saturation point is converged on.