The anticipation of workforce contraction as populations age and decline has become a dominant economic concern in developed countries. Models link workforce participation rates to age cohorts, without allowing for the natural feedbacks in a tightening labour market, causing greater recruitment, retention and redeployment of workers in tighter labour markets. OECD countries differ widely in their extent of aging and provide a natural experiment to test the impacts of aging on economic performance. Among OECD countries, no correlation was found between extent of demographic aging and proportion of people employed, nor hours worked per capita. Nor is any productivity penalty evident. In contrast, the proportion of underutilised youth and the extent of income inequality were lowest where the working-age population was contracting. A tighter labour market has potential to improve employment security and lifetime earnings of most households. Comparing naturally declining with immigration-boosted population projections, we find that extra costs of aging are off-set by savings on infrastructure expansion and education. Unwarranted concerns about demographic aging should not overshadow the many the social and environmental benefits of depopulation.