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## Structural Change: Implications of Policy and Other Barriers

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Professor Pissarides presented to OXONIA joint work he has carried out with Rachel Ngai at the LSE's Centre for Economic Performance. Their previous work has explored the relationship between structural change and sectoral growth rates. Over the last year, they have introduced the effects of barriers to mobility and of policy environments on this relationship.

Pissarides presented a model in which the explanation for structural change is found in the differential rates of total factor productivity (TFP) growth between sectors of the economy (due to non-uniform distribution of new technology across sectors). In order that changes in productivity are not wholly absorbed by prices, the model takes the price elasticities at the two-digit industry level to be less than one. Additional assumptions are that all sectors share a standard Cobb-Douglas production function and have a fixed labour force.

The implications of this model are that labour moves to sectors with low TFP growth and that prices rise for the products of that sector. This result is comparable to "Baumol's cost disease" (Baumol, 1967). However, critically, Pissarides pointed out that Baumol neglected capital. When the manufactured production of capital goods is introduced, the model shows that the growth rate of the economy is on a steady-state growth path equal to the growth rate of the capital-producing sector. Pissarides further showed that, within sub-sectors, labour moves to the higher TFP growth area (e.g. from delivering snail-mail to supporting e-mail). A further modification is the opening of the economy. When

this is made, the possibility of high TFP growth industries attracting labour relative to foreign competitors is introduced. The extent of this effect is limited, however, by balance of payments effects so that these industries may not attract labour relative to lower TFP growth domestic industries.

Pissarides argued that there were two types of barrier to economic activity: barriers to factor mobility and the effects of taxation-regulation. Both may have lasting effects on economic activity since structural change is ongoing. Barriers move economic activity in the opposite direction to TFP. As an example, Pissarides discussed the different employment rates between the US and EU labour markets. An improvement in TFP for market produced domestic goods (washing, cleaning etc.) relative to those produced at home (i.e. unpaid) should move women (who predominantly produce these goods) from the home into the labour force. To the extent that there is a marked difference between female participation rates in the US and the EU, this could be ascribed to variation in TFP. If so, the variation would be 40%. However, in fact, the TFP in the two regions is about the same. One explanation for the difference is therefore that the deadweight loss of taxation-regulation is 40% of productivity. While the figure is a little far-fetched, Pissarides argued it was not altogether false.

Pissarides presented a series of illustrations of the points he had made, drawing on data from major OECD economies. As suggested, the share of agriculture in employment in 'mature' economies (US, UK) has fallen to very low levels, the share of manufacturing has fallen to around the investment rate (20%) and the share of services has risen to around the consumption rate (near 80%). The ranking by country according to the gender employment gap shows the same ordering as the OECD's measure of barriers to enterprise start-ups (slides 26, 36). This is consistent with the idea that higher TFP (lower barriers) will see a move from home to market provision of domestic services and a consequent increase in female employment rates.

Finally, there is a strong correlation between the OECD's measure of barriers to enterprise start-ups and the share of the working age population (WAP) employed in services. This suggests that barriers inhibit the structural change to employment-creating service sector growth. One striking finding which awaits full explanation is that the relationship between increased female employment rates and increased service sector employment share is positive in both EU countries and the US but with very different coefficients. The US appears to have raised both substantially over the last 10 years, whereas EU countries have seen a lower rate of increase of female employment relative to the increased share of services.

Pissarides ended with a few policy conclusions. First, attempts to delay the inevitable process of structural change due to unbalanced TFP growth were futile. Second, low female employment rates in some countries are associated with high barriers to change. Third, barriers have a greater impact on impeding

the growth of services than they do on limiting the contraction of manufacturing. So countries with high barriers will see higher levels of unemployment. Lastly, any government efforts to increase productivity should be targeted on the capital-producing sector since this is determinant of the growth of economic activity.

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