

in brief...

How the rise of the service economy narrowed the gender gap

The historical growth in the service sector has created jobs for which women have a comparative advantage, according to analysis by **Rachel Ngai** and **Barbara Petrongolo**.



One of the most remarkable changes in the labour markets of rich countries since the Second World War has been the rise of female participation in the workforce. In the United States, for example, the employment rate of women has more than doubled: from about 35% in 1945 to 77% at the end of the twentieth century. Several European countries, including the UK, have experienced very similar trends.

There has been a huge amount of research on the causes and consequences of the rise in women's involvement in the labour market. Proposed explanations include medical advances, growing investment in human capital, technological progress in the household and wider availability of childcare.

Our research puts forward a new and complementary explanation based on the secular expansion of the service economy and its role in raising the relative demand for female work. Our emphasis on the evolution of the industry structure is motivated by a few observations.

First, the sustained rise in female work since the late 1960s in the United States has been accompanied by a fall in male work and a rise in women's relative wages. In 1968, women's hours were about 37% of men's hours and their wages were about 62% of male wages. By 2008, these ratios had risen to 73% and 81%, respectively.

Men's working hours mostly bore the burden of deindustrialisation

Second, the entire (net) rise in female hours has taken place in the broad service sector, while the entire (net) fall in male hours has taken place in goods-producing sectors, including the primary sector, manufacturing, construction and utilities. This pattern is closely linked to the process of 'structural transformation', and specifically the reallocation of labour from goods to service industries, with an expansion of the service share from 56% in 1968 to 75% in 2008.

Finally, the rise in women's hours in the service sector has been accompanied by a strong decline in their working hours in the household – from about 41 to 31 hours weekly – consistent with substantial 'marketisation' of home production.

Women's market hours were boosted by structural transformation and marketisation

This article summarises 'Gender Gaps and the Rise of the Service Economy' by Rachel Ngai and Barbara Petrongolo, published in the *American Economic Journal: Macroeconomics* 9(4): 1-44 in October 2017 (earlier version available as CEP Discussion Paper No. 1204: <http://cep.lse.ac.uk/pubs/download/dp1204.pdf>).

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One reason for the significance of services is that their production is relatively less intensive in the use of 'brawn' skills than the production of goods – and relatively more intensive in the use of 'brain' skills. As men are better endowed with brawn skills than women, the historical growth in the service sector has created jobs for which women have a comparative advantage.

While the brawn versus brain distinction has become less relevant with the introduction of what might be called 'brawn-saving technologies', women may still retain a comparative advantage in services, related to the more intensive use of communication and interpersonal skills that cannot be easily automated. The simultaneous presence of producers and consumers in the provision of services makes these skills relatively more valuable in services, and a few studies have highlighted gender differences in the use of such traits.

Women's comparative advantage in services is clearly reflected in the allocation of their market hours. In 1968, the average working woman in the United States was supplying three quarters of her market time to the service sector, while the average man was supplying only one half. As structural transformation expands the sector in which women are over-represented, it has potentially important consequences for the evolution of women's hours of market work.

A second reason for the significance of services relates to women's involvement in household work. In 1965, women spent on average 41 hours a week in home production, nearly four times as much as men. Household work typically includes childcare, cleaning, food preparation and other activities that have close substitutes in the market service sector. If the expansion of the service sector makes it cheaper to outsource these activities, there is going to be a reallocation of women's work from the household to the market.

The work allocation of men and women in the late 1960s is thus key to understanding later developments. While women were mostly working in home production and the service sector, men were predominantly working in the goods sector.



From that point, while men's working hours mostly bore the burden of deindustrialisation, women's market hours were boosted by both structural transformation and marketisation.

We use US data to assess quantitatively the importance of these mechanisms. The forces of marketisation and structural transformation predict the entire rise in the service share between 1970 and 2006, 20% of the gender convergence in wages, one third of the rise in female market hours and 9% of the fall in male market hours.

By predicting changes in the overall allocation of time across market goods, market services, home services and leisure, the evolution in the industry structure explains about 60% of the evolution in the overall structure of time allocation across manufacturing, services, leisure and home production for men and women.