Productivity and Resource allocation of Portuguese firms

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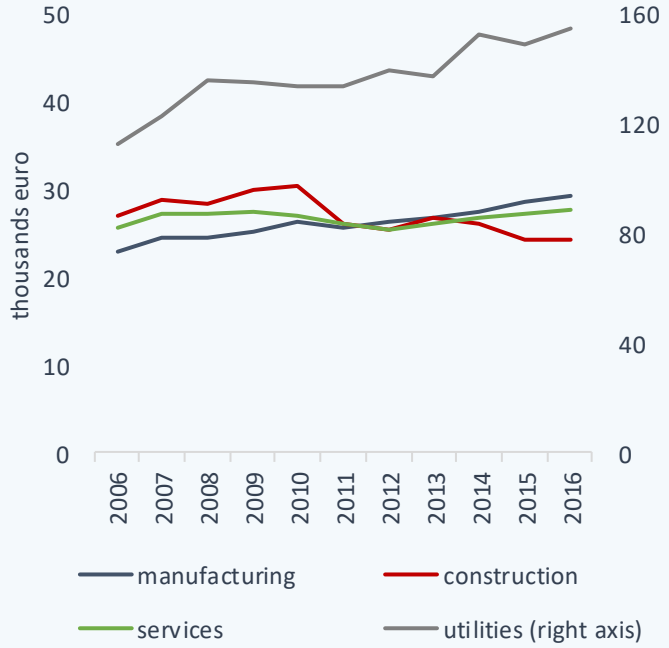
Evolution of labour productivity

Source: own calculations using IES

note: p10: 10th percentile; p25: 25th percentile; p50: median; p75: 75th percentile; p90: 90th percentile

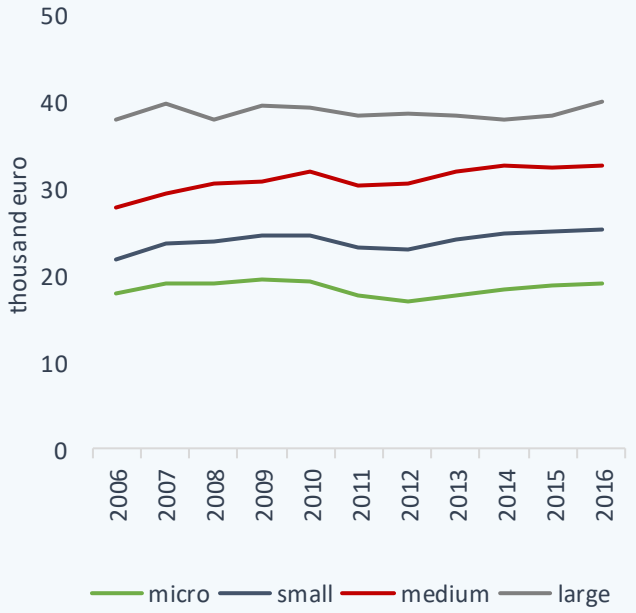
- Productivity is measured as the ratio of GVA to number of employees.
- Aggregate values correspond to the weighted average using labour share as weights.
- We have used information from IES – *Informação Empresarial Simplificada.*
- We included NFC from the manufacturing (except tobacco and oil products); Utilities; Construction and Services activities (except non-market services, real estate, financial sector)
- Results confirm significant heterogeneity in productivity levels across firms as it is usually described in the literature

Evolution of average labour productivity for selected sectors



Source: own calculations using IES

Evolution of average labour productivity for the different sizes

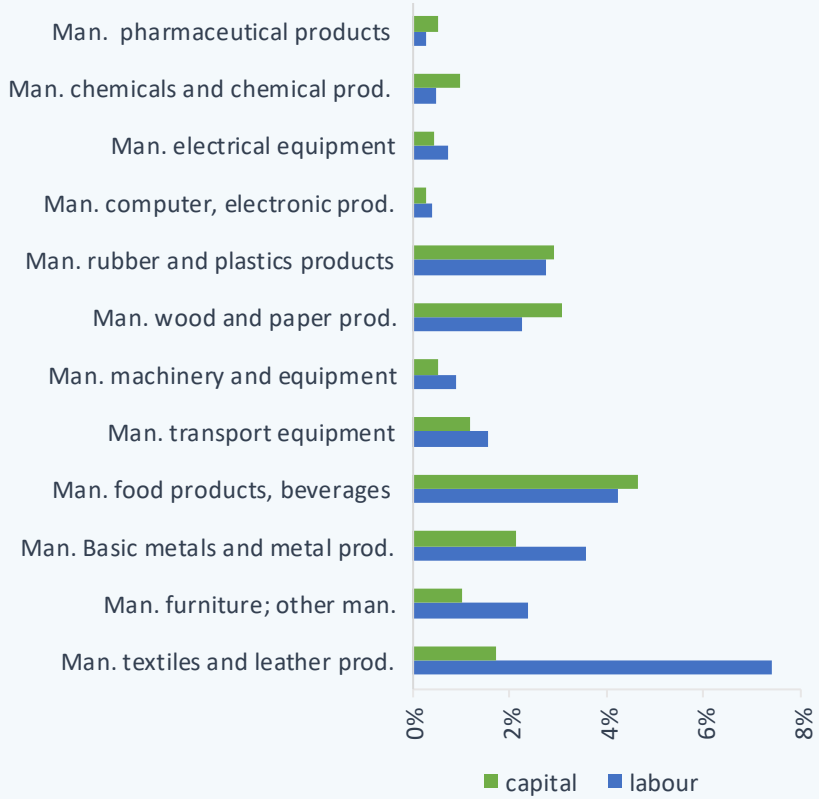


Source: own calculations using IES

Average labour productivity manufacturing (2006-2016)

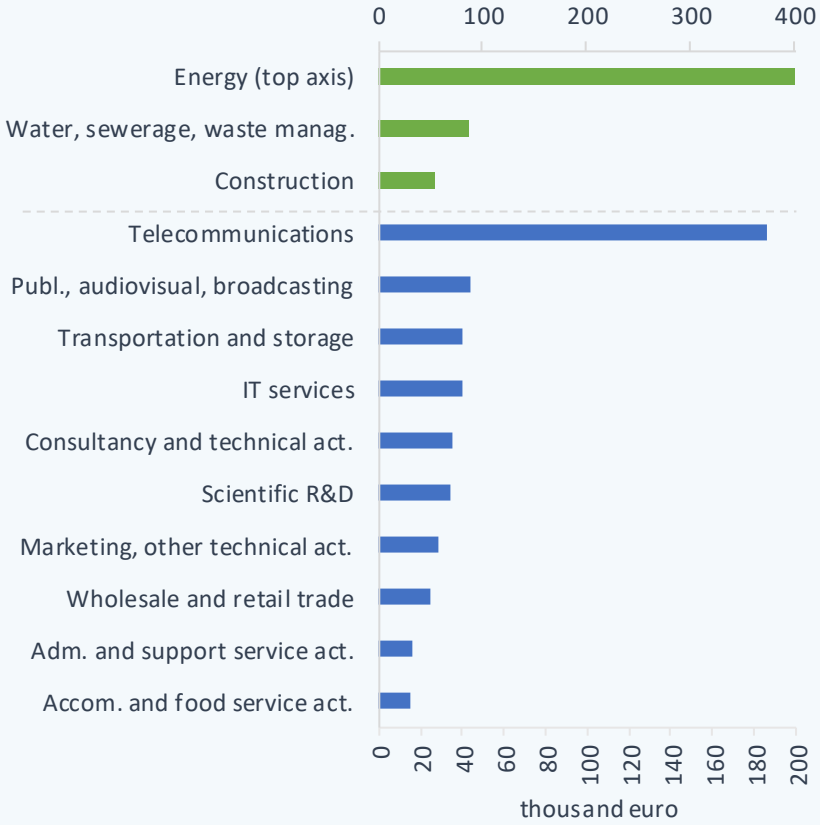
Source: own calculations using IES

Allocation of resources across sectors manufacturing (2010-2016)



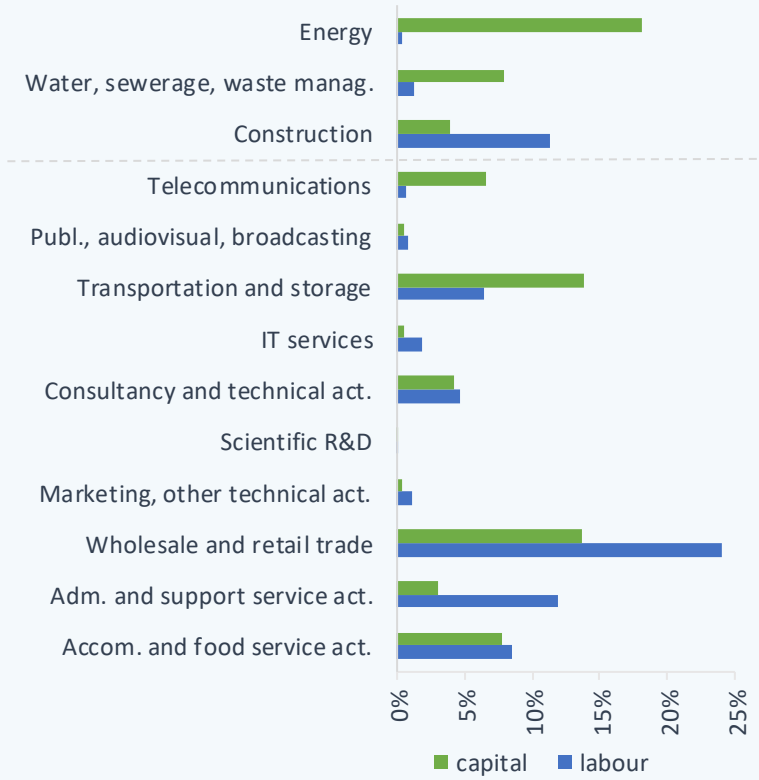
Source: own calculations using IES

Average labour productivity services, utilities and construction (2006-2016)



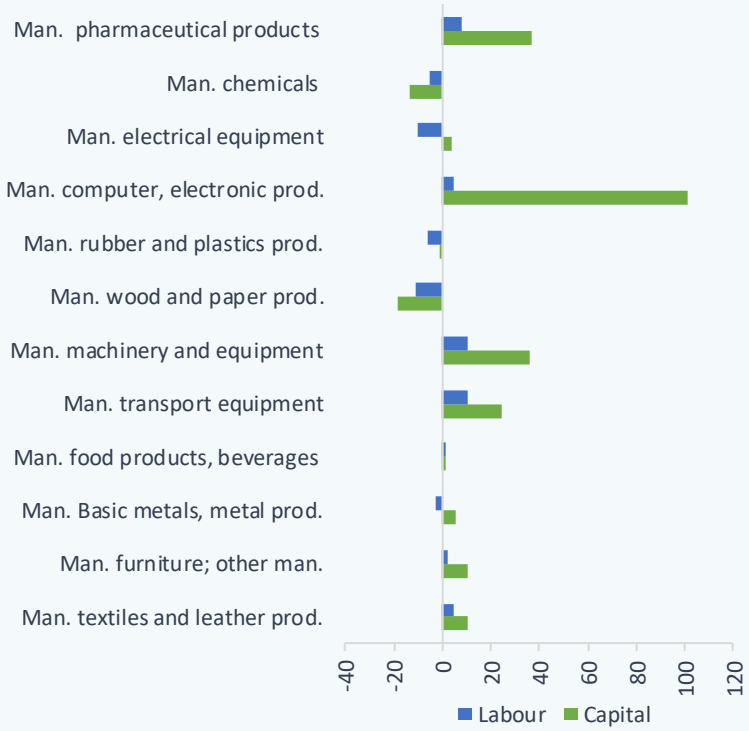
Source: own calculations using IES

Allocation of resources across sectors services, utilities and construction (2010-2016)



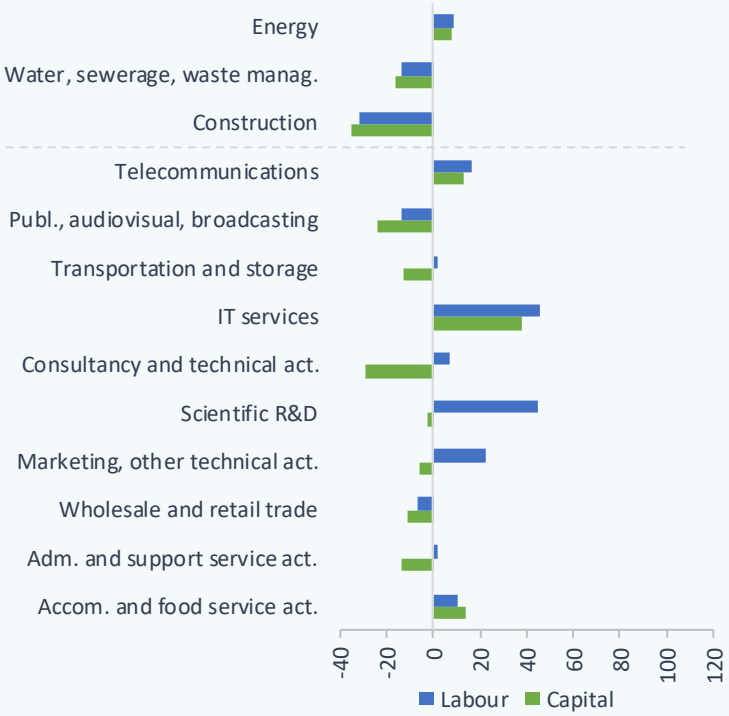
Source: own calculations using IES

Capital and labour growth rates manufacturing (2010-2016)



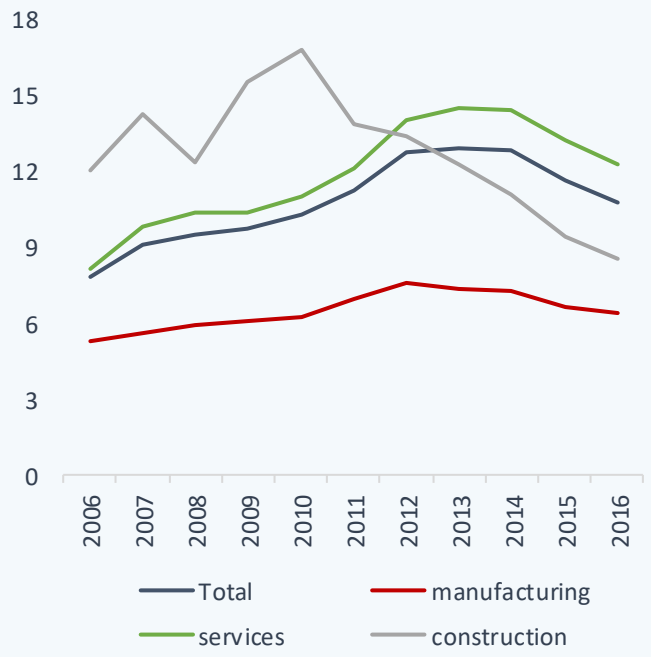
Source: own calculations using IES

Capital and labour growth rates services and utilities (2010-2016)



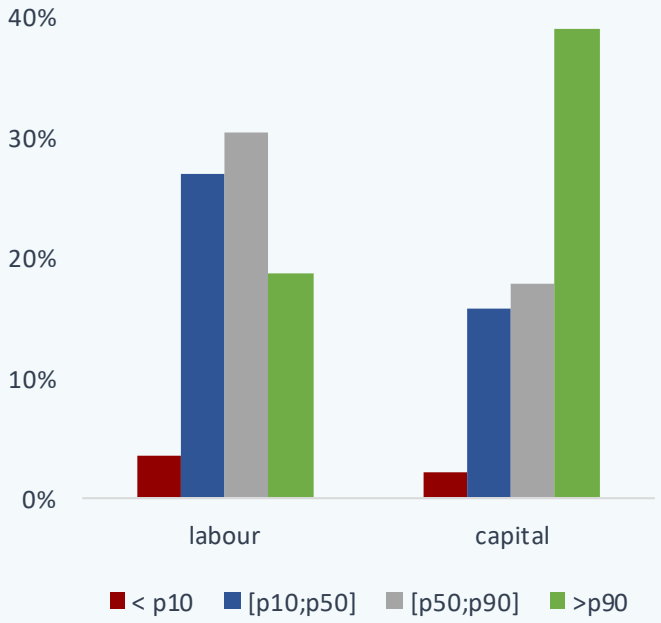
Source: own calculations using IES

90/10 productivity ratio for selected sectors



Source: own calculations using IES

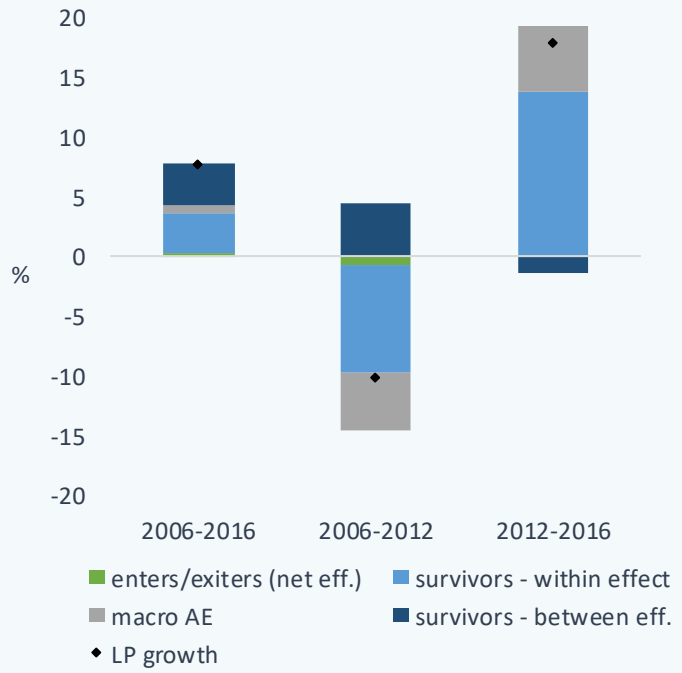
Within-sector allocation of resources across firms by performance (average, 2010-2016)



Source: own calculations using IES

note: <p10: includes firms with labour productivity (LP) below 10th percentile (worst performers); >90: includes firms with LP above 90th percentile (best performers); [p10;p50] includes firms with LP below median excluding worst perf.; and [p50;p90] includes firms with LP above median excl. best perf.

Decomposition of productivity growth



Source: own calculations using IES

Labour productivity growth can be decomposed into four effects:

- macro allocative efficiency effect (macro/between sector AE)
- sector level productivity effects:
  - within effect of survivors, which measures improvements to surviving firms' productivity
  - between effect of survivors, which measures changes to efficiency in labour allocation (within sector AE)
  - firm dynamics effect (enters and exiters net effect)

Main conclusions:

- We find confirm the existence of high heterogeneity regarding productivity levels across and within sectors, and across firm sizes. Moreover, empirical evidence suggests a positive relation between the resources allocated to a firm and its productivity level. Nonetheless, there is margin for improvements.
- Despite the evidence of a global positive relation between resource allocation and productivity, results indicate that labour is actually more concentrated in sectors with lower than average productivity. Although evidence for capital is not as straightforward.
- Regarding the allocation of resources across firms within each sector, results indicate they are, on average, more concentrated in the most productive firms. However, data suggests a deterioration in the allocative efficiency of labour during the last years.
- A decomposition of average productivity growth reveals that the main drivers behind the increase in productivity for the period 2006-2016 were improvements to firm's productivity and a within-sector improvement to efficiency of labour allocation.

Thank you