Non-disruptive regime changes-The case of competing energy efficient lighting trajectories - DTU Orbit (10/08/2019)

Non-disruptive regime changes-The case of competing energy efficient lighting trajectories

Technologies within the same industry are expected to follow similar patterns of innovation, and when the dominant patterns change, this is often expected to have disruptive effects on the industry. However, the three most recent lighting technologies (fluorescent, compact fluorescent, and LED) show different patterns of innovative activities despite similarities in the determinants of innovation; and we observed multiple technological regimes within the lighting industry. Furthermore, we observed changes in these innovative patterns without widespread disruptive effects. While FL and LED quickly improved once they were introduced, CFL struggled for decades. We present an historical case study of the emergence and development of the different regimes and we present possible explanations to be found in market structure and selection criteria. The analysis shows the important role for policymakers in stimulating new technologies in industries with undesirable Mark II pattern through the influence of all the dimensions of the technological regimes.

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