

# How you spend it matters: On the effect of re-targeting subsidies in economically depressed areas

Preliminary – Please do not cite – September 23, 2023

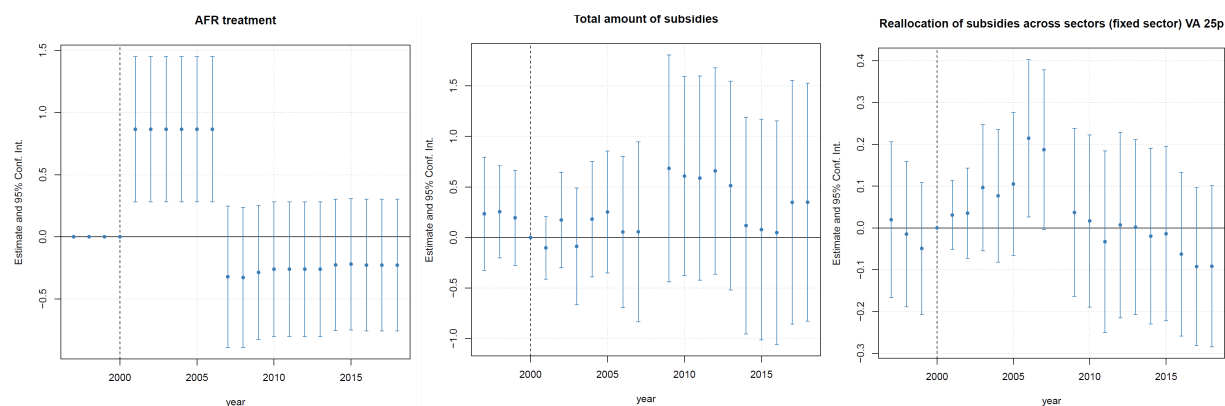
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**Extended Abstract:** In developed economies, the structural decline of manufacturing sectors left formerly flourishing regions in distress. To counteract these developments many governments implemented place-based policies to foster investment. These can trigger large employment responses in depressed areas (Austin et al., 2018). But despite substantial resources allocated to those policies, local labor market conditions persist over time. So are these depressed areas trapped? Or is there a trade-off between current employment stabilization and future employment growth? When regional authorities have more discretion on how to spend their funds, would they finance projects that have immediate benefits for the current population but few long-term prospects? In contrast to previous work that has focused on the level of local subsidies, we are interested in how the local subsidies are spent. Therefore, we study a policy that created regional variation in the legislation governing the allocation of subsidies while keeping the overall amount of subsidies constant.

To ensure fair competition, the European Commission restricts discretionary subsidies. Notably, in France the “de minimis rule” sets the maximum amount of subsidies a firm can receive over a three year period. But in economically disadvantaged areas called *zones d’Aide à Finalité Régionale (AFR)* policy makers are completely exempted from the de minimis rule. In the rest of France, this exemption was restricted to investments in Research and Development and firms providing business services.

This regional variation changes the restrictions on policy makers and should provide variation in the actual allocation of subsidies across sectors. Furthermore, in contrast to other EU countries which allocated large budgets to make use of these exemptions (see e.g. Criscuolo et al. (2019) for the United Kingdom and Siegloch et al. (2021) for Germany), the French government dedicated only a negligible amount of funding to specifically subsidize firms in AFR zones (about €30 million yearly, less than 1% of the total subsidies to firms). AFR zones are re-assigned at infrequent points in time. At that time, an employment area can change AFR status because local economic condition change or because of zoning rule changes, where the latter depend on EU rules that are viewed as largely exogenous to the exact local conditions. In the spirit of Criscuolo et al. (2019), we build a synthetic instrumental variable which solely relies on changes in the zoning rule, specifically on AFR zoning changes which occurred in 2001. Our analysis relies on French administrative data on firms and workers and uses the employment area as the unit of observation.

**Figure 1: Effects of predicted AFR treatment on actual treatment (left), total regional subsidies (middle) and allocation to high-value-added sectors (left)**

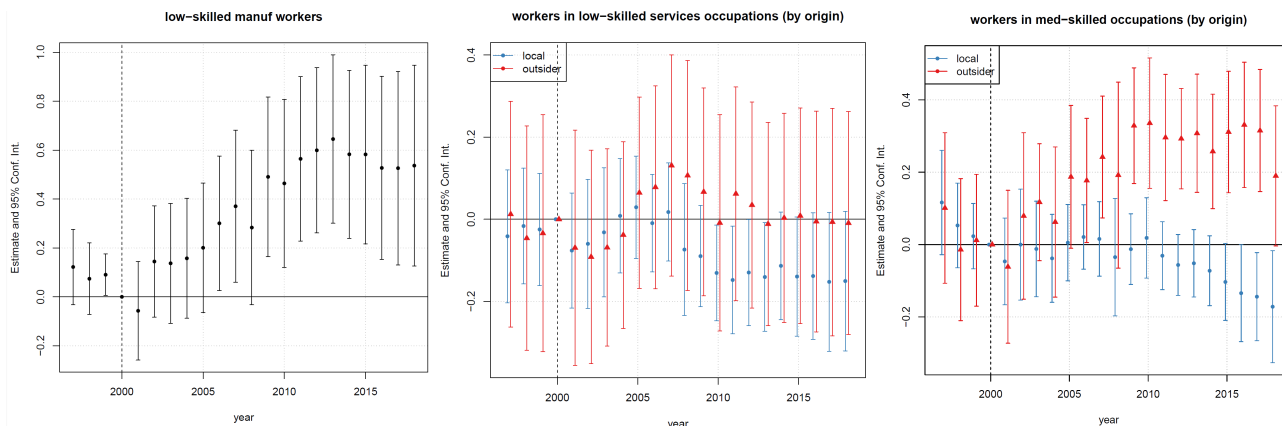


The left panel in Figure 1 shows that our instrument indeed strongly predicts AFR treatment from 2001 and until 2007 when the AFR zoning changed again. The middle figure shows that predicted AFR treatment does not alter the level of subsidies given to firms. We also confirm the result of an unchanged level of subsidies when simply estimating

a post-2000 treatment effect. The right figure shows significant reallocation of subsidies to firms in industries that experience the highest VA growth nationally (i.e., the industries in the top quarter of value-added growth nationally). This right panel provides two immediate insights: Regional authorities indeed shift allocations. And apparently, they shift it to sectors that see a lot of growth in value added. With constant subsidies, this must come at the expense of sectors with low value-added growth; and is likely linked to change away from subsidies to innovation or to services-that-aid-business-activities as these subsidies could already be freely granted even in the absence of the AFR status. This could alter future competitiveness, and certainly the allocation of workers across sectors. Our work aims to answer: Whom does this help, and who is hurt by this, and over which time frame?

We see that employment and hours of work increase persistently after impact, a development that persists even after 2006. This is driven by increases in low-skilled manufacturing labor (Figure 2, left panel), and applies both to “locals”, workers born in the region, and “outsiders” (not shown). In contrast, low-skill services take a negative hit, especially for locals (Figure 2, middle panel, locals as blue circles). A similar chilling effect is visible for locals in mid-skilled occupations (Figure 2, right panel). High-skilled scientific occupations fare badly for all workers, though other high-skill occupations fare well (not shown).

**Figure 2: Effects of predicted AFR treatment on employment in low-skill manufacturing (left), low-skill services by worker origin (middle), and medium-skilled occupation by worker origin (right)**



This shows that granting larger freedom for regional authorities to choose how to subsidize firms with a given level of budget stems against the general trend in France and elsewhere, which is to lose low-skill manufacturing workers. It also hinders a transition to services and mid-skill jobs at least for “locals”.

We propose to document all this in more detail. In addition, we will use the administrative firm-level data to assess in more detail which firm and sector characteristics explain this re-targeting of policy makers. On the worker side, we complement the current “stock-based” approach by a “flow-based” approach. Following workers over time, we investigate whether at time of AFR-reassignment local workers in low-skill services and mid-skilled occupations loose and manufacturing workers gain, or whether flows between occupations allow everyone to gain. We will also examine flows into unemployment and individual wage developments. Finally, in a macroeconomic model of sectoral employment and local labor markets featuring occupation-specific human capital, we intend to replicate our empirical findings and explore the welfare implications of different degrees of freedom in subsidy allocation including potential spillover effects within and across regions.

This analysis allows a glimpse at the trade-offs that different subsidy policies have on the local labor market, even without changing the overall subsidy level. We think this is essential in order to understand the appropriate response to support structurally affected sectors even with a limited budget. How to precisely target subsidies might attract again more attention going forward as changes in (artificial intelligence) technology might again create booms in some regions but lead to busts and calls for structural aid in others.

## References

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