Replacing churches and mason lodges? Tax exemptions and rural development ☆

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ABSTRACT

This paper analyzes a tax credit program targeted at rural areas in France, including temporary and permanent wage subsidies on different types of jobs. We find no impact of the program on employment and wages, pointing to the absence of labor demand response. Comparison with a contemporaneous urban scheme suggests ways that the incentives of the rural program could be targeted more effectively.

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1. Introduction

"Everybody knows the role of associations, in particular in rural areas, where they replace churches, mason lodges, pubs, the police, tax collectors, and Communist party sections. They are the only ones creating social links."—a member of parliament, quoted in Daniel et al. (2009).

Governments around the world issue tax credits and subsidies to disadvantaged labor markets in an effort to reduce spatial inequalities. Examples of these schemes include so-called "EZ programs" like the state-level enterprise zone or the federal empowerment zone programs in the US. However, the economic rationale for such programs is debated. The literature has analyzed conditions under which place-based policies make economic sense, for equity and/or efficiency motives (Kline and Moretti, 2014). To fix ideas, consider a wage subsidy for jobs located

in a deprived area — a frequent component of place-based policies. Under complete markets, the subsidy will increase local workers' welfare under two main conditions: low worker mobility and high housing supply elasticity.[1] Thus, policymakers considering a localized wage subsidy to reduce spatial inequalities need to anticipate the consequences that can arise from worker mobility and housing market responses in the targeted area, and design subsidies accordingly – or find better ways to transfer resources, such as person-based interventions (e.g., a means-tested program).[2]

The empirical literature on place-based policies has mostly focused upon urban EZs, even though rural areas constitute a frequent target of such programs (Wortman, 1996). Filling that gap is important, if only because rural areas seem to fulfill criteria that would make them an appropriate context for place-based interventions: labor mobility to remote areas is low, and the availability of land and/or the excess supply of housing limit the risk of rent increases. This argument has been used

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[1] The former ensures that the subsidy is passed on to local workers through higher wages – which would not be the case with a fully elastic labor supply due to migrants or commuters – while the latter ensures that the increased demand for housing does not push the rental price of housing up to the point that it would offset the benefits of wage increases.
[2] Of course, localized market imperfections may also provide a rationale for place-based interventions.

to promote place-based policies as a tool for poverty alleviation in remote "pockets of poverty" (Partridge and Rickman, 2007). Furthermore, search frictions in rural labor markets and a low productivity provide a case for hiring subsidies, as a way to fight excessive unemployment (Kline and Moretti, 2013).

In this paper, we analyze a rural EZ program called *Zones de revitalisation rurale* or ZRR, a tax credit program targeted at areas of low population density in France. The ZRR program was launched in the mid 1990s and is still operating. In 2008, the program cost was above 400 million Euros.[3] The main component of the program is a wage subsidy, in the form of employer payroll tax exemptions, targeting a subset of the jobs located in the rural EZs. The targeting and generosity of the payroll tax exemptions evolved over time. During the first nine years of implementation (1996–2004), the exemptions were restrictively targeted toward small firms (with fewer than 50 employees) that increased their workforce, and they were temporary, reducing labor cost by up to 20% during the first year of a job spell. A turning point occurred in 2005 when, somewhat by surprise, a parliamentary amendment made the scheme more generous, granting a large, permanent payroll tax cuts for all employees of a specific group of employers, the so-called "public interest organizations" (PIOs). As made clear by the above quote, the member of parliament promoting the amendment had in mind small associations that maintain a form of social life in rural areas. An unexpected side-effect of these new exemptions was that it benefited some large employers in the health and education sectors (Daniel et al., 2009).

We analyze the ZRR program's impacts between 1996 and 2004 (initial version of the program) and between 2005 and 2009 (second version). We take advantage of a discontinuous criterion in the rule that determined whether a given local jurisdiction was eligible for the program, and implement a fuzzy regression discontinuity design. We find no impact of the rural EZ program on local employment or the number of businesses, and also no impact on wages. Estimates are quite precise, and the results are robust to a variety of specification checks. Given the focus of the program on specific subsets of firms, we separately analyze new jobs in firms with fewer than 50 employees, and public interest organizations. Again, we do not find any significant effects and can in most cases reject large positive impacts. Overall, the program clearly failed to increase employment and business creation in the eligible areas; it also failed to increase the wages of local workers. This points to the lack of labor demand response.

These results may come as a surprise: while models in the literature discuss in which contexts the labor and housing supplies are likely to be elastic or not, they typically assume an elastic labor demand, and even in most cases a fully elastic one (Glaeser and Gottlieb, 2008; Busso et al., 2013; Kline and Moretti, 2014). This paper provides a case with limited labor demand response. An important question is whether this weak response is due to the specificities of the rural environment, or whether the design of the incentives in the ZRR program made them ineffective. To assess the specificities of the ZRR program design, we use a contemporaneous French urban EZ program as a benchmark. That program has been extensively evaluated in the recent literature and found to yield quite large impacts. Comparing the different versions of the ZRR program to its urban counterpart reveals that the design of the ZRR program contributed to make it ineffective, in that it provided insufficient incentives to new jobs, excluded relocating businesses, and restricted the more generous incentives to a sector with fewer job creations and destructions (the public interest organizations). Then, in order to analyze geographical constraints to the ZRR program's effectiveness, we analyze the potential heterogeneity of the program's impacts across more or less remote areas. Our hypothesis is that

program's impacts could be larger in rural areas whose location makes it easier to divert activities from non-ZRR neighboring areas. However, we do not find any evidence of this. We conclude that focused incentives are a necessary condition for place-based policies to fulfill their promises of poverty alleviation in rural areas. Whether they are sufficient is an open question.

Our paper adds to the few papers evaluating EZ programs in a rural environment. The results are consistent with previous evaluations of the French rural EZ program (in its 1996–2004 version).[4] The absence of impact is also consistent with Devereux et al. (2007) in finding that firms are less responsive to government subsidies in areas where there are fewer existing plants in their industry. More generally, our paper fits into the growing literature evaluating the impact of EZ programs on employment and other outcomes.[5] The evidence against large employment effects is in line with recent findings in other contexts by Neumark and Kolko (2010), Bondonio and Engberg (2000), and Bondonio and Greenbaum (2007). Interestingly, there are also recent evaluations which find positive impacts – in particular Busso and Kline (2008), Busso et al. (2013), Ham et al. (2011), and, in France, Givord et al. (2013) and Givord et al. (2012). As argued by Bondonio and Engberg (2000), a comparative perspective is needed to draw more general lessons on how to design the incentives. Just like Bondonio and Engberg (2000), we find that no version of the ZRR program had a significant impact. But the comparison with the urban EZ program in France suggests that a mix of more generous incentives and different targeting techniques might lead to more positive results.

The paper proceeds as follows: in Section 2, we provide a theoretical framework to think about the labor market impacts of wage subsidies in a rural environment. In Section 3, we describe the French rural EZ program. In Section 4 we describe our econometric approach and the data. In Section 5 we present our estimates of the program's impacts. Section 6 discusses possible explanations for the lack of labor demand response. The last section concludes.

2. A model of wage subsidies in a rural labor market

The analysis in this paper focuses upon the labor market's impact of the ZRR program.[6] We present a simple partial equilibrium model of response to wage subsidies in a local labor market, and discuss implications for rural areas.

We consider a local labor market (the rural EZ) surrounded by other, non-EZ labor markets. In contrast to classic spatial equilibrium models (Roback, 1982), we set up the model so as to allow for labor demand and labor supply curves with finite wage elasticities. Specifically, we follow Kline (2010) on the labor supply side, and assume a continuum of workers who decide to work or not in the area yielding the highest utility.[7] The utility of worker i working in area j is

$$u_{ij} = w_j + A_j - r_j + \varepsilon_{ij}, \tag{1}$$

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[3] The order of magnitude is similar to what is found in several EZ programs in the US: $1.21 billion for the federal empowerment zones, or $290 million in tax credits in California (2008).

[4] Lofredi and Schmitt (2006), Cardot et al. (2012) use panel data and matching approaches. Lorenceau (2009) uses the same regression discontinuity approach as this paper, but we use more reliable administrative data leading to more precise results, consider different target groups of firms, and analyze the altered 2005 scheme.

[5] Ham et al. (2011) and Neumark and Kolko (2010) include recent reviews. See also Glaeser and Gottlieb (2008) and Greenstone and Looney (2010).

[6] A recent strand of literature (Kline, 2010; Busso et al., 2013; Kline and Moretti, 2013; Wang, 2013) has emphasized the necessity to consider a broader set of outcomes (in particular, the rental price of housing and the total factor productivity growth) in order to assess the welfare impact of place-based policies. This is beyond the scope of this paper, which focuses on labor demand responses. A significant labor demand response is necessary for the program to have welfare implications beyond those of a mere transfer to firms.

[7] As the ZRR wage subsidy is not restricted to workers residing in the zone, whether a worker decides to live in the zone or not is transparent in terms of labor supply. We therefore follow Kline (2010) by assuming for simplicity that workers live and work in the same place. But the model can be extended to distinguish decisions on places of work and residence – see Kline and Moretti (2014).