Appendix, "Place-Based Policies of the European Union: Contrasts and Similarities to the US Experience," Peter R. Berkowitz, Michael Storper, and Max Herberson, forthcoming in Economics of Place-Based Policies,' edited by Cecile Gaubert, Gordon H. Hanson, and David Neumark, University of Chicago Press.

7 Appendix A. Evidence on the impact of Cohesion Policy

Earlier studies such as Dall'erba and Le Gallo (2008) and Gallo et al. (2011) found little evidence of spatial spillovers. However, Amendolagine et al. (2024) use a heterogeneous panel model to accommodate spatial dependence and spillover effects and demonstrate that Cohesion Policy generates substantial heterogeneous spatial spillovers and the positive effects outside target regions. Confirming earlier studies, strong spillover effects are channeled by trade linkages to richer central regions. Maucorps et al. (2023), using structural equation modeling, identifies positive and substantial spillovers from EU Cohesion Policy from less developed areas. Blouri and Ehrlich (2020) use a general equilibrium model calibrated for the regions of the EU in order to focus on three main channels: wage subsidies, local productivity amenities, and local transportation infrastructure. They suggest that local transportation is the most likely to create positive spillovers. Crucitti et al. (2023) use a dynamic spatial general equilibrium to model regional contributions through taxes and expenditure in six sectors for each of the NUTS2 regions in the EU. The analysis suggests that cohesion policy programs had a positive and significant impact. The impact is higher in less developed regions, but in the long run, it is also positive in richer Member States due to international spillovers. In conclusion, these studies suggest that there are significant trade spillovers in the context of Cohesion policy. However, there is much less conclusive evidence on the dynamics of congestion and agglomeration effects.

A number of studies have focused on infrastructure and highlight the complexity of assessing the localized impact of network investment. As a result, the effects of transport investment are highly heterogeneous (Crescenzi and Rodríguez-Pose (2012)). Different studies have argued that returns on motorway investment offer low returns compared to secondary roads (Crescenzi et al. (2016)), while others see more positive results (Bo and Florio (2012)). A key feature of transport investment is that it lowers transport costs for regional actors, but also for competitors outside the region. As a result large-scale network infrastructure is likely to benefit those places which are able to exploit agglomeration economies (Puga (2008)). But in some cases, such investments have allowed poorer regions to exploit locational and cost advantages in industries such as vehicle manufacturing or the aeronautics industry.

In addition to investment in public infrastructure, Cohesion Policy has provided considerable support to SMEs, with exceptional support for large companies. For example, in the 2007-2013 period support was estimated at EUR 6 billion, representing 20 per cent of all ERDF spending on direct enterprise support in the EU-28, with the remainder going to SMEs. A review of a mix of EU and national counterfactual evaluations by the European Commission in 2012 concluded that for large enterprises there is little evidence of long-term benefits due to deadweight effects (Loi and Rodrigues (2012)). One area of investment which shows more positive outcomes are research investments with links to local SMEs. The regulatory framework was therefore adjusted in the 2014-2020 period. An evaluation undertaken in 2015 by the Commission concluded that in only 20 per cent of cases, ERDF support was among the main causes of project implementation. In 50 per cent of cases, ERDF support was successful in inducing changes in corporate behavior, particularly influencing the timing

and the scope of the implemented projects. In 30 per cent of cases, ERDF support had little influence on the behavior of large enterprises (Commission (2016)). Furthermore, as the resources came from the EU budget there was considerable political concern about relocation from richer to poorer Member and the durability of investment.

Bachtrögler et al. (2020) show that the average treatment effect on supported (treated) firms (ATT) is relatively large in terms of boosting both value added and employment growth. However, outcomes are heterogeneous and the impact on productivity is smaller across countries and not always significant. Crescenzi et al. (2020) studying an Italian SME scheme found only positive employment effects. Banai et al. (2020) identified a significant positive effect on the number of SME employees, sales revenue, gross value added in Hungary. However, the labor productivity of enterprises was not significantly affected by any of the support schemes. Beņkovskis et al. (2019) suggest that projects co-financed by the ERDF increase firms' employment, turnover and capital stock per employee immediately, while it raises their productivity only two years after the launch of the projects. ERDF beneficiaries that are initially less productive, larger, less capital intensive and more financially leveraged enjoy larger productivity gains. Finally, studies by the World Bank (2019) and Statistics of Poland's SME and innovation support programs over 2007-13 finds similar results - there are positive impacts on firm employment, sales, value-added and exports. In contrast, there is mixed evidence about the impacts on productivity, depending on the productivity measure used. They suggest that the lack of impact on productivity enhancing investment may be partially driven by a crowding-out effect if firms lack the capacity to absorb capital efficiently. Instead of increasing investment, firms may choose to redirect private funds towards other purposes (for example, increase hiring).

Workforce training and skills. The fund that invests in workforce development – the European Social Fund (ESF) – had a budget of around EUR 75bn for the period 2014-2020. The results of an updated meta-analysis of the available ESF and YEI counterfactual impact evaluations carried out in the 27 Member States and the UK showed that participants in ESF/YEI measures had, on average over the 2014–2020 period, a higher likelihood of being in employment afterwards than comparable non-participants, amounting to 6–8 pp (Pompili et al. (2023)). Giua et al. (2022) provide evidence that Cohesion Policy projects have had a positive effect on the wage gaps between local employees and immigrants. Fusaro and Scandurra (2023) find positive impact on employment of the European Social Fund on youth education and employment but highlight that such results are strongly influenced by local specialization in high-skilled activities. Furthermore, studies suggest that there is division in education outcomes between those with low and upper secondary education that could potentially worsen pre-existing inequality in the long run. Crescenzi et al. (2020) concluded that learning mobility programs can reinforce skill matching only if problems of beneficiary self-selection can be addressed. Biedka et al. (2022) examine the impact of Cohesion Policy support for human capital at municipal level in Poland. This has a positive effect on local revenues, both during and after the intervention. However, although the authors do not find direct evidence that cohesion policy stimulates out migration of skilled people in Polish municipalities, there is also no sign that EU funded investment in human capital prevents depopulation of the least developed areas in the country.

Migration and sorting. There is relatively little evidence on the impact of Cohesion Policy support on the retention of skilled workers in the context of outmigration. Given

the urban wage premium in large European cities (Ahrend et al. (2014)), the pull factors are potentially significant. The European Commission recently adopted a communication "Harnessing Talent in Europe's regions" (European Commission (2023)) which addressed the challenge of encouraging the development and retention of highly skilled individuals, and the Draghi and Letta Reports both refer to a "right to stay." This certainly contrasts with historical American attitudes and practices that emphasize mobility, but does find a recent echo in the US, where lower levels of geographical mobility are leading some to rethink the emphasis on leaving to opportunity as a solution to place-based problems. Note, however, that these concerns in both Europe and the USA probably mostly concern not the highly-skilled, but other population groups. And that policies to encourage or enable people to stay may conflict with spatial allocation concerns (see conclusion).

Many different regional characteristics have also conditioned the effectiveness of Cohesion Policy. These include human capital endowments (Becker et al. (2012), Fratesi and Perucca (2019)), settlement structure (Gagliardi and Percoco (2017)), industrial structure (Cappelen et al. (2003), Percoco (2017)), population density (Albanese et al. (2021)). This heterogeneity has been used as the basis to argue for the need to place-tailor policies (OECD (2009); Barca (2009); Iammarino et al. (2019); McCann (2023)), but it also raises the question of policy mix.

8 Appendix B. Full history of European place-based policy objectives

Period	Objectives	Geographical Coverage
1988-1993	Promoting development and adjustment of lagging regions	< 75% EU gdp/per head
	Converting areas seriously affected by industrial decline	Industrial regions
	Combating long-term unemployment	All regions
	Facilitating the occupational integration of young people	All regions
	Speeding up the adjustment of agricultural structures	All regions
	Promoting the development of rural areas	Rural areas
	10 community initiatives	Targetted according to theme
1994-1999	Promoting development and adjustment of lagging regions	< 75% EU gdp/per head
	Converting areas seriously affected by industrial decline	Industrial regions
	Combating long-term unemployment and supporting (young) people into the labor market	All regions
	Facilitating the adaptation of workers to industrial changes and changes in production systems	All regions
	Speeding up the adjustment of agricultural structures (alongside reform of CAP)	All regions
	Facilitating the development and adjustment of rural areas	Rural areas
	12 community initiatives	Targetted according to theme
2000-2006	Promoting the development and adjustment of lagging regions	< 75% EU gdp/per head
	Supporting economic and social conversion of areas facing structural difficulties	Industrial , rural and urban areas
	Supporting the adaptation and modernisation of policies and systems of education, training and employment	All regions
	4 community initiatives	Targetted according to theme
2007-2013	Convergence: Speeding convergence of least-developed Member States and regions	< 75% EU gdp/per head
	Competitiveness and employment: Strengthening regions' competitiveness and attractiveness as well as employment	All developed regions > 75% EU gdp/per head
	Territorial cooperation: Strengthening cross-border cooperation, transnational and interregional cooperation and exchange of experience at the appropriate territorial level	Border regions
2014-2020	Strengthening research, technological development and innovation	All regions
	Enhancing access to, and use and quality of, ICT	All regions
	Enhancing the competitiveness of SMEs	All regions
	Supporting the shift towards a low-carbon economy in all sectors	All regions
	Promoting climate change adaptation, risk prevention and management	All regions
	Preserving and the environment and promoting resource efficiency	All regions
	Sustainable transport and bottlenecks in key network infrastructures	All regions
	Sustainable and quality employment and supporting labour mobility	All regions
	Social inclusion, combating poverty and discrimination	All regions
	Investing in education, training and vocational training for skills and lifelong learning	All regions
	Enhancing institutional capacity of public authorities and stakeholders and efficient public administration	All regions
	European territorial cooperation	Border regions
2021-2027	Competitive and smarter Europe	All regions
	Greener, transitioning to net-zero economy, and resilient Europe	All regions
	More connected Europe	All regions
	More social and inclusive Europe	All regions
	Europe closer to citizens	All regions
	European territorial cooperation	Border regions
	Just transition	Regions dependent on fossil fuel production and energy intenstive industries

Figure 17: Full history of European place-based policy objectives