

A 'place based' industrial strategy for sustainable competitiveness

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1. Introduction

The shift towards place-based industrial policy is arguably best highlighted in the EU's Research and Innovation Strategies for Smart Specialisation (RIS3 or S3) programme. This has focused attention at the EU as a whole and within EU regions in utilizing policy instruments in a way that leverage their existing strengths and resource endowments, so as to unleash an 'entrepreneurial discovery process' and uncover new innovation opportunities (Foray, 2015). The aim is to enable regions to evolve/re-invigorate themselves in a dynamic way and move onto a higher growth trajectory.

S3 provides a policy framework that focuses almost entirely upon value creation activities; whether within firms or co-created with other actors in the regional innovation eco-system (RIE). It is increasingly being acknowledged that for sustained regional growth, value capture is also important (Bailey et.al, 2018, 2019). In this short position paper, we set out how regions might concomitantly pursue five strategic moves– technological diversification, place renewing leadership, use of vehicles such as FDI and clusters/business ecosystems, positioning and control over 'bottleneck' assets – in exploiting their assets to not only create value, but also capture a fair share of the value they help co-create. We first begin by outlining the concept and categories of value, before outlining the five moves. We then conclude.

2. Value Creation, Co-creation and Capture

The concept of 'value creation' lies at the heart of modern industrial policy¹. Value itself is a wide-ranging concept that has long troubled social science. In a business context, we might define it in terms of a good or service's '*perceived worthiness*' to an individual agent (Pitelis (2009, p.1118)). As such, value creation arises from additional value stimulated through an activity, product or service; this may be akin to 'value added', a measure of business success (Kay, 1995, p.9). Realising this value – or capturing it – is achieved through profitable sales and this is critical to sustained business success. In markets, firms can create and capture value through either raising the attractiveness or perceived utility of the product/service and charging a higher price or achieving cost reductions and raising the price-cost margin for a given price. Strategy is critical here, with firms often utilising their ability to control these options, through better organisational management, human resources, innovation, returns to scale, advertising/branding and strategic entry deterrence (Bailey et.al, 2018). These options to value creation and capture are not mutually exclusive and are typically pursued simultaneously.

However, what is applicable to firms is also scalable to value creation and capture within regions (Bailey et.al, 2019). And, it is important that at the regional level, any value created in the region, is at least partly retained by local public and third sector actors (the local society), and not captured by a few focal private actors, foreign or local. Indeed, there have long been concerns that multinationals unduly benefit from public initiatives aimed at regional innovation/growth, and hitherto shifting production offshore so as to capture a disproportionate share of the fruits of value co-creation (Christopherson and Clark, 2007). This can be inimical to sustained regional growth.

¹ The concept of value is wide-ranging, a useful definition is in terms of a good or service's '*perceived worthiness*' to an individual agent (Pitelis (2009, p.1118))

If a region wants sustained growth, and benefit from the value creation process, it will need to attract and retain firms which can capture value. But it will also need to identify and leverage ways in which it can also capture a share of the co-created value for non-private actors. In part this requires embeddedness within the region, with strong linkages between the local industrial base and multinational firms so as to render regions 'sticky' (Markusen, 1996). But it also requires specific strategic measures that ensure that within the region the distribution of benefits is such that it supports sustainable growth. Below we outline five elements of place-based industrial strategy can help foster sustainable capture of co-created value.

3. Building Regional Competitive Advantage

i). Technological Diversification

The first element for sustainable growth, is regions need to identify their extant and evolving comparative and competitive advantages. Invariably, this means deciding whether to 'compete' on their existing strengths/assets or to create new opportunities through developing new specialisms. The latter often emerge through regional actors exploiting their existing expertise, competencies and knowledge bases and synergising them with new complementary technologies in related sectors (Frenken et al., 2007).

This is referred to as 'related diversification' (or exploiting 'related variety') and facilitates regional branching, where new industrial and technological paths emerge out of existing embedded industrial structures, and which has become a pattern across Europe (Kogler et al., 2017). At the regional level, it involves structural change yet this opens up the possibility to move onto more dynamic trajectories which can be important once traditional strengths have become redundant (Boschma and Gianelle, 2014, Mameli et al., 2014, Neffke et al., 2011).

ii). Place-Renewing Leadership

The second element and critical in facilitating technological diversification is 'place-renewing leadership' (Bailey et al, 2010). Regional governments and public agencies can especially lead in aligning place-based industrial policy with structural and technological changes and hitherto shaping region's desired competitive advantages (Lee and Malerba, 2017). The exemplar is Emilia Romagna, whose regional government and public technology agencies have played an instrumental role in shaping several post-war transformations. For instance, in the Emilian Packaging Valley industry, Andreoni et.al (2017) documents how policymakers have utilised a wide range of direct and indirect policy supports to enable it to adapt, evolve and retain its global market position, despite fierce international competition. Over the last 50 years, the industry has integrated new electronics, information and communication technologies with traditional mechanical systems, which have opened up new opportunities in higher-value product segments (such as in pharmaceutical machine packaging), which has led to an organisational reconfiguration within the Emilian production system. Regional policymakers have played a leading role in this process, through closely liaising with local firms and ensuring co-ordination and flexibility in policy at different stages of the cycle (Andreoni et.al (2017)).

Place-renewing leadership is especially important in lagging regions, and those stymied by a reliance on traditional sectors. For instance, in North Staffordshire ceramics industry, locally-based industry bodies, such as Lucideon through its Applied Materials Research, Innovation and Commercialisation Company, have begun to lead a transformation into the field of material science. This is enabling the region (and cluster-ecosystem) to gain new competitive advantages in transforming materials (including ceramics, metals and polymers), processes and technologies into new types of products and solutions to improve industrial efficiency and for commercial use (see Tomlinson and Branston, 2014, 2017).

iii). 'Vehicles'

The third element is identifying and supporting appropriate 'vehicles' through which regions can strengthen their supply-side structures so they can be globally competitive. Examples of these 'vehicles' include Foreign Direct Investment (FDI) by multinational firms acting as 'innovation anchors' and the agglomeration of firms and universities/research institutes within a regional innovation eco-system. These 'vehicles' play a key role in fostering regional value co-creation. In RIEs, related and supporting institutions and organisations such as third sector or private-public collaborations such as chambers of commerce, joint infrastructural projects, venture capital firms, incubators, catapults and in cases free enterprise zones, all foster embeddedness and stickiness. Each of these 'vehicles' may play a role in fostering entrepreneurialism - and while they need to be tailored to specific local contexts – critically, they each involve regional government as a co-ordinator/facilitator.

No-where is this better perhaps illustrated, than perhaps in Massachusetts. It is primarily a knowledge intensive and innovation led economy, with a strong manufacturing sector focusing upon small-batch, high value niche production. The state's 'vehicles' are its world class university sector and public-private research institutes that include the Raytheon-UMass Lowell Research Institute, which has close with leading OEMs, and has a reputation for nurturing innovative start-ups. This has enhanced Massachusetts's entrepreneurial and innovation eco-system and attracted inward FDI which is specifically tailored to the development of advanced manufacturing within the state. Policymakers continue to play a key role – for instance, recent interventions include fostering better collaboration between OEMs and SMEs to upgrade the latter's capabilities, especially in the supply chain and in the early-stage of SME 'scale up' (see MIT, 2015).

iv). Regional 'Place Positioning'

The fourth element is developing regional or 'place positioning' strategies. This concept is well established in the business marketing literature but is less understood in policy circles. Crucially, it involves a region identifying and developing its own unique 'place brand' (see also Konzelmann et.al, 2017). Possibilities here include regions identifying their strengths in terms of cost leadership, differentiation and/or focus/niche strategies (the first two can also operate in the context of the third (niche/focus)). A region could conceivably seek to position itself as a niche/focus player differentiated from other niche players in terms of the cost and quality of its offerings as compared to other regions. An ideal position is one of low relative cost/high relative differentiation in which a region simultaneously reduces unit costs (through organisational and

institutional innovation) and produces high quality products and services; in doing so, the region acquires a reputation as being a technological leader.

In essence, the aim for regions is to carve out a reputation for developing high value products and offer bespoke services which are largely invariant to price competition. And, in this regard, such 'place positioning' strategies are gaining credence, often in diverse clusters. In the UK, for example, Northamptonshire's footwear industry has upgraded its traditional skills which has successfully been combined with firms developing (international) premium market niches. Similarly, Motor Sport Valley, has become globally synonymous for innovation in Formula One, while in emerging clusters such as English Sparkling Wines in Sussex and Kent, the focus has been upon low volume/high quality wineries that have won international awards (see Konzelmann et.al (2017)). The Scotch Whisky industry is another example - it exploits its unique geology which favours whisky production, by creating world leading distilleries and hitherto a global reputation for high quality malts.

v). Control over 'Bottleneck' assets

The fifth element to foster the capture of value co-creation involves regions and regional actors creating and leveraging 'bottleneck assets and capabilities', namely those that are difficult to imitate or offshore. For example, where regional actors are part of global value chains, it will be important to ensure their contribution to the final product is especially significant (and difficult to dislodge). This will enable them to capture a significant proportion of globally co-created value.

In this regard, regional policymakers can encourage/advise/support local suppliers to specialise in developing "bottleneck" parts/services, which are not imitable, and are outside the radar of larger firms, but are important for the final product. Regional policy can help local suppliers identify and develop these assets. The German Mittelstand and its highly specialised advanced manufacturing SMEs have long pursued such a strategy, to great success. For instance, SME participation in applied research programmes – such as the Leading Cluster Initiative – is mandatory. This strengthens their technical capabilities and opens up possibilities for collaboration with research consortia such as universities, research institutes, OEMs, consultancies and intermediaries. German industrial policy is often targeted to specific growth areas and focused upon exploiting a region's capabilities so to establish future 'bottleneck assets' such as medical devices in Nuremberg, and e-mobility in Stuttgart (see MIT, 2015).

The UK is beginning to adopt similar policy measures. For example, the 'Niche Vehicle Network' in the UK Midlands region is based upon open innovation to facilitate a shift into low carbon technologies and has been supported by the former Regional Development Agency, Innovate UK and the Advanced Propulsion Centre (Amison and Bailey, 2014). These type of policies enhance a region's 'stickiness' and ability to create and capture value.

4. Concluding Comments

In this paper, we have emphasised five elements that ought to be integral to any place-based industrial strategy. Our focus has been to bring together the value creation activities as epitomised in the S3 approach, with ways to capture and retain part of this value in which it was created. This

is crucial for sustainable regional development. These five elements should not be pursued independently, but rather simultaneously within an over-arching policy framework. A critical adjunct is regular review and diagnostic monitoring of policy (Sabel, 2016), particularly with regard to a region's evolving competitive advantages and positioning.

For example, regions may adopt S3 policies that enhance skills and capabilities within their existing industrial base, but simultaneously foster a regional diversification strategy so as to encourage synergies in related technological fields, from which new innovation pathways might emerge (McCann and Ortega-Argilés, 2015). These new skills/capabilities might also serve as 'bottlenecks'. Such an integrative approach should enable regions, especially lagging regions, to upskill, raise productivity and move onto a lower unit cost/higher differentiation trajectory (see Barzotto et.al, 2019). Similarly, competitive advantages can be linked to positioning, regional ecosystems diagnosed and upgraded, and appropriate FDI attracted in a way that is inclusive and in line with these advantages. For instance, to attract and embed high knowledge-intensive FDI, some forms of FDI might be positively discouraged – Singapore's high wage policy is a case in point (Lall, 2000). It is good policy to try and ensure the locational interests of multinationals align with the region's strategic advantages/positioning strategy

Regions should identify bottleneck assets and capabilities and leverage them within the context of specialisation within advantages-compatible segments of global value chains. What is advantages-compatible is often beyond the capabilities and resources, even the radar, of many firms, especially SMEs. Public sector agencies can be critical in funding the requisite research and disseminating the information, knowledge and training to whoever can benefit from it, acting as a 'public entrepreneur' (Klein et al., 2010, 2013). A focus on SMEs can foster diversity and pluralism and support a fairer distribution of value captured, which is critical for sustainable development (Bailey et.al, 2015b). It also strengthens the hand of the local actors allowing policy space to the region to foster a fairer distribution of the gains.

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