﻿Industrial dynamics and localisation economies

Firm entry/ firm growth / firm survival

Life cycle approaches: Product life cycle approach/industry life cycle approach

SUMMARY AND CONCLUSIONS

This review started to define the field of industrial dynamics in a narrow sense as the study of entry, growth and exit of firms across industries. In the context of economic geography, the central question becomes how clusters of economic activity can be understood from the entry, growth and exit of firms, and how, in turn, clusters affect entry, growth and exit patterns through localization economies. This question was answered by reviewing how clusters affect entry, exit and growth through localization economies, and by applying a long-term perspective to the emergence and evolution of clusters.

Cluster的出现和演变和tech firm的进入与退出模式

The first conclusion that could be drawn holds that clustering has a strong effect on entry. Without exception, empirical studies found that entry rates increase with cluster size. Importantly, this empirical association does not in itself indicate that firms locate in a cluster because they benefit from co-location, since most potential entrepreneurs simply stay in their region of origin. This does not hold for the location choices of subsidiaries, e.g. in the case of foreign greenfield investment. For these studies, localization economies seem to play a role in entry decisions, but only for technologically lagging firms who have most to gain and least to lose from co-location (SHAVER and FLYER, 2000; ALCÁCER and CHUNG, 2007).

The second main conclusion holds that there is only weak evidence that localization contributes to firm performance. More specifically, especially when performance is defined as survival, few studies find any indication for localization economies, while for studies defining performance as growth evidence on localization economies is more convincing. Furthermore, in those studies where firm age is included, the evidence supporting the hypothesis of localization economies on growth seems to hold in studies looking at young firms, while studies covering firms of all ages generally find no evidence or even negative evidence for this hypothesis. It can be argued that given the heterogeneity in capabilities between young and more established firms, young firms may profit more from co-location than older firms. Such an explanation, which remains to be tested more systematically, is in line with recent work on plant-level productivity by RIGBY and BROWN (2013) which showed that relatively new plants benefit more from localization economies than older plants.

A third finding concerns the role of related industries and their impact on firm performance. Even if firms do not necessarily benefit from co-location with firms that are active in the exact same industry, a number of studies show that co-location with firms active in related industries is beneficial for firms. This finding indicates that firms may experience negative externalities from colocation with same-industry firms due to involuntary knowledge spill overs and competition for critical resources such as talented employees, while they may experience positive externalities from co-location with related-industry firms as knowledge spill overs then occur to non-competing firms (STABER, 2001).

The findings of studies on where clusters emerge and how they evolve are less systematic (HENNING et al., 2013), since research designs and the data used are much less standardized compared with studies testing the effect of clustering on entry, growth and exit rates. Nevertheless, the available evidence is largely consistent with predicted patterns.

Concerning the spatial product life cycle, the main hypothesis holds that firms in emerging innovative industries profit most from being located in large diversified cities, while firms in mature routinized industries profit more from being in a cluster, and typically in smaller specialized cities. Indeed, the available evidence suggests that localization economies increase with the maturity of industries, while benefits from variety tend to decline when industries become more mature. Furthermore, work on firm relocation shows that the dominant pattern is from larger cities to smaller towns, indicative of firms that look for locations with lower prices for inputs as their technologies become standardized and competition shifts from quality competition to cost competition.

Evidence on the more recent industry life cycle theory and its emphasis on spinoffs dynamics as the main driver underlying cluster formation is also quite consistent. In line with the more general findings discussed in the subsection on firm survival, the industry life cycle studies find that localization economies have no effect on firm survival. Instead, as spinoffs outperform other firms, clusters emerge primarily from a local process of spinoff creation. This finding is not in line with the spatial product life cycle that expects firms in specialized cities to benefit from localization economies. However, these conflicting findings may be, at least, due to the fact that localization economies in industry life cycle studies are tested for all firms that ever exist during the whole life cycle of an industry, while localization economies in the spatial product life cycle are tested by looking at the later stages of the life cycle, i.e. after the shakeout has occurred with only relatively few firms still operating.

The industry life cycle model also explains why there is regional path dependence: since the first generation of entrants in a new industry hardly contain spinoffs, but mostly firms set up by people with experience in related industries, regions that host industries which are related to the new industry have a higher probability to create this new industry. Thus, even though the location of new industries can be sensitive to the­­­­­ ﻿random location of exceptional entrepreneurs who bring forth many generations of spinoffs, chance stills favours regions with industries related to the emerging industry. Since more diversified urbanized regions will have a higher likelihood of having one or more industries related to the new industry in question, new industries can be expected to emerge in such diversified areas rather than in specialized areas, in line with the spatial product life cycle theory.