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Editorial

Knowledge dynamics out of balance: Knowledge biased, skewed and unmatched

Knowledge is considered by some to be the most important resource for competitiveness in the contemporary economy. To meet their goals, individuals, firms, regions, and nations depend crucially on their possibility to command and develop knowledge. This consideration has spurred a stream of high quality and extremely relevant research addressing the nature, centrality and importance of knowledge creation and transfer at various aggregation levels and for several contexts. Yet, contrary to what is often assumed in economic theory, knowledge is not distributed equally across actors. It may develop in a particularly biased way, while the causal ambiguity it is imbued with may make it impossible to determine which elements are relevant for success and how these elements may be matched fruitfully with that of other actors. Little systematic research into the determinants and consequences of the unequal distribution of knowledge is available. What implications do knowledge dynamics that are out of balance have for assessing, commanding and creating new knowledge? With some notable exceptions, for instance in the economic geography literature, knowledge dynamics being out of balance has been considered mostly as a transitory phenomenon left to the literature studying catching-up processes. It is sometimes assumed implicitly that targeted policy would easily fix the situation. In this special issue, contributions ranging from macro to micro looking at different and intricate ways in which knowledge dynamics can be out of balance are brought together, discussing in particular the implications for governance by the different actors involved.

Not all players are in similarly advantageous positions to command knowledge. This special issue illustrates that this holds at global, national, regional and firm levels. Knowledge is distributed unevenly across countries. As Archibugi and Castellacci argue, the accumulation of tacit and codified knowledge, combined with an effective knowledge transfer infrastructure (ICT), explains differences in the global distribution of knowledge and in national growth performance worldwide. Choosing a focus on global knowledge-sourcing strategies of firms from less

developed countries, Barnard shows that the nature and characteristics of their local knowledge bases influence the capacity of these firms to tap into globally distributed pools of knowledge, thus possibly perpetuating the uneven distribution of knowledge worldwide. However, underneath the aggregate level examples of upcoming firms and regions that have overcome the identified challenges are emerging. Newly developed knowledge distributed unevenly across the globe or within a specific region, for instance, may be taken up and further developed by other firms than those directly involved in its development. Vang and Chaminade discuss the emergence of specialized hubs in developing countries, such as Bangalore in India, focusing on patterns of knowledge accumulation at regional level. Thus they supplement the aforementioned papers by unpacking the strategies that underpin efficient upgrading processes that in the context of increased knowledge unevenness. The determinants of the unequal distribution of knowledge are discussed in several papers. Audretsch and Keilbach argue that incumbent firms' internally available knowledge can be left unused and unexplored, only to be used by upstart entrepreneurs. Entrepreneurial capital thus facilitates knowledge spillovers, in turn affecting regional growth. An additional contribution to the other papers – and the literature on knowledge dynamics in general – is the attempt to move beyond the dominant supply-centric approaches by modelling the feedback of growth-initiated entrepreneurial activity. Dolfsma and Van der Panne, who focus on sectors, show when firms are more likely to develop and use new knowledge. Entry barriers and large dominant firms will help maintain unbalanced knowledge dynamics. Even when cooperation exists, knowledge is not easy to transfer. As Gilsing, Nooteboom, Vanhaverbeke, Duysters and Van Oord argue, when firms seek cooperation with other firms, they will find that matching of knowledge between them is a delicate balance to strike. The differences between them, even within the same sector, should not be too large or too small and it matters where firms are located in a network. If these conditions are not met, knowledge will remain unmatched

and no fruitful collaboration is likely to occur. Yet, even within a firm, it might not be possible to identify the core of relevant knowledge - the knowledge that is worth preserving and replicating internally. Szulanski and Jensen show that this intriguing and to some extent counter-intuitive case holds for a large, international franchise organisation. Even the way in which knowledge is biased, or what knowledge there is to be matched by other knowledge, may not be clear. Methodically replicating knowledge may then, counter-intuitively perhaps, lead to better results than engaging in innovative activities.

Even though it is clear that knowledge dynamics can persistently be out of balance, firms, regions and nations are, however, not merely at the mercy of external forces. Actors, including firms and governments, can and will seek ways to influence knowledge dynamics. This special issue shows when and why knowledge dynamics can be biased, skewed or unmatched. A better understanding of reasons for and implications of out-of-balance knowledge dynamics means that intervention to balance or re-direct

knowledge dynamics may be more likely to have the intended effects.

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