Business Groups as Knowledge-based Hierarchies

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[PRELIMINARY DRAFT - DO NOT DISTRIBUTE]

Abstract

We exploit a unique dataset of 270,474 headquarters controlling more than 1,500,000 (domestic and foreign) affiliates in all countries worldwide in order to characterize business groups (BG), that is a set of at least two legally autonomous firms whose economic activity is coordinated through some form of hierarchical control via equity stakes. Although the emergence of BG is traditionally considered a phenomenon typical of countries at an early stage of development, with the growing importance of global value chains and intra-firm trade the phenomenon of BGs is acquiring a new relevance worldwide: the top 100 multinational enterprises (MNEs) reported by UNCTAD are all organized as cross-border BGs, with an average of some 300 affiliates each and up to 10 different hierarchical levels of control. Legal autonomy and hierarchy are jointly constituent attributes of BG, distinguishing them from independent firms (as these are legally autonomous but operate without impending hierarchies) and from multidivisional firms (which are organized through internal hierarchies of branches, but without autonomous legal status).

Our theoretical model thus combines insights from the theory of the firm (eg Grossman and Helpman, 2002) with the literature modelling knowledge hierarchies (eg Caliendo and Rossi-Hansberg, 2012). Specifically, in our setting an headquarter has to choose whether to vertically integrate the production of intermediates, outsource them to a branch, or produce through a controlled affiliate external to the legal boundaries of the headquarter. Demand parameters, the bargaining weights / share of control and the fraction of property rights that can be transferred as a result of the hold-up problem will determine the optimal integration decision of the headquarter.

At the same time, the headquarter has to decide how to organize the production of the N units that, under the different modalities chosen through the integration decision, assemble intermediates. The headquarter can organize the N production units in one layer or in L hierarchical layers, each one endowed with a different (increasing) level of tacit knowledge and problem-solving capability. The higher the number of layers, the lower the amount of time spent on problem solving vs. production, and thus the higher the demand the group can serve, at the cost however of having to remunerate the investment in tacit knowledge undertaken in each layer. How to optimally solve this trade-off in terms of layer of knowledge, and number of units per layer, is the organization decision of the headquarter.

Combining the integration with the organization decision allows us to define the optimal structure of the business group. We characterize some properties of the BG structures as a function of the different parameters of the model. .