

More than intent

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COUNTERPOINT

More than intent: A bundling model of MNE–SME interactions

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Abstract

As a counterpoint to Prashantham and Birkinshaw, I present an alternative model of MNE–SME cooperation where either type of firms can take the role of content provider or distributor. I argue that MNEs will interact with SMEs when there are differences in optimal scale between the content creation and distribution stages of the value chain, and it is not feasible or efficient for either party to vertically integrate between these two stages. I then build two 2×2 bundling models, one in which the SME provides content and the MNE distributes it, and another with the reverse configuration. In these 2×2 s the axes are the transactional properties of the two complementary inputs, content and distribution, that MNEs and SMEs bundle to create value. I show that these models can explain the forms taken by MNE–SME cooperation and their dynamics.

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INTRODUCTION

Prashantham and Birkinshaw (2019) (P&B) present a general model of cooperation between multinational firms (MNEs) and small and medium enterprises (SMEs), which for them are of two types, technology-intensive firms (e.g., Monteiro & Birkinshaw, 2017) and global value chain subcontractors (e.g., Rugman & D’Cruz, 1997). They address both the forms taken by this cooperation and its dynamics, and then discuss how their model can be applied to the pursuit of the United Nations Sustainable Development Goals. Along with P&B I assume that all MNEs are large firms – although we know that this is not necessarily the case (e.g., Dimitratos, Johnson, Slow & Young, 2003). So in the rest of this counterpoint, “MNE” and “large firm” are used interchangeably. SMEs are sometimes young firms that, while still small, are nonetheless eager to grow, but also older firms that are permanently small and mid-sized.¹

I start by summarizing P&B’s two-by-two model of MNE–SME cooperation in which the axes are an MNE’s intended strategy (exploration vs. exploitation) and an SME’s intended focus

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(domestic vs. international), and discuss the strengths and weaknesses of their model. I then present an alternative model of MNE-SME cooperation. In this bundling model (Hennart, 2009), the axes are the transactional characteristics of two inputs, content and distribution, which MNEs and SMEs bundle. I show that the model can explain the forms that this bundling takes and their dynamics. Because SMEs can be either upstream or downstream from MNEs, I present not one but two two-by-twos, one in which the SME is positioned upstream and provides content – products and services – to the MNE which distributes it, and one in which the SME is a downstream distributor of MNE-created content. The model predicts the form MNE-MNE cooperation should take given the efficiency of the markets for the inputs (content and distribution) contributed by MNEs and SMEs. Using six examples, I then consider the factors that affect the evolution of that cooperation. I show that its instability results from changes in the transactional properties of the partner contributions and the inability of their jointly chosen governance institution to accommodate them. I conclude by discussing the insights into MNE-SME cooperation that my bundling approach provides.²

PRASHANTHAM AND BIRKINSHAW'S MODEL OF MNE-SME COOPERATION

P&B present a two-by-two table where the axes are an MNE's objective, i.e., whether it seeks exploration or exploitation, and an SME's ambition, i.e., whether it wants to expand internationally or consolidate domestically. The table yields four quadrants. In two of them MNE-SME cooperation is deemed to be stable and in equilibrium, while in the remaining two it is unstable.

P&B expect equilibrium when an MNE in exploration mode – looking for new knowledge inputs – cooperates with an internationally-oriented SME that wants to use the MNE to reach foreign consumers, either directly, or indirectly by incorporating its products and services into the MNE's own products (Quadrant 3). P&B give the example of a pharmaceutical MNE (Ciba-Geigy) cooperating with a biotech SME (Alza) and argue that while differences in size may cause communication problems, their cooperation will be stable because they both want to expand internationally. Equilibrium can also be expected when an MNE in exploitation mode cooperates with a domestically-oriented SME that feeds the MNE's global supply chain (Quadrant

1). P&B argue that such cooperation is stable because “neither party is seeking changes to the status quo”, the MNE wants access to reliable complementary products, while the SME has no ambition to expand internationally.

In contrast to the above, cooperation is deemed unstable when an MNE in exploitation mode collaborates with an SME with international ambitions (Quadrant 2). P&B argue that because it is in exploitation mode, the MNE is unwilling to help the SME upgrade and internationalize. P&B's example is Skelta, a Bangalore software firm that initially had trouble getting Microsoft to support its global ambitions (Prashantham & Dhanaraj, 2015). Cooperation is also likely to be unstable when the situation is reversed, when an MNE is in exploration mode eager to tap the capabilities of an SME, but the SME is domestically oriented (Quadrant 4). They argue that the SME is unlikely to trust the MNE and will consequently refuse to collaborate (they cite O'Dwyer & O'Flynn, 2005).

P&B then look at the dynamics of MNE-SME cooperation. They describe four paths. Path A (Quadrant 2 to 1) is when, faced with an MNE's exploitation stance, an SME abandons its ambition to upgrade and globalize, resigning itself to a less innovative role; and Path B (Quadrant 4 to 1) when an MNE gives up persuading a domestically-oriented SME to upgrade its products, and both parties settle on “low level linkages”. Path C (Quadrant 2 to 3) is when SME managers with global ambitions seek out MNE counterparts who may be willing to hear them out, and are able in the end to persuade them to tender contracts for more innovative products, while Path D (Quadrant 3 to 4) is when an MNE works on its interface with an SME, and that SME becomes more confident and accepts to collaborate on more technologically-intensive tasks.

Evaluation of Prashantham and Birkinshaw's Model

I applaud P&B for explicitly acknowledging the role played by firms that provide complementary resources to MNEs. As I wrote in my 2009 JIBS article entitled *Down with MNE-centric theories*, too much of IB theory assumes that MNEs are always in the driver's seat. The narrative is that they unilaterally choose their foreign market entry mode – for instance the level of ownership they want to hold in their foreign affiliate – based on their tolerance for risk and need for control. This overlooks the fact that to sell in foreign markets MNEs must interact

with local owners of complementary inputs. So MNEs do not always joint venture because they want to, but often because this is the only effective way to motivate local firms to supply complementary inputs (Hennart, 2009). According to Buckley and Prashantham (2016: 54), global value chain scholars have also focused on orchestrating MNEs, assuming that local partners are passive price and quality takers. One of the merits of P&B's article is that they do not take such an MNE-centric view. Rather, they consider interactions between MNEs and other firms, specifically SMEs.

Nonetheless, P&B's model has a number of limitations. First, P&B focus on the relationship between MNEs and innovative SMEs on one hand, and between value chain-orchestrating MNEs and upstream SME suppliers, on the other. In both cases MNEs are downstream, i.e., customer-facing, and SMEs upstream. P&B's model does not include cases where MNEs are upstream content providers, and SMEs are downstream and customer-facing. This latter configuration is quite common in international business since, for many products and in many countries, MNEs rely on SMEs to deliver their products to customers, either as local distributors or as local service providers – franchisees for example. These cases would fall into P&B's Quadrant 1 – MNEs in exploitation mode and SMEs with a local focus. I will show, however, that in contrast to P&B's predictions, the relationship between MNEs and SMEs in this quadrant is not always stable.

Second, while two-by-twos are an effective way to explain relationships, the insight they provide depends on the choice of axes. P&B posit that one axis affecting the stability of the MNE-SME relationships is the MNE's choice between an exploration and an exploitation strategy. The distinction is ambiguous. One might think that for P&B MNEs that engage in exploration are seeking new ideas and knowledge to develop new products and services, while they follow exploitation strategies when they sell these new products and services to final customers. In that case, the two strategies are complementary, not mutually exclusive – which is problematic since mutual exclusivity is necessary in a two-by-two. Consider Apple. It seeks applications (apps) for its mobile phones, so P&B would say that it is engaging in exploration when dealing with SME app developers. But Apple seeks apps because it wants to sell phones, as having apps increases the desirability of their models. When it comes to apps, Apple serves as a distributor, allowing app designers to access final customers, which obviously should

be seen as exploitation. So when Apple contracts for apps, it is engaging in both exploration and exploitation. Is it possible that for P&B what differentiates exploration from exploitation is the type of product or service sought? P&B seem to suggest that MNEs in exploration mode are seeking high-tech knowledge inputs, while those in exploitation mode are looking for low-tech produce, materials, and parts. If this latter interpretation is correct, it is not clear what makes the two strategies conceptually different, since in both cases an MNE assembles inputs obtained from SMEs into outputs sold to final users.

An additional problem with the exploration-exploitation dichotomy is the meaning of the term “exploration.” Does exploration mean accessing knowledge, or internalizing it? As shown in Zeng and Hennart (2002), the two are not the same. Consider a pharmaceutical MNE striking an alliance with a biotechnology SME. It may want to absorb knowledge from that SME through full or partial acquisition, or to surreptitiously appropriate it within an equity joint venture (EJV). Or it may seek licensing agreements to access external drugs to fill its distribution network without any desire to absorb the knowledge embedded in them. These strategies might all be called exploration, but, as we will see, they have very different consequences for the feasibility and stability of agreements between MNEs and SMEs. EJVs set up by MNEs to expropriate the knowledge contributed by SME partners are unlikely to be long-lasting (Reich & Mankin, 1986; Zeng & Hennart, 2002), but licensing agreements signed by MNEs eager to complete a product line might be.

The other axis in P&B's two-by-two is SME intent. Since an SME's intent reflects in part its experience with MNEs, as P&B's analysis of the dynamics of cooperation shows, this runs the risk of being tautological. For instance, P&B argue that cooperation in Quadrant 4 – an MNE in exploration mode and an SME with a local focus – is unstable because as they put it, “SMEs are suspicious of MNE motives”. But why would they harbor such suspicion in Quadrant 4 and not in Quadrant 1? P&B assume Quadrant 1 relationships will be stable because the MNE is in exploration mode, and the SME has global ambitions, but they overlook two potential difficulties. One is whether an MNE's strategy of exploration is of the internalization or access type. As argued above, attempts at the former will either lead to the bankruptcy of the cooperating SME or to its withdrawal from the agreement (e.g., Alvarez &

Barney, 2001). The second potential difficulty is whether the type of market access the MNE can provide the SME meets its internationalization needs. As we will see later, these two types of problems led to the dissolution of the Ciba-Alza EJV.

P&B emphasize the role played by the lack of interface between MNEs and SMEs. While this can cause problems, I believe that there are more fundamental reasons why cooperation between MNEs and SMEs may not satisfy both parties, and they are revealed by focusing on the transactional characteristics of the inputs exchanged and on the governance institutions used to organize their transfer. On this P&B are silent. But, as we will see, actors choose particular governance institutions in response to particular transaction characteristics, and each governance institution has specific advantages and drawbacks.³ The way the chosen institution is structured has also a significant impact on the magnitude of gains it generates for the interacting parties and hence on the stability of cooperation (Hennart & Zeng, 2005).

Lastly, P&B seem to imply that stability should be the ultimate goal of cooperating parties. This is a simplification. Barriers to exit may make some stable relationships temporarily unprofitable for one or both of the parties. While some unstable relationships are lose-lose, others are win-win. I return to this in the concluding section.

AN ALTERNATIVE MODEL OF MNE-SME INTERACTION

As with P&B, my goal is to explain the forms taken by MNE-SME cooperation and their dynamic. To do so, I first ask when cooperation between MNEs and SMEs will take place, and under which conditions it can potentially create value. I argue that cooperation will occur when it is more efficient for both parties to cooperate as separate entities than for either party to integrate into the other's business. Why does this cooperation have the potential to create value? Along with P&B, I think that it is because MNEs and SMEs have complementary capabilities, with SMEs generally more nimble and creative than MNEs, and MNEs specializing in activities where large size is critical. Under which conditions will this potential value be realized? Transaction cost theory argues that value creation is not automatic but requires that parties choose a governance institution that matches the transactional characteristics of the inputs contributed by

the partners (Williamson, 1975, 1985; Hennart, 1982, 2015b). In the absence of such a match, the cooperation will fail to generate enough value to make it sustainable. To predict which governance institution is optimal requires understanding their comparative advantage, so I briefly explain how EJVs differ from contracts. Not only do parties need to choose the appropriate governance institution, they also need to carefully craft the institution they have chosen. I therefore discuss next how EJVs can be structured to handle the problems they usually face. With these building blocks in place, I develop a bundling model (Hennart, 2009) that predicts which governance institution is optimal given the comparative advantage of each governance institution and the transactional characteristics of the inputs contributed by both parties. Because, as shown in Figure 1, MNE-SME cooperation takes place under two generic configurations, one in which SMEs are upstream in the value chain, and sell content to MNEs which then provide distribution access (Type 1), and one in which the roles are reversed, with MNEs providing content and SMEs access to final customers (Type 2), I need two bundling models (Tables 1 and 2). Having explained the forms taken by MNE-SME cooperation, I use the two bundling models to examine its dynamics. I show that what happens to a cooperation hinges on both internal and external factors. With the passage of time, the transactional characteristics of the inputs a given MNE and SME contributes to joint value creation may change – for example the unique input a partner contributed to an EJV may be absorbed by the other. This can lead to a change in optimal governance. If the chosen governance institution is unable to accommodate the change, cooperation will be brought to an end.

Why Does MNE-SME Cooperation have the Potential to Create Value?

When are we likely to see MNEs and SMEs cooperate, and when and why has their cooperation the potential to create value? Let me address the second question first.

MNE-SME cooperation can be potentially beneficial because each type of firm enjoys a comparative advantage in carrying out particular tasks. Some activities can only be profitably carried out at large scale because of economies of scale – their minimum efficient scale (MES) is large. For example, an efficiently-sized paper plant using the chemical pulping process requires an investment

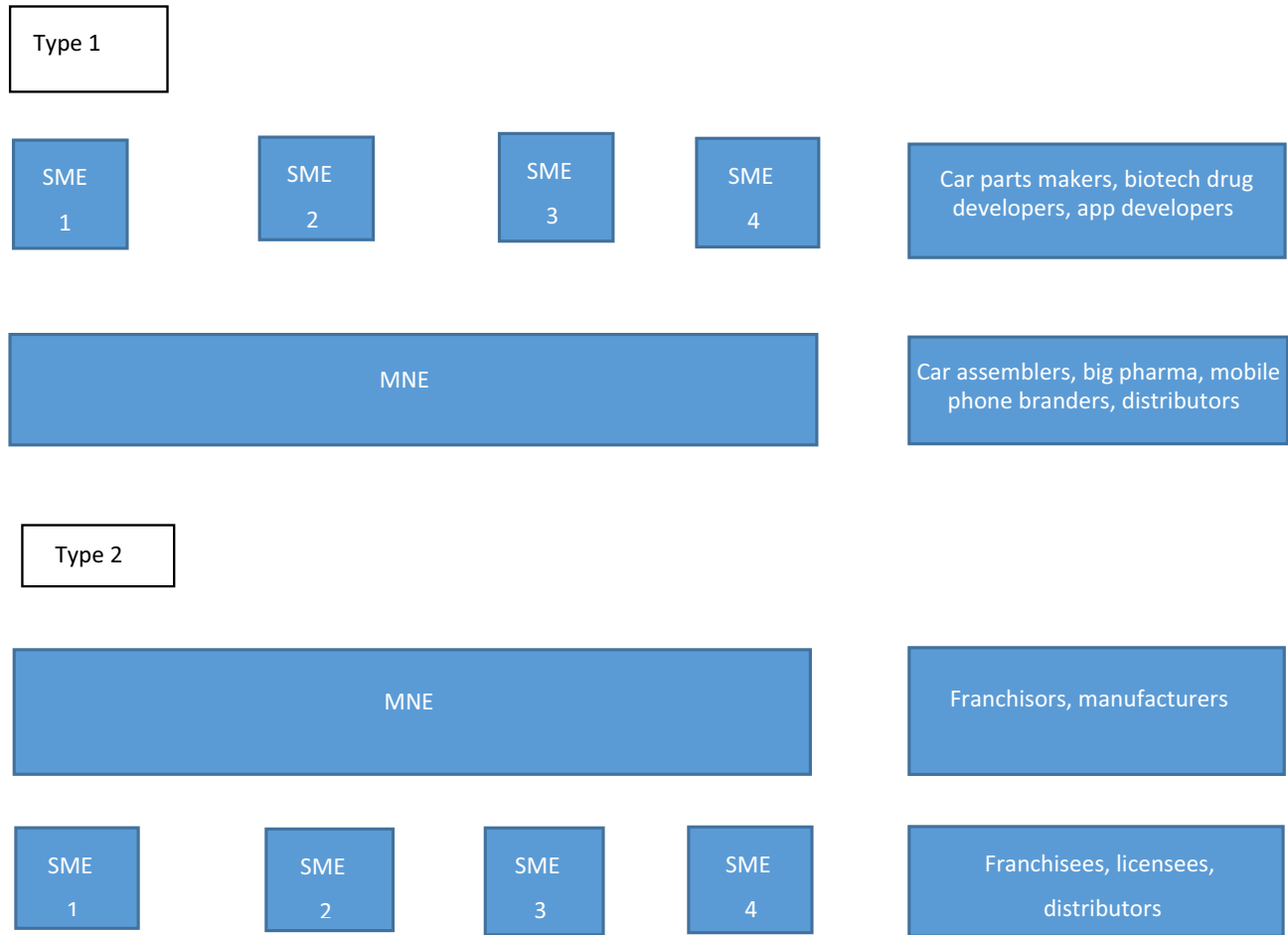


Figure 1 Two types of MNE–SME configuration.

Table 1 Bundling model for type 1 configuration

		SME has content (knowledge, goods, parts, etc.)	
		Easy to transact	Hard to transact
MNE has distribution	Easy to transact	1. MNEs and SMEs interact in perfectly competitive markets	3. SME negotiates access to MNE global distribution platform e.g., Boeing/Airbus–CTT Systems
	Hard to transact	2. MNE buys or expropriates SME e.g., Amazon and its complementors	4. MNE–SME joint-venture e.g., Ciba–Alza EJV

Table 2 Bundling model for type 2 configuration

		MNE has content (knowledge, products, etc.)	
		Easy to transact	Hard to transact
SME has distribution	Easy to transact	1. MNEs and SMEs interact in perfectly competitive markets	3. MNE contracts with SME or acquires SME e.g., Heineken–Van Munching
	Hard to transact	2. Local firm licenses, buys, or imitates MNE know-how, buys knowledge-owning MNE – or part thereof e.g., Foreign PC makers–Lenovo	4. Market-access equity joint ventures e.g., Danone–Wahaha

of 2.5 billion dollars (Energy Technology Systems Analysis Programming, 2015). Similarly, R&D projects must also sometimes be performed at a large scale. Network externalities may also lead to large firm scale, at least in relation to the size of the market.

Small firms, on the other hand, can enjoy a comparative advantage in flexibility and creativity. As firms become large, they become more bureaucratic. Bureaucracies are characterized by narrowly defined roles, limited worker autonomy, and heavy reliance on rules and routines. That management style leads workers to show greater social conformity, to be more specialized, to have narrower knowledge of the external environment, and to be more risk adverse, all of which hinder entrepreneurship and innovation. Workers in smaller firms, on the other hand, are more likely to be jacks of all trades, to have a broader knowledge of what goes on outside the firm, less respect for the status quo, and greater tolerance for risk, traits which encourage innovation (Sorensen, 2007). SMEs provide therefore a more congenial environment for “creative types”. Hence large firms might be said to suffer from diseconomies of scale when it comes to creativity and innovation, and this can lead to an optimal division of labor between SMEs and MNEs, with the former specializing in radical innovations, and the latter in their efficient production and commercialization (e.g., Buckley & Prashantham, 2016).⁴ This is a major reason why cooperation between MNEs and SMEs can be beneficial.⁵

When Will We Observe MNE–SME Cooperation?

Given that MNE–SME cooperation has the potential to create value, when are we likely to observe it? I believe there are two necessary conditions: First, there must be differences in optimal scale between two adjacent stages of the value chain; second, the most efficient way to bridge these two stages must be through market exchange or EJVs rather than through full vertical integration, since in that case relationships between independent firms are replaced by an integrated hierarchy. I elaborate on those two conditions below and then discuss how they apply under two generic configurations, one where MNEs are downstream from SMEs, and one where they are upstream from them.

The first reason for the existence of a configuration where an SME will cooperate with a large firm is the presence of significant differences in the MES at which two successive stages in a value chain are best operated. In other words, when there are economic reasons why the optimal size of a firm must be large at one stage, and small at the other,

the optimal configuration will be one where many smaller firms will interact with a few large firms, or even a single one (Figure 1). The larger-scaled activity may be downstream, as in the case of car assemblers, mass retailers, or internet platforms (Type 1), or upstream, as in that of trademark owners or large manufacturing firms (Type 2). When the optimal scale is the same at both stages – and when vertical integration between the two stages is not possible or desirable – SMEs do business with SMEs, and MNEs with MNEs.

Differences in efficient size between upstream and downstream firms can be handled either through market exchange or EJVs, or through full vertical integration (Hennart, 1988). A second reason for market exchange between MNEs and SMEs is therefore that coordination between them is more efficiently done through exchange on the market or through EJVs than fully within a firm, i.e., through full vertical integration.

Differences in optimal scale between stages

Figure 1 is a schematic representation of the argument. The width of the boxes represents the optimal scale of production at each stage. The figure shows two generic configurations, Type 1 and Type 2.

Type 1 is characterized by diseconomies of scale at the content production stage but scale economies (or network externalities) at the assembly or distribution stage. This is the configuration studied by P&B. Content creation is often best undertaken in small firms because radical innovation requires a culture of creativity, out-of-the-box thinking, and risk taking, which is generally incompatible with the bureaucratic, risk-avoiding, and groupthink nature of large firms. In the pharmaceutical industry, for instance, the techniques used for developing traditional drugs – systematic, but basically random screening of compounds – differ from the more science-based ones required for biotechnology drugs. The latter rely more on top scientists (Lynskey, 2006; Galambos & Sturchio, 1998), many of whom have an academic background and prefer an SME’s entrepreneurial environment to that of traditional pharma companies. While biotech research is best done in small firms, later processes such as conducting trials, obtaining regulatory approval, and marketing, have high fixed costs and benefit from the experience and deeper pockets of established pharmaceutical companies. The mismatch in MES between biotechnology drug discovery and downstream stages, and the existence of barriers to vertical integration between the two (see

below), have led to a network structure in which a large number of small biotechnology research SMEs interact with a few established pharma firms that concentrate on approval and marketing. Similarly, mobile phone branders such as Apple, Samsung and Huawei rely on small app developers to generate the applications that make their phones attractive.

This network pattern also characterizes the global value chains orchestrated by MNEs, which have found that in many cases the use of SME subcontractors allows for cheaper and more flexible production than is possible in-house (Buckley & Ghauri, 2004; Buckley & Prashantham, 2016). Automobile manufacturers, for example, use external subcontractors for many of the parts they need. Lastly, because some types of distribution benefit from logistical and informational economies of scale, the MES of distribution is sometimes much larger than that of manufacturing, so it makes sense for manufacturing SMEs to have their products distributed by larger firms, e.g., MNEs, trading companies, or large internet platforms like Taobao.

In Type 2 configuration, the optimal size of content creation is large, but that at the downstream distribution stage is low. This configuration, while extensively studied in international business, is not covered by P&B's model. In some cases the MES of manufacturing and brand creation is larger than that of distribution, for instance when final markets are segmented by economic, cultural, and governmental barriers. In such cases distribution is done by firms that are smaller, but better embedded in the local environment. The optimal scale for the establishment of a trademark is also often much larger than that for local production or sale of the trademarked products and services. Fast food outlets need to be located close to the consumer, and are thus necessarily small. Likewise, the MES of branding credit cards is much higher than that of signing up merchants and providing customer support, while in internet platforms the MES for platform development and branding is many times larger than that for service delivery, which is typically provided by smaller firms, in some cases even individuals (as in Uber and Lyft). In all these cases the result is a network structure, with many SMEs interacting with a large firm.

Market, contract, and EJV coordination rather than full vertical integration

A second necessary condition for independent SMEs collaborating with a large firm is that there is no full vertical integration between adjacent

stages of the value chain. That is, it must be inefficient or impossible for large firms to fully integrate into the SME's business, and vice versa.

In Type 1 configuration, it makes sense for an SME content producer to use the services of large distributors if the alternative of integrating into distribution is not feasible. As we have seen, SMEs developing new biologicals or drug delivery techniques have to work with large pharma firms if their products require large-scale distribution, less so if they have niche applications. Similarly, large pharma firms may find it hard to vertically integrate into the development of biologicals by buying up biotech SMEs because of differences in corporate culture, as noted above (Tapon, 1989). Likewise it is often inefficient for automobile manufacturers to integrate into the production of all the parts they need, as this would increase management costs and may not match the low costs and flexibility achieved by SME subcontractors.

Turning now to Type 2 configuration, there are reasons why upstream firms, trademark owners, manufacturers – and in particular large MNEs – may want to cooperate with small distributors and local service providers rather than integrate into local distribution by setting up sales subsidiaries or company-owned outlets. Establishing a sales subsidiary involves fixed costs, and only makes sense for a sufficiently large sales volume. Another advantage to using independent distributors is that they can complement a firm's products with those of other manufacturers to offer final consumers a full product line. Most distributors have an in-depth knowledge of their local market as well as useful contacts with local buyers and decision-makers, both of which are crucial to selling in unfamiliar markets. This explains why manufacturers vertically integrate into distribution only in very specific cases, namely when (1) it is crucial for them to gather direct information on customers, (2) they need to exercise tight control on the way their products are distributed, and/or (3) they find it difficult to persuade independent distributors to make investments which are specific to them (Hennart, 2010).

For firms selling trademarked products and services, such as fast food, car rentals, or hotels, vertical integration into service delivery is not always optimal. Operating outlets with employees incurs high management costs if serving the market requires a large number of small dispersed outlets (Brickley & Dark, 1987). An efficient solution can then be to license or franchise SMEs. This is done by

some fast food companies that enter into franchise contracts with a large number of SMEs; by credit card branders such as Visa and MasterCard that use local banks to sign up customers and process payments; and by some internet platforms, such as Uber and Lyft, that rely on local independent drivers rather than company employees (Hennart, 2019b). Vertical integration into local production, on the other hand, will be chosen when the costs of direct monitoring of employee-staffed outlets are not excessive while quality debasement by franchisees cannot be controlled by franchising contracts (Hennart, 2010).

Likewise it is usually difficult for SME distributors or local producers of MNE-branded products and services to integrate backward into the production of the goods and services they are distributing. Whether they can or not depends on the MES at the manufacturing stage and on how difficult it is to duplicate the MNE's products and services. As MNEs and their SME distributors accumulate knowledge about each other's business over time, albeit usually at different speeds, their relationship may become unstable. In the next section, I discuss all these issues using a bundling model (Hennart, 2009; Hennart, Sheng & Pimenta, 2015), which specifically addresses the factors that affect the likelihood of vertical integration.

The Governance of MNE-SME Cooperation

Now that I have established the circumstances under which MNE-SME cooperation will occur, and the reasons why it can be value-creating, the next step is to determine the forms it will take. Transaction cost theory tells us that realizing value is not automatic: it requires an appropriate governance institution (Hennart, 1994). The two main governance institutions that can be used to organize MNE-SME cooperation are arm's length sales and contracts on one hand, and EJVs on the other. Since transaction cost theory tells us that the form taken by MNE-SME cooperation is the result of a match between the transactional characteristics of the contributed inputs and the features of the chosen governance institution, we need to understand how governance institutions work, for instance how spot sales and market contracts differ from EJVs. We also need to discuss what is meant by transactional characteristics of inputs.

Contracts versus EJVs

In arm's length sales and in contracts, parties are paid for their contributions ex ante. In residual-sharing agreements, including partnerships, joint

research agreements, and EJVs, they are paid ex post from a share of the results of the venture.⁶ The distinction is important. Rewarding parties ex-ante requires being able to observe ex ante the quantity and quality of the goods and services they are selling. When this is difficult to do, a better way to reward contributors to a joint endeavor is to give them an ex post share of the outcome of the venture (a share of its residual) (Hennart, 1988, 2019a). This obviates the need for measuring and pricing partner contributions ex ante. It also facilitates task reassignment, which is a plus when contributions are hard to define beforehand. However, contributors will be generally unwilling to accept being paid ex post from the outcome of a venture if given no say in it, especially if the venture makes up a significant part of their income. This is why EJV partners are given co-managing rights.

Structural characteristics of EJVs

As is often the case, the very features which make EJV governance efficient in some circumstances are also the source of potential difficulties (Hennart & Zeng, 2005). First, giving EJV partners the right to co-manage is problematic when they have different goals. *Goal conflicts* arise, for example, in foreign market entry EJVs where MNEs seek to maximize global income, while local partners are interested in the profits of the affiliate of which they are part owners (Stopford and Wells, 1972). Another potential problem is that the usually vague description of expected contributions in EJVs makes it possible for parties to contribute less than promised, i.e., to free ride. *Free riding* is a frequent problem in franchising arrangements where all parties share in the reputation of the brand. If reducing quality is costly to detect, and most customers are one-time-only, it may pay for franchisees to debase quality, and if they all do that, the franchise chain will go under (Brickley & Dark, 1987).⁷ A third potential problem is *holdup*. Outsourcing tasks to a partner firm carries the risk of dependence, which is likely to be problematic if it is not mutual. It is also often easy for EJV partners to appropriate inputs contributed by their partner(s) to the EJV and use them in unauthorized ways – the *spillover* problem – because these inputs, tacit knowledge for example, have weak property rights (Davies, 1977).⁸ As shown below, Lenovo, Wahaha, Danone and Amazon displayed this type of behavior. All in all, how governance institutions are structured affects whether they bring net gains to the parties.

All these potential problems can generally be avoided by selecting the right partner, choosing the right configuration for the agreement, and installing appropriate contractual and non-contractual safeguards. Goal conflicts and free-riding can be reduced by choosing partners with similar goals. One can also minimize the probability of goal conflict, holdup, and spillover through careful design of the size, scope and vertical configuration of the agreement. The probability of holdups can be reduced if partners set up parallel structures that make exposure symmetrical (Williamson, 1983; Anderson & Jap, 2005), and if they invest in co-specialized assets whose value depends on the continuation of the agreement (Teece, 1986, 1992; Dyer, 1997). Selecting partners who are not actual or potential competitors reduces the likelihood of damaging spillovers (Jones & Shill, 1991; Gomes-Casseres, 2015), and so is the merging of the potentially competing activities of partners into a commonly-held entity. GE did that in its CFM International EJV with Snecma, but Ciba did not. A third solution to spillovers is the blackbox approach whereby the intermediate products incorporating the contributions of the partners are transferred between them in ways that hide the underlying know-how (Scarbrough, 1995), one of the strategies adopted in CFM International. Lastly, segmenting the markets in which the EJV partners could sell makes it possible to avoid competition between them, with the segmentation enforced through licensing and/or franchising contracts (Gomes-Casseres, 2015). This is what Heineken did with Van Munching, but Danone failed to do with Wahaha (see below). This solution is only feasible if intellectual property rights are enforceable, but many types of knowledge are not patentable, so their appropriation by distributors and EJV partners cannot be prevented, as shown in the Lenovo-PC makers case discussed below.

A Bundling Model of MNE-SME Cooperation

Having explained what is meant by governance institution, I can now present my two bundling models (Tables 1 and 2). In both tables content providers, i.e., firms that have developed content based on technology or unique business models, are in the columns, while distributors are in the rows. Table 1 illustrates the case where SMEs are content providers, relying on MNEs for distribution, and Table 2 the reverse, MNEs generating content and SMEs providing local production and distribution.

The tables show how the form taken by cooperation between content providers and distributors varies with the level of transaction costs in the transfer of these inputs. To exploit content in a given market – new products and processes or unique business models, for instance – a content provider must line up complementary inputs. These inputs can be purchased in four markets, those for assets, for services of assets, for inputs necessary to produce assets, and for firms in which assets are embedded.⁹ For simplicity's sake, let us assume that distribution is the only complementary input needed by content providers.

Content and distribution can be either easy or hard to transact on each of the four markets. As parties can switch between markets, and will choose to operate in the most efficient one, an input is hard to transact if it is difficult to access on all four markets. Let's start with content – knowledge, reputation, products. Easy to transact knowledge is that which can be sold on any of the four markets, or can be easily imitated or stolen. Knowledge can be sold in a variety of ways. It can be licensed if it is covered by a strong patent which is enforced by public authorities. Some tacit knowledge can be bought from technical or management consultants (Arora & Gambardella, 1998; Zeng & Williamson, 2007). When embedded in individuals, knowledge can be accessed by hiring on labor markets, a tactic successfully used by Huawei (Schaefer, 2020), and if it resides in teams of workers or in firm routines, by acquiring the firm or joint venturing with it. In some industries, knowledge is embedded in products and in equipment that can be bought on the market. Makers of laptops or mobile phones, for instance, can access up-to-date technology by buying components and incorporating them into their products, and cutting edge manufacturing technology by purchasing equipment and being trained in its use (Mathews, 2002). Hard-to-transact content includes some types of tacit knowledge that cannot be transacted through the means described above and that cannot be easily imitated (Arora, Fosfuri & Gambardella, 2001; Levin, Klevorick, Nelson & Winter, 1987). The other intangible, reputation, can sometimes be embedded in trademarks and franchised, but this requires that counterfeiting be curbed and that quality debasement by franchisees be controlled (Hennart, 2010). To sum up, content can be accessed on four markets, those for (a) assets, (b) services of assets, (c) labor and (d) firms or parts thereof. Easy to transact content is that which can

be accessed efficiently on any of those markets, or that can be easily copied. Difficult to transact content cannot be accessed on any of them and cannot be easily imitated.

Turning now to the rows, distribution is relatively easy to transact when (a) there are many competing distributors providing reliable services that a content provider can access without fear of being held up, (b) the market for the inputs necessary to build up a distribution system is efficient, allowing a content provider to build one from scratch by hiring employees and buying or leasing warehouses and retail outlets, or (c) firms that own distribution networks can be easily bought. Conversely, distribution is relatively hard to transact, i.e., hard to obtain, if (a) access to consumers is monopolized by governments or by private firms, (b) it is difficult to hire competent employees and to rent or buy warehouses and retail outlets to build a distribution network, and (c) it is not possible to acquire local firms that own distribution facilities.

Type 1: SMEs provide content and MNEs distribution

Using Table 1, let's explore the case where content creation is best undertaken by SMEs, but distribution, being subject to significant economies of scale, is best carried out by MNEs with international distribution networks. The intersection between row and column gives us four cases.

Quadrant 1 of Table 1 corresponds to the case where both the markets for content (knowledge, reputation, parts) and distribution have low transaction costs. In the other quadrants imperfections in the market for content have encouraged SMEs to vertically integrate to be able to exploit their knowledge or reputation on more efficient markets. For example, and as shown below, CTT does not market its technical skills as is, but instead embeds them into humidifiers and de-humidifiers. In contrast, the market for both inputs is perfectly competitive in quadrant 1, so these inputs can be sold as is. An example would be an SME consultant applying routine skills to solve the generic problems of an MNE. The MNE could instantly replace her with any other consultant, and she could sell her services to any number of MNEs. As long as the market for the inputs are perfectly competitive, there are no long-term issues because parties can adapt by costlessly switching partners.

In Quadrant 2 of Table 1, the SME's content is easy to transact. By this I mean that the MNE can access it by in-licensing, by imitation, or by

purchasing the SME. At the same time the market for distribution is inefficient, in the sense that the SME finds it difficult to contract for access to it on reasonable terms and/or to integrate into it. Consider the case of Amazon's complementors. In addition to selling its own products on its platform, Amazon sells those of third party complementors. These complementors, often SMEs, are eminently vulnerable to holdup because in most cases they are not the exclusive producers of the products they sell via Amazon, while at the same time they are often highly dependent on Amazon for distribution as purchasing Amazon is out of the question, and setting up their own platform may be beyond their means. This is an unstable situation as Amazon can easily identify which complementor products are particularly profitable and replace them with its own. Indeed Zhu and Liu (2018) found that between June 2013 and April 2014 Amazon did just that for 3% of the products third party sellers put on its platform, and that the products replaced with Amazon versions tended to be those that had been the most successful. Naturally this behavior is not without consequences, as it can be expected to encourage complementors to ask Amazon for safeguards or to seek alternative platforms.

As our model predicts, the probability of a content-providing SME being expropriated by a large downstream buyer or distributor depends on the exclusivity of its products. If it is not possible for platform owners to replace the products of third party sellers with their own, and if third party sellers can sell their products on alternative platforms, then they can avoid being financially squeezed by platform owners, or having their products displaced by them. Huang, Ceccagnoli, Forman and Wu (2013) show that app and software developers who sell unique patent-protected products are less likely to be expropriated, and also that they are more likely to be bought by platform owners wanting to vertically integrate. Indeed, vertically integrating into distribution or selling themselves to MNEs with distribution networks are two common strategies for content-generating SMEs.

In Quadrant 3 of Table 1 knowledge held by the content provider, in this case an SME, is difficult to sell, but also difficult to copy, i.e., it is hard to transact. Distribution, on the other hand, is easy to access. In that case the relationship between SME and MNE will clearly be beneficial to both parties. It will also be stable as long as neither party finds integration into the other's business a more attractive option. CTT Systems AB is a Swedish SME with

about 100 employees and a turnover of some US \$35 million. It makes humidifiers for aircraft cabins and de-humidifiers for aircraft structures. Its clients are the two main airframe manufacturers, Boeing and Airbus, which incorporate its equipment either as standard or as an option in their airframes, and also more than 50 airlines that retrofit their aircraft with it. CTT is a good example of the advantage of occupying a niche (Zucchella, Palamara & Denicolai, 2007; Hennart, 2014; Hennart, Majocchi & Forlani, 2019). The company has no competitor in aircraft humidifiers and just one in aircraft de-humidifiers. The relationships with its customers, the major airframe assemblers, are stable because the market segment is too small and peripheral for them to enter, and CTT's technology is patent-protected. At the same time it would not make sense for CTT to integrate into plane assembly (CTT Systems, 2013; 2019, Bloomberg, 2019).¹⁰

Quadrant 4 of Table 1 corresponds to the case of an MNE with strong control over distribution – distribution is hard to transact – and an SME providing content that is difficult to license, but also difficult to imitate, i.e., that is hard to transact. In other words, in Quadrant 4 both content and distribution are difficult to access. In that case residual-sharing agreements such as EJV's, are efficient. However, such arrangements are vulnerable to poor design and to a change in the options available to the parties. The Ciba-Geigy–Alza EJV discussed by P&B is a good example.

In 1977, Ciba-Geigy (CG), a large Swiss chemical and pharmaceutical MNE, took an equity position in Alza (AZ), a small US developer of advanced drug delivery systems (ADDS). CG was eager to fill its product pipeline as its conventional research program was failing to come up with new drugs. AZ, on the other hand, was in dire need of funds and market access. Under the EJV agreement, AZ was to do research on ADDS, specifically on oral slow release pills and transdermal patches, while CG was to provide drug registration, production, and marketing (Doz, 1996).

P&B (2019) cite that EJV as an example of cooperation between an MNE in exploration mode and an SME with international ambitions, and write that such mutuality of interests is likely to make for a stable relationship, the only potential challenge being establishing an interface between firms of very different sizes. They argue, citing Doz (1988), that this problem surfaced in the AZ-CG EJV. While interface problems did arise between CG and AZ, there is evidence this was not the main reason why

the EJV was eventually dissolved. As we have seen, a firm that relies on a partner for key resources runs the risk of being held up. CG, to avoid this from happening, decided not to merge its own ADDS research program into the AZ-CG EJV, but instead to continue to operate it alongside the EJV. When AZ's researchers realized that the know-how they contributed to the EJV was flowing to CG's own research lab for its own uses, and that that would sooner or later put AZ out of business, they stopped sharing. Doz writes (1996: 72) that "AZ's perceptions of the trustworthiness and forthrightness of CG deteriorated over time as AZ saw the company being run down by CG as CG built its own, in-house, ADDS development capabilities." Thus cooperation between an MNE in exploration mode and an SME with global ambitions can be endangered by attempts by the MNE to absorb the SME's content. Another issue not addressed by P&B is whether the MNE is able to provide the precise type of customer access the SME needs. As ADDS became more accepted by the pharmaceutical industry, it made sense for AZ to maximize the number of applications by striking agreements with a wide range of pharma companies. This made an exclusive alliance with CG increasingly unattractive for AZ (Doz, 1988: 37).¹¹ In 1982, AZ bought back CG's share, putting an end to the EJV.

Doz (1996) contrasts the AZ-CG EJV with CFM International (CFM), an alliance between General Electric (GE) and Snecma, a mid-sized French firm.¹² Founded in 1973, CFM has been successful up to this day in developing and manufacturing mid-range engines for civilian aircraft. Unlike CG and AZ, GE and Snecma merged all their competing civilian business into CFM, thus eliminating potential spillover problems (Doz, 1996: 69).¹³

All in all, our examples show that, contrary to what P&B advance, having an exploration-minded MNE and an SME with global ambitions is not a sufficient condition for fruitful and/or stable MNE–SME cooperation. The outside options available to both parties and the specific design of their agreements play a bigger role.

Type 2: MNEs provide content and SMEs distribution

In Table 2 we show what happens when MNEs provide content while SMEs do distribution.

In quadrant 1, markets for the content produced by MNEs and for the distribution services or the local production provided by SMEs are perfectly competitive. One can think of a standard product handled by a generic distributor. As long as there are no changes in the efficiency of these two

markets, the transaction will take the form of spot sales at exogenously-determined prices. None of the problems that can potentially arise in the other three quadrants of the table apply in this case because the parties can adjust instantly to any problem by switching partners.

Quadrant 2 of Table 2 features the case of an SME with strong control over distribution, i.e., distribution is hard to transact, and the ability to access or vertically integrate into content, i.e., content is easy to transact. An SME's ability to either replicate content, or to buy firms or parts of firms in which content is embedded, will put an end to its cooperation with an MNE. Consider the case of Lenovo, today the world's largest maker of personal computers. The firm started in 1987 in China as a distributor of foreign-branded personal computers and peripherals at a time when the Chinese government did not allow foreign computer makers to own distribution networks there (Xie & White, 2004; Chen, Qin, Ye & Yin, 2001). Lenovo (then called Legend) used its first mover advantage to develop a formidable distribution network and sell distribution services to foreign PC-makers (Chen et al., 2001). Through this it gained in-depth knowledge of Chinese consumers, which proved crucial when it decided to design and manufacture its own computers in competition with its foreign suppliers (Xie & White, 2004). Legend, then an SME, was able to vertically integrate into content because the technology of the Western firms that used its services was in large part embedded in components and manufacturing equipment available on world markets (Xie & White, 2004). Through its acquisition of IBM's PC division in 2005, Lenovo obtained additional inputs needed for international expansion: 10,000 employees and two R&D laboratories, distribution networks in 116 countries, the right to use the IBM trademark on its PCs for 5 years, and the full ownership of the Think family of brands (Williamson & Zeng, 2009). All in all, Lenovo kept its grip on Chinese distribution, while at the same time accessing technology and reputation on relatively efficient markets for components and firms.

In Quadrant 3 of Table 2 the intangibles held by the MNE are difficult to sell, but also difficult to copy. To exploit them, the MNE must vertically integrate into the manufacture of the product in which the content is embedded. If the content-providing MNE can access distribution by contracting with local SMEs, and is unable or unwilling to integrate into their business, while the

distribution-providing SME finds it difficult to vertically integrate into content, then the relationship between the content provider and its SME distributor will be stable and beneficial to both parties.

One example is Van Munching's exclusive distribution contract with Heineken, a relationship which lasted nearly 70 years across two generations. In 1933 Leo van Munching, a Dutch citizen who worked as a steward on the Dutch Holland America Line that sailed between Rotterdam and New York, met the head of the Heineken family and persuaded him to give him the exclusive distribution of Heineken in the United States.¹⁴ Pre-prohibition attempts by Heineken to sell in the United States had not been successful (Van Munching, 1997). Van Munching promoted Heineken as a luxury beer, and was extremely successful at it, making Heineken the largest imported beer brand in the US. Not only did Van Munching obtain exclusive distributorship for himself, he also got the right to pass it on to his son, an agreement that lasted until 1990, when the son decided to retire and sell the US business back to Heineken (Smit, 2014; Weber, 2016).¹⁵ One can surmise the reasons for this stable and mutually profitable relationship. Van Munching's success was linked to the Heineken brand and he would almost certainly have taken a loss had he switched to another brewer. Thus, content was hard to obtain on the market because it was protected by a trademark. Heineken, for its part, was happy to take a chance on Van Munching because it found the US market unfamiliar – earlier attempts to enter it had not been successful – Van Munching was a Dutch compatriot, and the risk of potential adverse reputation spillovers was limited by the geographical separation of the markets and the inability of Van Munching to tamper with the product, given that it was brewed in Holland. In other words, Heineken could access distribution on reasonably easy terms, but there was no feasible way for Van Munching to appropriate the Heineken brand by purchasing it or infringing on it.

In Quadrant 4 of Table 2 the MNE has difficulty accessing distribution while the SME cannot easily access the MNE's content. Residual sharing agreements, in particular EJV's, are efficient in such cases. As pointed out earlier, this type of market entry EJV can be unstable if not properly configured, with instability usually caused by changes in the transactional characteristics of the inputs traded. The Danone-Wahaha EJV provides an interesting example.

That EJV was established in 1996 by Bai Fu Qin, a Hong Kong investor, Danone, a French dairy and water MNE, and Wahaha, a Chinese SME selling fortified milk and bottled water. Two years later Danone bought Bai Fu Qin's share and became majority owner. Danone had initially attempted solo entries into China, but they had been disastrous. It subsequently acquired and entered into EJVs with a number of Chinese dairy and water firms (Verbeke, 2009). One of them was Wahaha. Wahaha had established a strong distribution network selling beverages under the Wahaha brand, but was short of cash (Zhang & Van Deusen, 2010). Wahaha brought into the EJV five of its ten main subsidiaries and its Wahaha trademark, while the other two partners contributed cash. Wahaha was supposed to register the transfer of its trademark to the EJV but this never took place. Rather than allowing that to lead to the dissolution of the JV, Danone asked Wahaha to grant the EJV an exclusive license for its trademark (Dickinson, 2007). Danone did not closely monitor the EJV, adopting instead a hands off policy and leaving Zong Qinghou, Wahaha's founder, in charge. The Danone-Wahaha JV was extremely successful, and by 2006 it had become the fifth largest beverage company in the world (Hamilton, 2008). There is evidence, however, that Danone was unwilling to support some of Zong's ambitious projects, such as the development of a Chinese cola brand. Perhaps as a response, beginning in 2000, Zong created some 60 non-EJV companies owned by him and by offshore companies controlled by his wife and daughter. The newly created companies sold products under the Wahaha trademark and using the EJV's distribution system, in competition with those of the EJV and of Danone's other China businesses, a clear case of spillover. Danone itself engaged in similar behavior when it acquired Robust, the EJV's main competitor in China (Verbeke, 2009; Zhang & Van Deusen, 2010). When Danone discovered that Zong was diverting EJV resources to his wholly owned businesses, at great cost to the EJV and to Danone's other Chinese businesses, it offered to pay Zong to merge his companies into the Danone-Wahaha EJV, but Zong refused. That led to an acrimonious dispute between the partners. After a series of costly and mostly unsuccessful legal actions against Wahaha in China, the United States, and other jurisdictions, Danone finally sold in September 2009 its 51% share of the EJV to Wahaha for an undisclosed amount.¹⁶ Two factors had weakened Danone's

bargaining position. First, the EJV did not have clear title to the Wahaha trademark, making it more difficult to prevent its use by Zong in his non-EJV operations. Second, Danone hands-off management style had allowed Zong to manage distribution, leaving Danone with limited knowledge and no effective control of it. When the relationship turned sour and Zong resigned as chair of the EJV, EJV employees and customers pledged not to collaborate with the new Danone-nominated chairman. Wahaha, on the other hand, was able to successfully absorb Danone's tacit knowledge. In short, equilibrium governance moved from Quadrant 4 to Quadrant 2 because Wahaha managed to obtain access to content – it became easy to access – while Danone was unable to get effective control of distribution – it remained hard to access.

The Danone-Wahaha and the PC makers-Lenovo relationships are illustrative of MNEs pursuing an exploitation strategy in cooperation with an ambitious SME – a situation that corresponds to P&B's Quadrant 2.¹⁷ P&B argue that in such situations there will be tension in the MNE-SME relationship until the SME curbs its ambitions (Path A) or manages to persuade the MNE to support what it wants to do (Path C). That ignores the possibility of an SME integrating into content, putting an end to the cooperation, and starting to compete with its former MNE partner.

CONCLUSION

Verbeke and Ciravegna (2018: 392) call for "... a better understanding of cooperative interactions in search of complementary FSAs between established MNEs and younger or smaller firms with international expansion ambitions, and the longer run dynamics thereof". P&B attempt to answer that call, as do I in this counterpoint, but we take different approaches. While P&B focus on relationship stability and argue that its main determinants are similarities or differences in strategic intent between MNEs and SMEs, I derive the optimal form their cooperation should take based on a match between the organizing methods used by governance institutions and the transactional properties of the inputs parties bring to the cooperation. Change in form, including ending cooperation, arises from changes in the transactional properties of the inputs and the inability of the chosen governance institution to accommodate them.

I first ask when one is likely to observe SMEs cooperating with larger firms, such as MNEs. The

alternative to MNE-SME cooperation is vertical integration between the two. One must therefore explain when and why this would not be the case. I argue that MNEs cooperate with SMEs because each type of firm has a comparative advantage in performing particular activities. MNEs are better at undertaking those requiring large size, while SMEs are more nimble and creative. Consequently MNEs will cooperate with SMEs when there are differences in optimal scale between two stages in a value chain, and vertical integration between the two is neither possible nor efficient. This occurs in two main cases. In the first one, discussed by P&B, SMEs supply MNEs with content – agricultural produce and parts in global value chains (Strange & Humphrey, 2019; Kano, 2018), as well as intangibles. While most of the examples I give in this article deal with the latter case, I believe that the logic of cooperation is the same for both.

I discuss a second scenario not covered by P&B. This is when the optimal scale of content production – the generation of new products, processes, and business models, or the creation of reputable brands – is larger than that needed for its distribution or local production. This occurs when the final markets for MNE content are segmented by political, social, institutional, and/or cultural barriers, making reliance on small locally-embedded distributors efficient, or when customers for the product are spatially dispersed, so servicing them requires a network of very small outlets, which would be difficult to manage if owned by the MNE (Hennart, 2010).

Given that there are opportunities for MNE-SME cooperation, what forms will this cooperation take? What governance institution will be chosen – will MNEs and SMEs interact using spot sales, contracts, or equity joint ventures? I use a bundling model to answer that question. I show in Tables 1 and 2 that the optimal governance institution depends on whether the inputs contributed by each party to the cooperation are sold on efficient or inefficient markets. A bundling model can also explain how cooperation will evolve. The prediction is that a change in the transactional characteristics of the inputs contributed to the cooperation will lead to a change in governance institution. Hence the diffusion of knowledge to a partner who controls distribution, without any change in the accessibility of the latter, typically results in a shift from quadrant 4 to quadrant 2, and thus to the end of the original cooperation.

P&B, on the other hand, argue that the clue to understanding why in some cases MNE-SME cooperation is stable while there is tension in others, is the extent to which the intents of the parties are compatible. MNEs seeking new knowledge sources and SMEs wanting to leverage them worldwide have compatible intents, as do MNEs seeking to globally distribute the products of SMEs that do not have ambitions to become international themselves. On the other hand, the relationships between MNEs and SMEs will be strained when MNEs seek new content to sell worldwide but SMEs are unwilling or unable to provide it, and when MNEs seek mundane inputs from SMEs which instead have global ambitions. My model shows that one possibility in that case, which P&B have downplayed, is that the SME will not reduce its ambitions (P&B Path A) or make an effort to persuade the MNE to let it contribute (P&B Path D). Instead, as shown by the Wahaha and Lenovo cases, the SME will break free of the MNE and vertically integrate into content or distribution. This possibility must be taken into account if one wants to build a comprehensive model of MNE-SME cooperation.

Besides providing a parsimonious and comprehensive model of MNE-SME interactions, the analysis presented here opens a number of new perspectives. First, my model calls into question the unwarranted, almost exclusive, focus on the role played by intangibles, such as technology and reputation. Bundling models remind us that the exploitation of intangibles requires complementary inputs, and that the supply of these inputs may have been monopolized by some firms, giving them bargaining power. This explains why new entrants can sometimes use their control of complementary inputs to challenge technologically superior incumbents (Teece, 1986; Hennart, 2012). In a bundling model, no input is necessarily more strategic than any other.

Second, my analysis challenges the claims made by some (e.g., Banalieva & Dhanaraj, 2019) that digital networks require new theory. Banalieva and Dhanaraj argue current theory is insufficient to explain them because “while traditional alliances focus on risk mitigation in the dyadic relationship, digital networks aim to maximize the value for the ecosystem” (Banalieva & Dhanaraj, 2019: 1380). Networks have long been seen as an example of co-opetition, where parties cooperate to create joint value but simultaneously compete with one another to maximize their own share of the pie

(Brandenburger & Nalebuff, 1997). Digital ecosystems are one example, but there are many others, EJVs, franchising networks, airline alliances, credit card systems, biotechnology alliances, to name just a few, which have been analyzed by IB and strategy scholars (e.g., Gomes-Casseres, 2015; Zeng & Hennart, 2002). In all these cases the parties cooperate in order to increase the size of pie, but they also compete with each other to maximize their share of it.

Following Powell (1990), Banalieva & Dhanaraj (2019) also claim that networks are a third type of generic governance mechanism, distinct from the other two, the price system – a governance mechanism based on the control of output – and hierarchy – one based on the control of behavior. It is clear, however, that the network relationships discussed by Banalieva and Dhanaraj, such as those between Uber and its drivers, are between independent entities governing their cooperation through the price system. Uber drivers make their living through the sale of their output, they are not paid a fixed salary as employees are. At the same time they are subject to some degree of hierarchical constraints in the form of behavioral rules imposed on them, some of which are built into the software. This is a good example of a hybrid, a governance institution that mixes output constraints with behavior constraints (Hennart, 1993), and one that is not fundamentally different from that used in fast food franchising or in airline alliances. So while the precise nature of the relationship between platforms and their upstream and downstream complementors is worth further study, there is no logical reason to think of networks as a third generic governance mechanism, at least in the precise meaning of the term in the transaction cost literature (Hennart, 1993, 2015a).

A bundling model also adds nuance to the view espoused by P&B and others, that large firm size automatically provides market power.¹⁸ I show that this is not necessarily the case. The CTT Systems example demonstrates that an upstream SME with a distinctive and difficult to imitate product or service can resist being squeezed by a larger downstream MNE. This is also true for a downstream SME, Lenovo and Wahaha for example, with control of a key resource such as distribution. Of course there are also many cases where SMEs are vulnerable to MNE exploitation. P&B's focus on interface as a major source of problems in MNE-SME interactions leads them to downplay this possibility. They argue, for example, that "a platform-based ecosystem is one mechanism for allowing SMEs

with internationalization ambitions to overcome tensions when their ambitions outstrip the intent of the MNE" (p. 8). While it is true that ecosystems make it easier for SMEs to slot their offering into those of the MNE, this is not without danger. As the Amazon case shows, MNEs with a distribution monopoly or quasi-monopoly can use ecosystems to obtain information on the products of SMEs in order to squeeze or evict them.

Another contribution of a bundling model is the emphasis on the crucial importance of choosing the right governance institution and the right structural characteristics within a chosen governance institution. Lose-lose relationships result from choosing the wrong governance institution, and/or the wrong structure within one. While there has been some work on the consequences of choosing the wrong governance institution (e.g., Powell, 2014; Leiblein, Reuer & Dalsace, 2002), IB scholars, to the best of my knowledge, have only paid limited attention to the impact of the type of structural features discussed here within one institution. Our examples show that these features have important consequences for the stability of cooperation. Hence not consolidating the R&D operations of Alza and Ciba-Geigy led to the end of their cooperation, while Danone's failure to transfer the Wahaha trademark to its joint venture with Wahaha made it difficult to control its unauthorized use by Wahaha's founder.

P&B appear to equate stable MNE-SME relationships, i.e., those at equilibrium, with mutually beneficial ones. That strikes me as a simplification. A stable relationship is not necessarily beneficial to both parties. One firm may capture all the gains if its partner faces significant exit costs. Such exit costs arise when the assets in which the partner has invested are specific to the present relationship, i.e., if they have low or zero value in alternative uses (Klein, Crawford and Alchian, 1978). Likewise, dissolution of an agreement is not always a bad thing. It can be win-win, lose-lose, or win-lose. When Amazon competes with its erstwhile SME complementors, the large firm wins and the SME loses, at least in the short term. The cases of Lenovo and Wahaha show that sometimes the SME wins and the MNE loses. Sometimes the breakdown of cooperation results in a loss for both parties, but by the same token there are terminations that are win-win. My model shows that both parties win when the SME has unique products or controls crucial assets, and the market for firms is efficient, as then SME owners can cash in by selling their firm to the MNE. For instance, high-tech SMEs based in small

markets and selling products with a potentially large international customer base need at some point to start developing their international activities. As Aharoni (2009: 379) notes, in Israel their choice is between undertaking the arduous task of building up international distribution networks or the much easier and profitable option of putting themselves for sale on the market for firms, which is efficient in most developed countries. They typically choose the latter.

This paper is but a first pass at an important topic. To keep things simple, I have assumed that each actor provides only one input, content or customer access (distribution). Another important external input SMEs need is finance. It should be possible to build a model with finance as one of the two axes. I also do not go in depth into instances where governance institutions are imposed by governments. I do not discuss cases where parties have chosen the wrong governance institution – for example an EJV when a contract would do – only those where they have chosen the right one, but have failed to design it properly. Lastly I use anecdotal evidence to illustrate my points; the predictions of my model can – and should – be subjected to rigorous empirical testing.

In spite of these limitations, the model I propose and the illustrative examples I chose raise some important questions. Lenovo and Wahaha have shown that local distributors are sometimes able to imitate MNE offerings and compete with them. More research is needed on the conditions under which this is possible. The Amazon case suggests that an MNE sometimes engages in opportunistic behavior despite the potential negative impact on its reputation, and hence on the willingness of complementors to feed the platform. Future research might investigate the extent to which this occurs on other platforms. A related issue is what defenses content-creating SMEs can muster against expropriation by MNE distributors. Alvarez and Barney (2001) examined a range of options such as slowing down a large firm's rate of learning, protecting oneself through contracts, or building trusting relationships with the MNE, but found all these remedies wanting. They suggest instead that SMEs diversify their technologies. Katila, Rosenberger and Eisenhardt (2008) suggest that SMEs delay forming any alliance until they have greater legal protection and find ways to keep their technology secret. In many instances such tactics are unrealistic. First, the need to have large firms as partners is especially strong at early stages of product development and that is when patent

protection is more difficult to obtain (Diestre & Rajgopalan, 2012). Second, secrecy is not always a feasible tactic, as SMEs seeking to persuade MNEs to ally with them need to disclose some of their know-how in the process. Some disclosure is also unavoidable when an SME starts working with an MNE; software vendors, for instance, must reveal some information to platform owners to achieve compatibility (Huang et al., 2013). The CTT Systems example suggests that adopting a narrow niche strategy may be a content-creating SME's most effective defense against expropriation, insofar as it may facilitate vertical integration into distribution (since the number of customers for niche product is limited) while discouraging imitation by MNEs (because the niche is narrow). This too is an interesting topic for further research.

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NOTES

¹The European Union defines an SME as a firm with less than 250 employees, a turnover of €50 million or less, and less than €43 million in total balance sheet (European Commission, 2020). The implications of firm size are somewhat ambiguous. For some SMEs, small size is transitory, either because they are on their way to becoming larger, or because they were started with the intent of being acquired by a larger firm once they reached a certain size. For others, small size is intended to be permanent. This is the case with many owner-managed firms, whose owners want to keep the firm small so as to maintain the non-pecuniary benefits which was the main reason for starting their firms in the first place (Hurst & Pugsley, 2011). Such firms can remain small and yet survive because they use business models that are compatible with small and medium firm size (Hennart, Majocchi & Forlani, 2019).

²In both P&B's and my models SMEs are independent firms, not MNE affiliates.

³Governance institutions (EJVs, contracts, spot sales) must be distinguished from organizing mechanisms, the price system and hierarchy. The price

system organizes cooperation by controlling outputs while hierarchy uses control of behavior. Governance institutions generally use both organizing mechanisms, but differ from one another by the extent to which they privilege one over the other. For instance, the main control mechanism used in franchising is the price system, but this is complemented by hierarchy (behavior control) through the franchising contract (Hennart, 1993).

⁴This does not mean that all SMEs are innovative. An overwhelming majority are not (Henrekson & Sanandaji, 2014).

⁵Some have argued that large firms have more market power. Market power is defined in economics as the ability to raise prices over marginal costs. Firms that have it are price makers, and those without it price takers. As the examples below show, market power is not always associated with large firm size. The fundamental cause of market power is strong bargaining power, and the basis of strong bargaining power is the absence of substitutes. Hence a large buyer has market power over a small seller only if the latter cannot shift sales to other buyers. As I show below, an SME can have strong bargaining power vis-à-vis a large firm if it sells a unique product with no clear substitutes, if it can integrate downstream into the large firm's business, and if it is protected by strong barriers to entry that prevent the large firm from invading its market niche. This strong bargaining power will allow it to profitably stay in business, or to get a good price if it sells itself to larger firms.

⁶Residuals are profits, outputs, or any other benefits that result from the joint effort of the parties. Rewarding contributors from a share of an ex post residual is the distinguishing characteristic of an EJVs. Some authors (e.g., Oxley, 1997; Das & Teng, 2002; Choi & Contractor, 2016) have argued that EJVs require the creation of a separate legal entity and hence that partial acquisitions are not EJVs. Hennart (2019a) shows there is no theoretical basis for such a view.

⁷Free-riding does not pay if customers are returning to the free-rider's outlet since in that case lowering quality will lower sales for that outlet.

⁸If they had strong property rights their owners would have traded them on markets.

⁹In my 2009 article (Hennart, 2009) I argue that inputs can be bundled using three markets, that for asset services, that for assets, and that for firms. I overlooked a fourth market, that for the inputs necessary to create assets.

¹⁰I am indebted to Claes-Göran Alvstam for information on this company.

¹¹The AZ-CG agreement specified that CG had to approve any outside cooperation between AZ and CG's competitors.

¹²In 2005 SNECMA changed its name to Safran Aircraft Engines.

¹³They do not compete much on the military side. The partners have further reduced the possibility of spillovers by blackboxing GE's technology. They do that by sealing the GE engine core before shipping it to Snecma for assembly (Dussauge & Garette, 1999).

¹⁴Earlier in the year, breaking with Prohibition, President Roosevelt had again authorized the sale of beer.

¹⁵In 1979 Heineken accounted for 41% of all US beer imports (Weber, 2016) and Heineken's exports to the US accounted for a very large share of all Dutch beer exports (Smit, 2014). Heineken's performance in the US deteriorated after the acquisition of Van Munching (1997).

¹⁶Reportedly substantially less than the market value of its share of the EJVs.

¹⁷Although Lenovo and Wahaha's strategy was to expand in their domestic market first.

¹⁸P&B argue that the relationship between MNEs and SMEs is characterized by "an underlying asymmetry in power". Buckley and Prashantham (2016: 44) write that "all things equal, MNEs possess greater power than their SME partners due to their greater resource base and status".

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