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FOREIGN OPERATION MODE FLEXIBILITY: TRADEOFFS AND MANAGERIAL RESPONSES

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ABSTRACT

Firms' ability to change foreign operation modes appears highly desirable in an increasingly volatile and unpredictable global environment. We propose and discuss mode flexibility as a management capability, with the aim at curbing the potential downsides of flexibility; in particular, the extra costs of coordination and contracting as well as revenue losses due to diminished partner commitment. We model the balancing and shifting of essential tradeoffs in relation to the two dimensions of mode flexibility – multiplicity and switchability – and highlight modularization and reciprocal use of real options as examples of tradeoff-shifting mechanisms that may improve the cost-benefit balance of mode flexibility.

Keywords: foreign operation mode; flexibility; tradeoffs; real options

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1. INTRODUCTION

In July 2017 the Danish urban juice bar and coffee concept Joe & The Juice bought back the brand's franchise rights for Singapore and Hong Kong, by exercising its call option in the contract with its master franchisee in these two territories, the Norbreeze Group (Insideretail, 2017). Hence, the real option clause ensured the international franchising chain a high degree of flexibility inasmuch as the chain obtained the right, but not the obligation, to convert franchised outlets into company-owned ones at any point in time. The real option clause was included at the request of the investment partner since October 2016, General Atlantic – a large US private equity fund. Founded in Copenhagen in 2002 by CEO Kaspar Basse, Joe & The Juice uses natural and organic ingredients for its freshly prepared juices, shakes, coffees and sandwiches. As per November 2017, the company had 200 stores internationally with a growing presence in the Asian and US market. In connection to the franchise buy-back, Kaspar Basse stated: "Norbreeze Group has helped establish a strong platform for growth in Singapore and Hong Kong from where we can continue the brand's expansion" (RetailNews Asia, 2017). So, through the use of real options Joe & The Juice apparently achieved the "best of both worlds": high *commitment* from the local franchise partner all the way to the buy-back, as well as a high degree of *flexibility* in terms of making a smooth switch of the foreign operation mode. The case suggests that the use of real options holds a potential of shifting the commitment-flexibility tradeoff towards achieving both objectives concurrently.

In this paper we take a closer look at real options as well as another management mechanism – modularization – and examine under which circumstances these two mechanisms can instigate mode flexibility without sacrificing commitment or incur additional transaction costs. We propose and discuss mode flexibility as a management capability that aims to curb the potential downsides of flexibility. In doing so, we contribute to an already substantial body of knowledge about foreign entry modes; knowledge that over the last fifty years has emerged from the disciplines of management, strategy, economics, and international business. In particular, we aim to deepen our understanding of

the economics and the business decisions that succeed the initial entry into a foreign country. Despite the overwhelming focus on foreign entry mode choices (Brouthers and Hennart, 2007; Canabal and White, 2008; Nisbet, Ghomas and Barrett, 2003; Vannoni, 1999), i.e. decisions on how to enter a foreign country to perform one or several value activities in that location, foreign operation mode choices go beyond the initial entry commitment. Over time, many companies switch their modes of operation in a country, characteristically because their activities have grown in volume and another mode might offer a more efficient way of organizing the activities. Sometimes, companies also add new operation modes to their existing ones, perhaps because they perform further activities in the country, or because interacting with a more diverse set of actors requires different ways of organizing (Benito, Petersen and Welch, 2009).

Typically focusing on the discrete choice made by a given company to enter a country – like whether to enter by setting up a wholly-owned subsidiary or relying on a local contractee – these are important strategic decisions with long-term ramifications, and hence a static view on such lasting decisions has been seen as appropriate; once made, they are difficult to change (Anderson and Coughlan, 1987; Anderson and Gatignon, 1986). However, to the extent that switches are made or new modes added to existing ones, more dynamic as well as more complex situations emerge, which are not adequately described and explained by a static approach to entry mode choice (Meyer and Gelbuda, 2006).

Recent research has exposed considerable mode dynamics, such as switches from one mode to another, as well as widespread use of multiple modes. Various studies report that mode switches are commonplace (Benito, Pedersen and Petersen, 2005; Björkman, and Eklund, 1996; Calof, 1993; Fryges, 2007; Clark, Pugh and Mallory, 1997; Putzhammer, Fainshmidt, Puck and Slangen, 2018; Putzhammer, Puck and Lindner, 2020; Swoboda, Olejnik and Morschett, 2011). Similarly, a "messier" reality of multiple modes has been noted in studies such as Benito, Petersen and Welch (2011), Clark et al. (1997), Kedron and Bagchi-Sen (2011), Petersen and Welch (2002) and Putzhammer et al. (2018), which provide evidence of companies using several different modes simultaneously. Taken together, these studies suggest that companies can take, or see a need to take, a dynamic approach to mode choice; modes can be, and are changed, and they can be used concurrently, either as

interconnected parts of a mode package, or alongside each other in a less connected manner. Either way, mode flexibility is key, as opposed to the traditional discrete and static view of foreign operation modes.

With the aim of moving the theory of foreign operation modes towards a more managerially oriented version, we discuss and conceptualize "mode flexibility". Whereas the term "mode dynamics" relates to the description of a particular international business (IB) phenomenon, mode flexibility can be viewed as a management capability (e.g., Hitt, Keats and DeMarie, 1998). We see mode flexibility as a composite term encompassing managerial states of mind (understanding of modes and their purposes; preparedness to act, to change modes; awareness of pressures or opportunities for mode change) and the means to implement change (resources; ability to deal with existing contractual limitations and to negotiate changes with foreign partners). Such managerial capability implies the ability to gain and maintain the positive, beneficial aspects of operation mode switches and additions while containing their negative implications. Hence, we address the research question: *How can mode flexibility unfold as a management capability that preserves the flexibility upsides and curbs its downsides?* We model a "baseline" capability as the ability to find the right balance between the benefits and costs of mode flexibility – arguing that the benefits of mode additions and switches tend to be traded off against increasing coordination costs and a loss of partner commitment, respectively. As a step towards understanding mode flexibility not only as a baseline capability but also as a managerial opportunity (and a managerial challenge!), we examine how two potential tradeoff-shifting mechanisms can be used to manage mode additions and switches: (1) The modularization of multiple operation modes in a foreign country in order to curb coordination costs, and (2) the use of reciprocal real options – i.e. the simultaneous use of call and put options – as a contractual instrument that may reduce hold-up problems (Williamson, 1983) in relation to switches from a local, independent operator or joint venture partner to a wholly-owned subsidiary.

Against this background, the paper proceeds as follows: In the next section, we elaborate our definition and operationalization of mode flexibility. In section 3, we identify essential tradeoffs associated with mode additions and switches that managers have to deal with. Then, we show how these tradeoffs can be balanced. We argue that tradeoff-balancing is a baseline capability of mode

flexibility. In section 4, we further develop mode flexibility capability from that of merely balancing essential tradeoffs to one of shifting such tradeoffs, moving closer to a "best-of-both-worlds" scenario; i.e. enhancing benefits while minimizing costs. Specifically, we discuss modularization of combined modes and the use of reciprocal real options in contracts as examples of tradeoff-shifting mechanisms that managers may apply in order to achieve the greatest extent of mode flexibility. In the final section, we summarize the analyses and point out remaining knowledge gaps in our understanding of mode flexibility.

2. WHAT IS MODE FLEXIBILITY AND WHAT ARE THE TRADEOFFS?

Mode switches are driven by a range of internal and/or external developments. As firms move into disparate and different foreign markets it is difficult for them to maintain a "one size fits all" approach to their foreign operation mode strategy. Different markets imply different operating conditions, and diverse cultural, regulatory, market and government contexts. Of course, over time such conditions change, prompting many firms to consider mode switch as a way of responding to altered market circumstances. Internal issues also inevitably play in and call for adjustments as a result of learning, resource changes, and other developments. A key factor is often the mix of increased foreign market sales and evolution in the relationship with e.g. foreign partners, such as intermediaries and master franchisees/licensees, or subcontractors, leading to a questioning of the mode being employed and its ability to contribute to market penetration and servicing goals, or to remain competitive in terms of costs, quality, and innovation (Jell-Ojobor and Alon, 2017). Mode flexibility thus appears as an important capability in firms' internationalization process, but how should mode flexibility be defined and conceptualized?

Our baseline definition of mode flexibility is the ability of firms to shift foreign operation modes in a timely, discrete and frictionless manner in response to changes in the foreign environment, in the relationship with a local operator, or in the firm itself. But what do we mean by "timely, discrete and frictionless"? Ideally, foreign operation modes should at any point in time exactly fit the needs and requirements of the foreign environment, collaborative constellations, or the company itself. This calls for ongoing calibration of how the foreign operations are organized. Rather than making the

occasional but large changes in response to escalated pressures across the value chain activities, mode changes should preferably be made in a discretionary way that aligns with those value chain activities affected by arising needs and requirements, or in response to emerging opportunities. So, instead of having one operation mode for all the activities in a foreign country, a multiplicity of modes is preferable, assuming timeliness and fitness pose limited concerns. However, frequent shifts of modes or using multiple ones may result in transactional frictions in terms of contracting and coordination costs as well as hold-up problems. Hence, a fundamental tradeoff emerges in relation to mode flexibility; namely that between the benefits of, at any time, having a perfect fit between the operation modes and the needs and requirements of the foreign environment, cooperative relations, or the company itself, and – on the other hand – the transaction costs associated with this fit. The major components and tradeoffs of mode flexibility are presented in Figure 1.

*** Insert Figure 1 about here ***

As indicated in the figure, mode flexibility results from mode multiplicity and mode switchability. The former term is the equivalent to "mode diversity" (Hashai et al., 2010), "mode packaging" (Benito and Welch, 1994), and "mode combination" (Petersen and Welch, 2002). In contrast to mode singularity, mode multiplicity enables more precise and fine-sliced adjustments of foreign operations. Some changes in the foreign market, in collaborative constellations, or in the entrant firm itself can be accommodated by adjustments of only one of the mode package components. With a singular mode the same changes would require a complete shift of the mode. Instead, mode switchability implies ability to shift operation mode at low or zero take-down or set-up costs (Benito et al., 2005; Weiss and Anderson, 1992). Hence, mode flexibility may be seen as the dualism of mode multiplicity and mode switchability in relation to a specific foreign market.

Figure 1 indicates both benefits (upsides) and costs (downsides) of mode flexibility. As mentioned, the upsides comprise a good fit between the operation modes and the required needs in terms of access to specialized local skills as well as realization of scale and scope economies. Furthermore, a particular upside of mode switchability is the deterrence of agency problems: An

independent local operator is less inclined to shirk or free-ride when facing a credible threat of termination, such as a short-term contract or a short cancellation notice (Anderson, Lodish and Weitz, 1987; Heide, 1994). However, the advantages associated with a credible threat of termination have to be balanced against the downsides in terms of lower commitment of the independent operator. Hence, lack of commitment from the local partner generates a mode flexibility downside. Facing a hold-up threat – i.e. a constant danger of being terminated with little or no compensation – a local operator will be disinclined to make irreversible and long-term commitments in terms of process or product development, marketing or sales (Williamson, 1983). As a consequence, the entrant firm will likely lose sales in the foreign market and thus experience a loss of quasi rent. Instead of conventional "prenuptial agreements", entrant firms could instead develop highly specified and customized contracts that safeguard relation-specific investments undertaken by the local partner against hold-ups (Williamson, 1983), or lessen the commercial risk carried by the local operator. However, such contracts tend to be costly to draft, in particular if they include complex real option clauses that stipulate the price of striking a call or put option at some future point in time (Benito et al., 2013; Jensen and Petersen, 2013). So, instead of trading switchability off against low commitment and sacrificing quasi rents, the entrant firm may find itself trading switchability for high contractual costs.

The figure also shows two other downsides of mode flexibility. First, mode switchability as well as multiplicity are associated with extra contracting costs. Mode switches require negotiating and drafting new contracts with new partners or, in the case of internalization, with own employees. As elaborated later, sophisticated switching options in the form of call and put options usually elicit extraordinary contract drafting costs. Mode multiplicity implies more contracts and, consequently, higher contracting costs. Instead of a singular contract, several contracts have to be negotiated and drafted with various local partners and these contracts may be more or less idiosyncratic. Also, post-contractual costs (i.e. costs of controlling and enforcing the contract) are multiplied.

Furthermore, with mode multiplicity follows higher coordinating costs. We would expect multiple modes across firms to be associated with higher transaction costs (more specifically, coordination costs) than a singular mode under common governance. Transaction costs economics revolves around the question of when technologically separable activities are most cost-efficiently

carried out as intra-firm activities under common (hierarchical) governance, and when it is more economical to organize them as inter-firm activities through legally independent business units (Williamson, 1985). In the latter case, market transaction costs are traded off against the production cost advantages of specialization. Intuitively, we would expect multiple modes across firms to be associated with higher transaction costs than a singular operation mode under common governance. This conjecture has to do with the mentioned costs of negotiating, drafting and enforcing contracts, as well as the costs of coordinating and aligning decisions among a group of operationally interdependent, but legally independent firms, compared to a single firm organized hierarchically (Kumar, van Fenema and von Glinow, 2009). The notion of the superiority of hierarchical control over inter-firm task coordination has long been argued by organization design scholars (Barnard, 1938; Thompson, 1967; Galbraith, 1977). Thus, mode multiplicity increases the complexity for the entrant firm beyond that of a singular mode by increasing the coordination necessary with external contractors.

3. TRADEOFF BALANCING AS A BASELINE MANAGERIAL CAPABILITY

While, as mentioned above, mode flexibility can be seen as a management capability, previous research has not included managerial intentionality as a key driver of mode dynamics (Dow, Liesch and Welch, 2018; Hutzschenreuter, Pedersen and Volberda, 2007). Instead, mode switches and mode additions have been regarded as largely determined by contingencies, and exogenous factors such as market uncertainty that managers have little influence on. Nevertheless, managers have to find the best possible balance given these contingencies. An important issue is how managers can and should balance risk and control in terms of resource commitment to a foreign market. Should an entrant firm manager choose a mode involving low or high commitment, such as a licensing arrangement versus a wholly-owned subsidiary? We do not address the issue of mode choice here, but focus instead on the tradeoff balance in terms of number of modes and contract length in relation to, respectively, mode addition and mode switch.

3.1 *Mode addition: Balancing benefit of specialization against cost of coordination*

How many operation modes should a firm add to its entry mode? Following our theoretical treatment of mode addition, we can simplify this question and instead ask: How should an entrant firm balance the tradeoff between benefits of specialization and costs of coordination in terms of the number of added operation modes? The optimal balance can be expressed as the point of intersection of the marginal benefit (MB) and the marginal cost (MC) curves in Figure 2.

*** Insert Figure 2 about here ***

In this example, we assume coordination costs in the context of reciprocal interdependence between activities performed by units (Thompson, 1967). Reciprocal interdependence implies that each unit coordinates with all other units in the value chain. Moreover, due to time specificity the coordination among the units is done in a simultaneous manner. In other words, the units are integrated but with no central, coordinating unit in the foreign market. The units coordinate bilaterally. This type of interdependence is cost-sensitive to the number of units (*in casu*, operation modes). Whereas pooled and sequential interdependencies "only" experience linearly and monotonically increasing coordination costs when new units are added, coordination costs increase exponentially for reciprocally interdependent units.[1]

Figure 2 indicates two different curves for marginal benefits: One for the specialization benefits in a large market (black, unbroken curve), and one for the benefits in a small one (in grey). Numerically, the specifications of this example are:

- x is a coefficient indicating the specialization gain of adding a mode. In this hypothetical example, $x = 4$ for large market size, and $x = 1$ for small.
- $MB = x(1/2)^{m-1}$, where m is the number of additional operation modes. This indicates diminishing returns to scale of specialization in a foreign market. More specifically, the benefit/gain is halved for every additional operation mode in the foreign market.
- $MC_{Reciprocal} = m - 1$, i.e. the derivative value of $C_{Reciprocal} = 0.5m^2 - 0.5m$.

In this numerical example, $MB_{large} = MC_{Reciprocal}$ when two modes are added (thus, the optimal $M^*_{Reciprocal,large} = 2$), indicating that one and two mode additions give the same return to the entrant firm, whereas $MB_{small} = MC_{Reciprocal}$ when one mode is added, indicating that the return to the entrant firm is the same for nil and one mode addition. Hence, in this example mode addition is only profitable for the entrant firm in the large market. Mode additions do not make the firm better off in the small market because the specialization benefits are not scaled up to a level where they exceed the coordination costs. However, later we demonstrate how this situation may change if reciprocal interdependence is altered to sequential or pooled interdependency.

3.2 *Contract duration as an element of tradeoff balancing in relation to mode switch*

Having exemplified tradeoff-balancing for mode addition we now turn to the mode switch phenomenon and ask two questions: (i) What is the essential tradeoff in relation to mode switch, and (ii) how is it balanced by entrant firms? Switch of operation mode has many manifestations: From joint ventures to wholly-owned subsidiaries (e.g. Meyer and Tran, 2006); from company-owned outlets to franchised and vice versa (e.g. Glaser, Jirasek and Windsperger, 2020); from export to licensing (e.g. Buckley and Casson, 1981), etc. Limited space does not allow us to exemplify the tradeoffs related to all these types of mode switch. We therefore focus on one broad type of mode switch: The shift from a contractual to a hierarchical operation mode. This mode switch category includes shifts from an independent distributor to a wholly-owned subsidiary (Pedersen et al., 2002), from a franchisee to a company-owned outlet (Lafontaine and Kaufmann, 1994), and from a licensing agreement to a wholly-owned production subsidiary (Welch et al., 2018).

These three types of mode switch tend to revolve around the same essential tradeoff; that between, on the one side, reaping quasi rents due to relation-specific investment undertaken by the local contractual partner, and on the other side, the loss of not appropriating windfall gains that may accrue to this partner. Long, irrevocable contracts with local distributors, franchisees or licensees prevent the entrant firm from taking over (i.e. internalizing) the operations in case the foreign market

proves unexpectedly lucrative. Hence, the lack of mode flexibility and the lost appropriation opportunities as a consequence thereof can be translated into an appropriation loss.

How do entrant firms balance this commitment-flexibility tradeoff (Pacheco-de-Almeida, Henderson, and Cool, 2008; Chi et al., 2018)? Evidently, they usually do so by fixing a certain length of an irrevocable contract. On the one hand, the contract should be long enough to safeguard against hold-up and thereby ensure the local partner's commitment (Vázquez, 2007). Without commitment, no relation-specific investments would be made, and there would be no quasi rent for the entrant firm to appropriate. On the other hand, the contract should not be infinite because that would imply the entrant firm renounces potential windfall gains forever. Of course, royalties ensure the entrant firm (the licensor or franchisor) a certain share of the income generated in an unpredictable, potentially lucrative market. This share can be considered as a partial windfall gain appropriation. An infinite contract prevents the entrant firm from expropriating the entire windfall gain.

*** Insert Figure 3 about here ***

Figure 3 illustrates the choice of contract length as a way of balancing the commitment-flexibility tradeoff. Similar to the previous illustration of mode addition tradeoffs, Figure 3 depicts a hypothetical example applying a marginal cost-benefit approach. The specification of this numerical example is: (i) the relevant time period is 100 years ($\approx \infty$), (ii) n = length of irrevocable contract in number of years, (iii) $MB = log10\ (100/n)$, $MC = 1$, and (iv) $MB = MC$, when $n = 10$ years. We use the log function for MB in order to capture a diminishing return to extending contract length. An extension of the contract from zero to just a few years has a strong positive effect on the commitment of the local partner and its willingness to undertake long-term, relation-specific investments – inasmuch as a lengthy, irrevocable contract creates an effective hold-up safeguard (Petersen, 1996; Vázquez, 2007; Williamson, 1983). Conversely, an extension of the contract beyond the depreciation period of required relation-specific investments has only a limited effect on commitment. Hence, in this numerical example an extension of the contract period from 10 to 100 years has the same effect on the commitment as an extension from 0 to 10 years. The optimal contract

length of 10 years in this example is common for franchising contracts, as studies report such contracts have an average length of 10 years (Brickley, Misra and Van Horn, 2006; Gorovaia and Windsperger, 2013), whereas distributor and licensing contracts tend to be shorter (Petersen, 1996; Welch et al., 2018).

4. TRADEOFF-SHIFTING AS A HIGHER ORDER CAPABILITY

So far, we have described the estimation of the optimal number of mode additions as well as the ideal contract length as important tradeoff balancing actions that managers often face. If we consider the balancing of tradeoffs as a "baseline" mode flexibility capability, a "higher order" capability would then be the identification and implementation of mechanisms that make it possible for the entrant firm to get around – or shift – a given tradeoff, which entails taking steps that enhance benefits and/or limit or reduce costs. First, we examine modularization as a mechanism that may keep coordination costs in check. Then, we consider real options as mechanisms that hold a potential of "escaping" the tradeoffs associated with mode switch. Their purpose is to curb costs while the benefits of specialization and commitment are simultaneously maintained.

4.1 *Mode addition: Lowering coordination costs through a shift of interdependence architecture*

The magnitude of coordination costs associated with multiple modes strongly depends on the interdependence architecture that applies to these modes. The example depicted in Figure 4 is an extension of that illustrated in Figure 2 and is based on the same specifications. If coordination costs are generated as a result of reciprocal interdependence between operation modes, as already shown in Figure 2, no more than two modes should be added – even in cases when entrant firms are able to achieve relatively high specialization benefits by operating in a large market. However, if the reciprocal interdependence architecture is replaced by a sequential or pooled arrangement, the optimal numbers of mode additions rise to three and four, respectively, inasmuch as $MC_{Sequential} = 1$ and $MC_{Pooled} = 1/2$. Thus, we argue that modularization (see e.g. Baldwin and Clark, 2000) is a

mechanism that potentially can change the interdependence architecture from being reciprocal to being sequential or even pooled (Ethiraj and Levinthal, 2004; Ethiraj, Levinthal and Roy, 2008).

*** Insert Figure 4 about here ***

One could obviously question to what extent organizational interdependence can be and/or is actually changed by managerial intent, for example through the introduction of more modular designs of foreign operation modes. A modular design of foreign operation modes implies that one firm – *in casu* the entrant firm – would take on an architectural role, and hence specify above all: (i) which contractual partners will be part of the local value chain and conduct which activities; (ii) describe how these partners will fit together; and (iii) define the standards for testing the partners' conformity to the overall value chain design rules. If feasible, the interfaces between the local partners would then be kept at a minimum whereas individual partners could be allocated a maximum of discretion as to how they perform their assigned activities as long as the activities are aligned with the value chain design rules laid out by the entrant firm. The aim of introducing a modular design is to fluidly integrate freestanding operational units, yet minimizing coordination costs. By design, the contrast to pooled interdependence is reciprocal interdependence, which is associated with higher coordination costs.

Modularity is reasonably seen as an outcome of organization design and thus subject to managerial intent. The computer industry provides classical examples of intended modularity, going back to the 1960s when IBM introduced its first modular computer, System 360. In the 1980s, another example was the introduction by Sun Microsystems of a workstation that relied on a simplified, non-proprietary architecture built with off-the-shelf hardware and software, including the widely available UNIX operating system (Baldwin and Clark, 2002). Today, modular designs of parallel programming/software development have become an industry standard.

The car manufacturing industry delivers other prominent examples of modularization. All major automotive manufacturers predominantly use modular systems, called scalable product architecture or just "platforms", which are proprietary to the individual corporations or groups (the

Ford platforms, the Toyota platforms, the Volkswagen Group platforms, etc.) or in some cases jointly used in a strategic alliance (e.g., the Hyundai-Kia platforms). However, today's modular design in the car industry was preceded by organization designs that instead of realizing pooled interdependence (but which nevertheless also includes significant sequential interdependencies in the actual assembly phase of manufacturing), were dominantly based on sequential interdependence. The classical example is, of course, the Ford assembly line organization. However, before pioneers like Ford in USA and Citroën in Europe, revolutionized car production, reciprocal interdependence (i.e. bespoke, hand-built cars), was the dominant approach, and interestingly, still remains as a viable option for automotive products provided, of course, the customers have the means and willingness to pay for exceptional products.

Examples of modularization abound also outside the computer and car industries (see, for example, Sanchez, 1999; Carlborg and Kindström, 2014), which generally support our claim that modularization is a viable management tool for lowering coordination costs – including, of course, the context of complexity that increases with mode addition – and, as such, should qualify as an important tradeoff-shifting mechanism.

4.2 *Mode switch: Reducing appropriation loss through a shift to real option contracts*

Real options comprise a set of management mechanisms that can potentially turn seemingly binding "fixed duration" contracts into more flexible contracts that can be exited or replaced with another mode arrangement at some point, though, typically within a given time window. The key question, which we will come back to shortly, is whether such substitutions have the desired effect of ensuring flexibility in terms of effectively appropriating windfall gains that occur in the "contractually defined territory" of the contract partner, without offsetting such gains through losing quasi rents or payment of transfer fees when striking the call option.

We are not the first to address the commitment-flexibility tradeoff but follow and complement studies in economics (e.g., Amador, Werning and Angeletos, 2006; Spencer and Brander, 1992) and business (e.g., Claussen, Kretschmer and Stieglitz 2015; Pacheco-de-Almeida, Henderson and Cool, 2008; Sadanand and Sadanand, 1995). In IB, the flexibility-enabling properties that real options may

offer entrant firms have been discussed for more than two decades (e.g., Chi et al., 2018; Chung, Lee, Beamish and Isobe, 2010; Rivoli and Salorio, 1996), though not necessarily modelling this flexibility as a tradeoff against commitment. Important exceptions, though, are Rese and Roemer (2004) and Li and Li (2010). In the context of dynamic markets, Rese and Roemer (2004) analyze how contractual commitments to a partner counteracts the flexibility (the "switching option") in terms of replacing with a better partner. We also focus on switchability, but on switches from contractual partners to own, in-house governance forms. Building on Dixit and Pindyck (1994) and Trigeorgis (1996), Li and Li examine the commitment-flexibility tradeoff in relation to ownership strategies of multinational corporations (MNCs) in China. Still, whereas our understanding of flexibility corresponds to that of Li and Li (2010) – that is, the right, but not the obligation to switch to another foreign operation mode (offering higher control) – we regard our commitment construct as somewhat different. Li and Li examine the conflict between, on the one hand, MNCs' desire for full ownership modes (which imply high commitment) in case market conditions turn out to be favorable, and, on the other hand, their wish for flexibility to defer full ownership until certainty about the market prospects is achieved. Furthermore, Li and Li point out that low equity modes, in particular 50-50 equity joint ventures with a call option, can reconcile MNCs' preferences for commitment and flexibility. In contrast, we focus on the commitment of the local partner (an independent distributor, franchisee, or licensee) as we see them as the main generators of quasi rent (Williamson, 1985). Obviously, the two objectives could collide. MNCs may seek mode flexibility, such as the option to convert a contractual set-up into a company-owned operation in case the market turns out to be more lucrative than expected (and thereby obtain a windfall gain), but MNCs also appreciate the commitment from a contractual partner. These are mutually exclusive aims, which ostensibly lead to a tradeoff. In the following, we examine real options (both call and put) as a mechanism that may instead shift the tradeoff.

In conventional international licensing or franchising contracts, the entrant firm (the licensor or franchisor) is usually entitled to a certain percentage of the turnover – a royalty fee – that is generated in the foreign market (Chaudey and Fadairo, 2008). If the market turns out to be more lucrative than expected – i.e. the turnover exceeds the market prognoses on which the contract is based – the entrant firm will get a share of this "windfall gain", but only a minor share, until the contract

expires. By holding and exercising a call option the entrant firm can instead appropriate the entire windfall gain.

However, it is difficult to see why the local partner (an independent distributor, a licensee or a franchisee) would allow the entrant firm to fully appropriate the windfall gains that may occur – unless we assume a power imbalance between the parties or asymmetrical valuations of the call option. If the local firm is in a weak bargaining position, for instance because it is losing market share and has an urgent need for new businesses, the entrant firm could force through a call option (as well as other favorable terms) upon the local partner as a precondition for making an agreement (Jensen and Petersen, 2013a). Asymmetrical valuation of the call option could happen if the local partner erroneously dismisses the possibility that any windfall gains will occur and therefore ignores the risk of a hold-up (Williamson, 1983). Such information asymmetries appear to be rather speculative: It is more likely that the local firm is more knowledgeable than the entrant firm about the sales prospects in the local market. In any case, both the power imbalance and the information asymmetry scenarios take on the characteristics of being zero-sum, non-cooperative games where the entrant firm appropriates windfall gains, if any, at the expense of the local partner. Assuming instead (approximate) power balance and symmetrical information – i.e. both parties are equally uncertain about the market prospects – the local firm would most likely be disinclined to grant the entrant firm a call option without agreeing on a transfer fee that fully compensates for relation-specific investments as well as the renunciation of future windfall gains. While this may seem like just another zero-sum situation, if the risk profile of the parties is asymmetric it may actually turn out to be a positive-sum game. Assuming that the local firm is risk averse and the entrant firm risk neutral, the former may be interested in exchanging a call option for a put option at terms that are favorable for both parties given their different risk preferences. Hence, reciprocal use of call and put options where the relatively more risk willing entrant firm gets a call option and the risk averse local firm receives a put option seems to prescribe a win-win situation in equilibrium. Figure 5 exemplifies how the utility functions of a risk-neutral franchisor and a risk-averse franchisee differ.

*** Insert Figure 5 about here ***

The horizontal axis indicates the expected losses or earnings in a foreign market. The two parties, the franchisor and the franchisee, are both uncertain about the market prospects but agree on the probabilities of different possible outcomes (Triantis, 2000). More specifically, they jointly estimate that there is a probability, P = .33, of earning $ 2 million (NPV) and similar probabilities, P = .33, of losing $ 1 million or earning $ 5 million. The vertical axis indicates the utility that the franchisee and the franchisor attach to these three market outcomes. We assume that the franchisor is risk neutral and that its risk-preference curve is therefore a straight (45°) line. At the same time, we assume that the franchisee is risk averse. Therefore, the franchisee's risk-preference curve is concave, such that the marginal utility value diminishes with decreasing losses and increasing earnings. In the example depicted in Figure 5, the franchisee attaches a relatively high, negative utility value (-2) to the likelihood of losing $ 1 million and a relatively low positive utility value (around 1) to the likelihood of an upside of $ 5 million. In other words, the franchisee is more than willing to trade, e.g., half of the potential for earnings of $ 5 million (the lucrative scenario) for a downside risk of losing $ 1 million.

The numerical examples discussed below (see the Appendix for details) compare two types of franchise contracts: A standard 10-year irrevocable franchise contract (without real options) and a 10-year franchise contract with reciprocal call and put options. The examples align with principal-agent theory (Jensen and Meckling, 1976; Shavell, 1979) assuming that the principal (*in casu*, the franchisor) due to its diverse businesses is risk neutral whereas the agent (*in casu*, the franchisee) is risk averse. Shavell (1979) and Triantis (2000) further argue that a strategically stipulated contract should allocate any particular kind of risk to the party most capable of bearing that risk. We hypothesize a case in which the two parties – the franchisor and the franchisee – are equally uncertain about market prospects when negotiating the contract. Given the uncertainty, the risk averse local partner – the franchisee – seeks a higher risk premium than the entrant firm. However, the entrant firm can take on the market risk by offering the partner a put option – the right but not the obligation to hand over its assets to the partner at a pre-specified price. In case the market turns out to be unfavorable the put option guarantees that the local partner can pull out of the arrangement between the parties (i.e. by selling back the franchise) without incurring losses.

The exemplified contract with reciprocal real options (the local firm gets a put option in return for the entrant firm's call option) takes advantage of the different risk preferences of the parties and the different utilities associated with various earning profiles/scenarios. Put differently, this contract type can play out as a win-win, cooperative game (Von Neumann and Morgenstern, 1953). The gains in the numerical example (see Appendix) are substantial: Despite a drop in the expected earnings of $ 200,000 – from $ 1,333,333 in the standard 10-year irrevocable franchise contract to $ 1,133,333 in the reciprocal real option contract (see Table 1 in the Appendix) – the franchisee almost doubles its overall expected utility from 1.3 to 2.5 (see Figure 6 in Appendix). The put option ensures the franchisee earnings equivalent to or better than the average market scenario without assuming any downside risk. The franchisor increases its expected earnings by $ 200,000 – from $ 233,333 in the standard 10-year irrevocable franchise contract to $ 433,000 in the reciprocal real option contract (see Table 2 in the Appendix) – an 86 % increase of expected earnings as well as utility value since the franchisor is risk neutral (see Figure 7 in Appendix). Note that it only pays for the franchisor to exercise its call option when/if the lucrative market scenario becomes reality. Conversely, it only pays for the franchisee to strike its put option in case the ruinous market scenario materializes.

The advantages of combining call and put options in a reciprocal way hinge on the risk preference differential. With a widening risk tolerance gap between the two parties the advantages of this reciprocity increase – and vice versa. It is also worth noting that in the numerical example the put option takes away the full downside risk of the venture otherwise assumed by the local partner. This might have negative implications in terms of reducing the local partner's motivation to make a whole-hearted effort to ensure the success of the venture/franchise. For this reason, it may make sense for the entrant firm to include a put option that only frees the local partner for some, but not all of the downside risk.

Is this win-win scenario a special case, or is it generalizable to other international business collaborations, including licensing, different types of franchising (Lafontaine, 2014), and equity joint ventures? We would argue both yes and no. The premise of a risk preference differential used in the franchising example can easily be applied to the other international business collaborations, i.e. contexts in which the entrant firm is a licensor or a joint venture partner. In contrast, a critical issue

regarding generalizability is the extent to which we can assume that the entrant firm is the more risk-willing party, and whether and how that matters. In the equity joint venture case, we argue that the existence of a certain risk preference differential is a necessary *and* sufficient condition for a win-win scenario to occur - it does not matter *which* JV partner is the more risk willing. The entrant firm could very well be the risk-averse party that extends a call option to the risk willing local partner against a put option, thereby creating the win-win situation. In the franchise and licensing cases, however, it is pivotal whether the entrant firm or the local partner is the more risk willing because it is the latter that primarily assumes the commercial risk. Therefore, the reverse reciprocity, where the entrant firm (either being a licensor or a franchisor) is getting a put option in return for granting a call option to the local partner (either a licensee of a franchisee), does not make much sense inasmuch as the entrant firm has no assets to transfer to the local partner if exercising the put option.[2] So, real option reciprocity seems to be a generally applicable mode flexibility mechanism in the case of international equity joint ventures where the partners differ in terms of their risk preferences, but less so in the international licensing and franchising cases insofar as the applicability is limited to situations where the entrant firm is the more risk-willing party. Our franchising example is based on the premise that the degree of risk tolerance solely depends on the business diversification of the individual firm. By definition, entrant firms have activities in more than one country, so their geographical diversification pulls in the direction of risk willingness or even risk neutrality. Since local firms are less likely to be geographically diversified, the odds of entrant firms being more risk willing than local firms are higher than one to one. However, other properties of the firm (and its managers and owners) than business diversification may determine the risk profile, such as the financial situation of the economic agents – financially strained economic agents tend to be more risk willing, see e.g. Bromiley (1991) and Greve (1998) – or the extent to which the company managers and owners have an entrepreneurial orientation. Whereas licensees and franchisees hardly can be categorized as being financially strained, they might be characterized as having traits of risk willing entrepreneurs (e.g. Martin, 1988; Vereshchagina and Hopenhayn, 2009).[3] Hence, even if the business of the local partner is less diversified than that of the entrant MNC, it cannot be taken for granted that the latter is the more risk willing.[4] [5] In the absence of systematic empirical evidence about the risk preferences of franchisors compared to their franchisees

we have been inspired by anecdotal evidence of the multinational company Flying Tiger Copenhagen (https://corporate.flyingtiger.com/), which has practiced real option reciprocity as part of its entry mode strategy. Since it was launched in 1996, the company has used a partner model that includes a 50-50 equity joint venture with a call option held by the company itself and a put option extended to the local joint-venture partner and franchisee. The company's strategy is to exercise its call option after a few years. Therefore, stores are now company owned in several of the 30 countries in which it is active in Europe, Asia, and North America.[6] [7]

But, what about the value of a call option in terms of mode flexibility? A call option gives the entrant firm an opportunity to convert the contractual mode to an ownership mode at any time. However, such mode flexibility may come at a high cost. The option value of appropriating quasi rents and windfall gains is likely to be offset by the transfer fee that has to be paid when exercising the call option. If so, a call option as a unilateral contract instrument is not a practical way to provide mode flexibility.[8] Only as a reciprocal contract instrument (i.e. the call option is in exchange for a put option) does it make sense to both parties. However, the entrant firm only achieves mode flexibility in relation to the upside scenario; that is, when the venture turns out better than expected and the entrant can appropriate all, or part of (as in the numerical example) the windfall gain by exercising its call option. Conversely, the entrant firm loses mode flexibility in relation to downside risks. If the venture goes badly because of adverse market conditions, it is the local partner that triggers the conversion to a venture owned by the entrant firm. Of course, in theory the entrant firm might supplant the local partner, but an adequate replacement could be hard to find under poor market conditions.

To sum up, real options are not miraculous management tools that can make mode switches smooth and costless by shifting the tradeoff between quasi rent gains and appropriation losses in a positive direction. Rather, real options should be seen as a double-edged sword in the hands of an entrant firm seeking mode flexibility. Reciprocal use of call and put options makes economic sense when two parties with different risk preferences collaborate and the prospects of their venture are uncertain. However, what the entrant firm gains in terms of mode flexibility (through its call option) when the venture develops better than expected, it may lose if the opposite development occurs and the local partner strikes its put option.

5. CONCLUSIONS AND FURTHER RESEARCH AVENUES

Since mode changes are common, if not inevitable, as by-products or even leading agents of internationalization (Benito et al., 2009), it could be expected that the theoretical treatment of mode flexibility would already have reached a developed stage. Instead, the issue of mode flexibility remains relatively underexplored, leaving our understanding rudimentary. Our analysis explores the possibility to modify key features of a company's business model – including both the nature of its operational interdependencies through modularization and the hold-up problems through insertion of reciprocal real options – into contractual arrangements with foreign partners as a way of coping with the potential cost and benefit implications of future mode changes. Our theoretical exploration and research evidence suggest that it is feasible for firms to prepare for mode changes, to ease the transition to an altered mode state. Rather than merely making static tradeoffs, it may be possible to avoid the tradeoff to some extent or, as we argue, to positively shift the tradeoff balance – increasing the benefits without incurring additional costs or reducing costs without reducing benefits. The altered position may involve mode additions to an existing mode resulting in an expanded mode combination. At issue for the firm is the question of how many mode additions they can implement efficiently, i.e. in ways that balance the benefits of specialization against the costs of coordination.

We recognize that it is difficult to anticipate future mode switch possibilities and pressures, and to appropriately prepare for them (Petersen, Welch and Welch, 2000). Still, it is feasible for firms to seek to make mode switches as the perceived need to do so occurs. However, the ability to make switches at a later date may be dependent on the type of relationship with the firm's foreign partner, in whatever form, and on the associated negotiation process which would be necessary without real options having been inserted in contracts. The foreign partner, say a licensee, may have built technological and marketing capacities over the life of a licensing arrangement such that it holds a strong negotiating hand. Thus, the concept of real options is an attractive alternative for the internationalizing firm. Switches can be prepared for at the outset of the foreign entry process through an option setting mechanism – without necessarily anticipating what the future may hold, but to create

options for a switch – to contractually insert an agreed ability to, and format for, a switch. Real options are a means to create future mode flexibility.

We argue that the ability to conceive and negotiate appropriate options for contractual insertion is a managerial capability, and it requires awareness and intentionality – it is not an automatic process. The foreign partner has to be engaged and to see benefits flowing from the arrangement.

Thus, we consider decision-making in a world of mode dynamics and flexibility. As such our analysis contributes to a (re)orientation of international business research towards the reality of change. While our theoretical exploration is undertaken in a restricted framework, it exposes many of the issues that firms must confront in more realistic situations. As various examples demonstrate, firms do deal in option arrangements, such as option-to-buy clauses in licensing and franchising arrangements (Welch et al., 2018). In so doing they seek to create the basis for mode shifts without incurring undue switching costs, and hence to enhance flexibility.

Our treatment of mode flexibility, its tradeoffs and the mechanisms to balance and possibly shift the tradeoffs is far from exhaustive. We have highlighted modularization and reciprocal use of real options as examples of tradeoff-shifting mechanisms, but there may very well be other ways to achieve a better cost-benefit balance for mode flexibility. There is a need for research that more systematically explores possible tradeoff-shifting mechanisms in relation to mode flexibility. Also, we have focused on coordination costs and quasi rent loss as potential downsides of mode flexibility and thereby disregarded contracting costs and ways to contain these (see Figure 1). We cannot argue that contracting costs are of minor importance compared to coordination costs and quasi rent losses. On the contrary, both mode switchability and mode multiplicity feed extra contracting costs. We also recognize that the development of social trust between partners may act as a substitute and/or complement to formal contracts, and change the way contracts are regarded (Petersen et al., 2000).

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APPENDIX: A numerical example of reciprocal use of real options in franchising

Basic assumptions:

- Time horizon: 10 years
- Initial irreversible, relation-specific investment undertaken by franchisee: $ 1m
- The investment is written off by 10 % annually.
- Market expectations as shared by franchisee and franchisor:
  - "Average market scenario": 33.3 % probability of franchisee earnings of $ 2m over the 10 year period =$ 200,000 annually.
  - "Lucrative market scenario": 33.3 % probability of franchisee earnings of $ 5m over the 10 year period = $ 500,000 annually.
  - "Ruinous market scenario": 33.3 % probability of no franchisee earnings at all.
- Franchisee earnings (before depreciation and amortization but after interest, tax and royalty payment to franchisor) = 50 % of turnover.
- Franchisor's royalty earnings: 5% of turnover.
- The real options can be exercised within an 8-year time window: from the third year and onwards (i.e. after a 2-year grace period).[9]
- NPV discount rate factor = 0 %
- The franchisor is risk neutral whereas the franchisee is risk averse with the utility functions indicated in Figure 5.
- The franchisee's upside risk (the lucrative market scenario) is $ 5 m (10 years @ $ 0.5m minus depreciation of $ 1m). The downside risk is a deficit of $ 1.4m: the initial, irreversible franchise investment of $ 1m + 2 years of lacking "average" earnings of $ 200,000 each year.
- The franchisee is willing to trade half of the lucrative earnings in year 3-10 (= $ 2m) - equaling a positive utility value of 1 - for a complete elimination of the downside risk – the "ruinous" scenario – that equals a negative utility value of 2. Through this trade – i.e. a put option in exchange for a call option - the franchisee's overall utility increases from approximately 1.3 to 2.5 - see Figure 6.

*** Insert Figure 6 about here ***

- The franchisor, on the other hand, is willing to trade half of the lucrative earnings in year 3-10 (= $ 2m) equaling a positive utility value of 2 (twice that of the franchisee) against taking the entire downside risk of $ 1m (the "ruinous" scenario) equaling a negative utility value of 1 (half that of the franchisee) – see Figure 7.

*** Insert Figure 7 about here ***

Two alternative franchise contracts:

(a) Conventional franchise contract (without real options)

Franchisee's expected earnings/losses:

Average scenario (p = 1/3): 10 years @ ($ 200,000/3) – 10 depreciation years @ $ 100,000/3) = $ 333,333
Lucrative scenario (p = 1/3):10 years @ ($ 500,000/3) – 10 depreciation years @ $ 100,000/3)
= $ 1,333,333
Ruinous scenario (p = 1/3): 10 years @ ($ 0) – 10 depreciation years @ $ 100,000/3)
= - $ 333,333

Total expected earnings of franchisee: $ 333,333 + $ 1,333,333 - $ 333,333 = $ 1,333,333

Franchisor's expected earnings:

Average scenario (p = 1/3): 10 years @ 0.05($ 400,000)/3 = $ 66,666

Lucrative scenario (p = 1/3): 10 years @ 0.05($ 1m)/3 = $ 166,666

Ruinous scenario (p = 1/3): 10 years @ 0.05(($ 0)/3 = $ 0

Total expected earnings of franchisor: $ 66,666 + $ 166,666 + $ 0 = $ 233,333

***

Total expected earnings of franchisee and franchisor: $ 1,333,333 + $ 233,333 = $ 1,566,666

(b) Franchise contract with call and put options

Franchisee's expected earnings:

Years 1 and 2:
Average scenario (p = 1/3): 2 years @ ($ 200,000/3) – 2 depreciation years @ $ 100,000/3) = $ 66,666
Lucrative scenario (p = 1/3): 2 years @ ($ 500,000/3) – 2 depreciation years @ $ 100,000/3=

$ 266,666
Ruinous scenario (p = 1/3): 2 years of zero earnings = 0

Years 3–10:
Average scenario (p = 1/3): 8 years @ ($ 200,000/3) – 8 depreciation years @ $ 100,000/3) = $ 266,666
Lucrative scenario in which the call option is exercised by the franchisor from year 3 (p = 1/3):
8 years @ ($ 500,000/3)/2 – 8 depreciation years @ $ 100,000/3)/2 = $ 533,333
Ruinous scenario (p = 1/3) in which the put option is exercised by the franchisee from year 3. The exercise releases a full compensation paid by the franchisor for lost initial irreversible, relation-specific investment undertaken by franchisee: transfer):
10 depreciation years @ $ 100,000/3) – compensation = $ 0

Total expected earnings: $ 66,666 + $ 266,666 + $0 + $ 266,666 + $ 533,333 + $0 = $ 1,133,331

Franchisor's expected earnings:

Years 1 and 2:
Average scenario (p = 1/3): 2 years @ 0.05(400,000/3) = $ 13,333
Lucrative scenario (p = 1/3): 2 years @ 0.05($ 1m/3) = $ 33,333
Ruinous scenario (p = 1/3): $ 0

Years 3–10:
Average scenario (p = 1/3): 8 years @ 0.05($ 400,000/3) = $ 53,333
Lucrative scenario (p = 1/3): 8 years @ ($ 500,000/3)/2 = $ 666,666
Ruinous scenario (p = 1/3): 10 depreciation years @ $ -100,000/3) = $ -333,333

Total expected earnings: $ 13,333 + $ 33,333 + $ 0 + $ 53,333 + $ 666,666 -$ 333,333 = $ 433,333.

***

Total expected earnings of franchisee and franchisor: $ 1,133,333 + $ 433,333 = $ 1,566,666

The expected earnings/losses in the two contract scenarios are summarized in Table 1 and Table 2 for the franchisee and the franchisor, respectively.

*** Insert Table 1 about here ***

*** Insert Table 2 about here ***

FIGURES

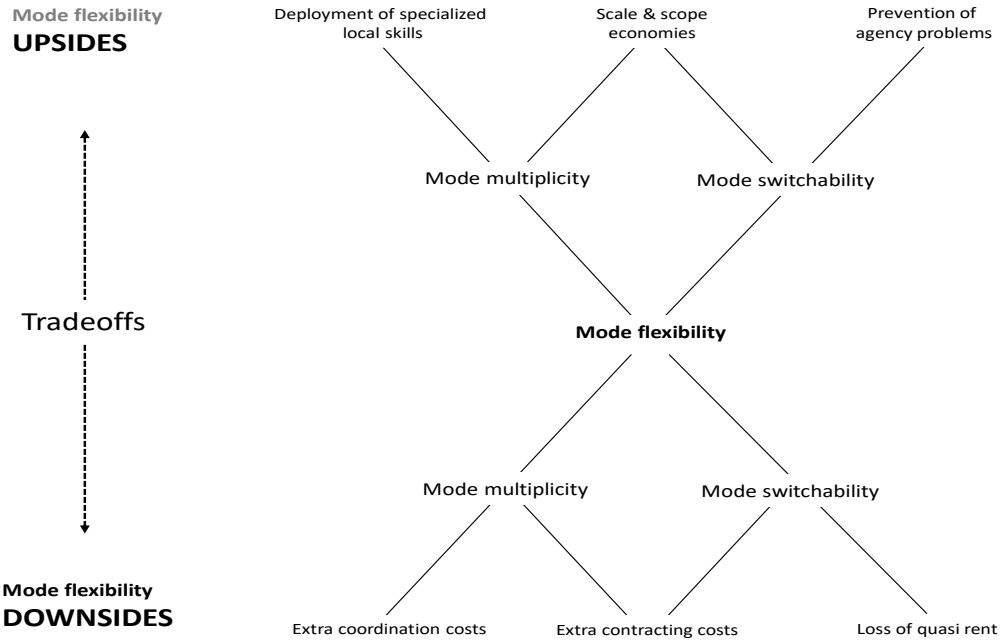

Figure 1. Inherent upsides and downsides of mode flexibility.

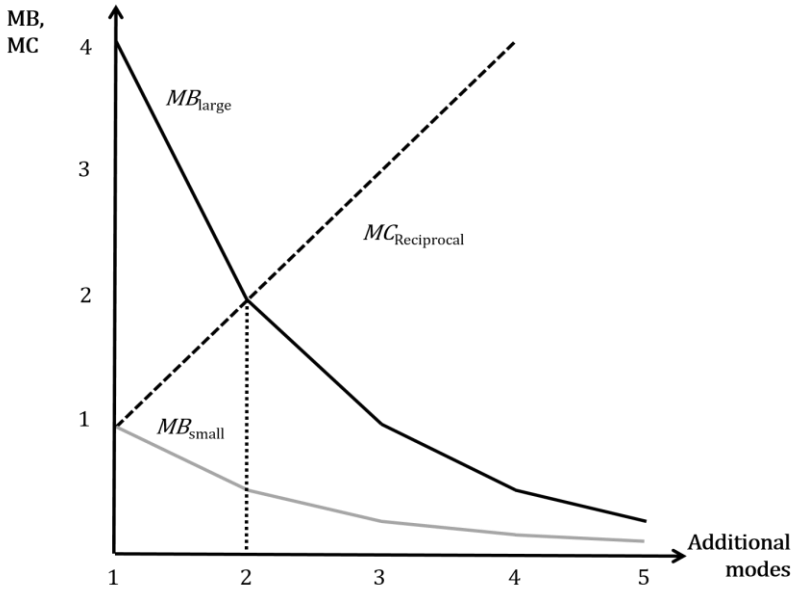

Figure 2. Example of tradeoff balancing in terms of number of operation modes.

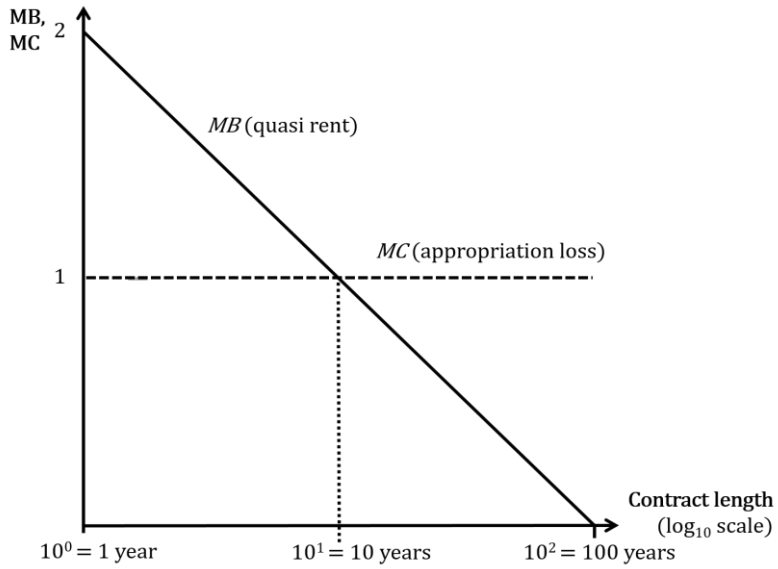

Figure 3. Example of tradeoff balancing in terms of contract length.

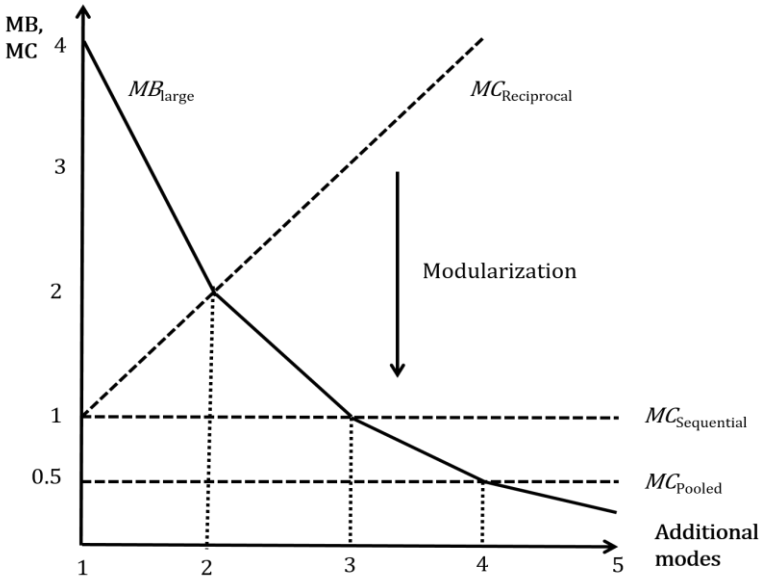

Figure 4. Example of tradeoff shift via modularization.

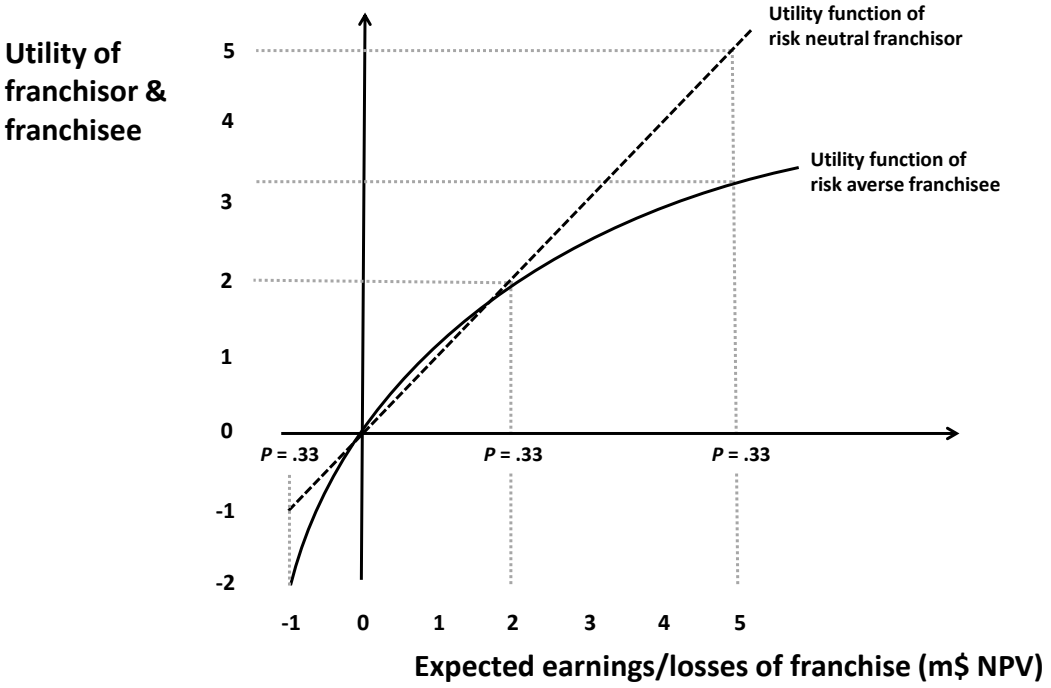

Figure 5. A utility model assuming asymmetrical risk preferences in franchising.

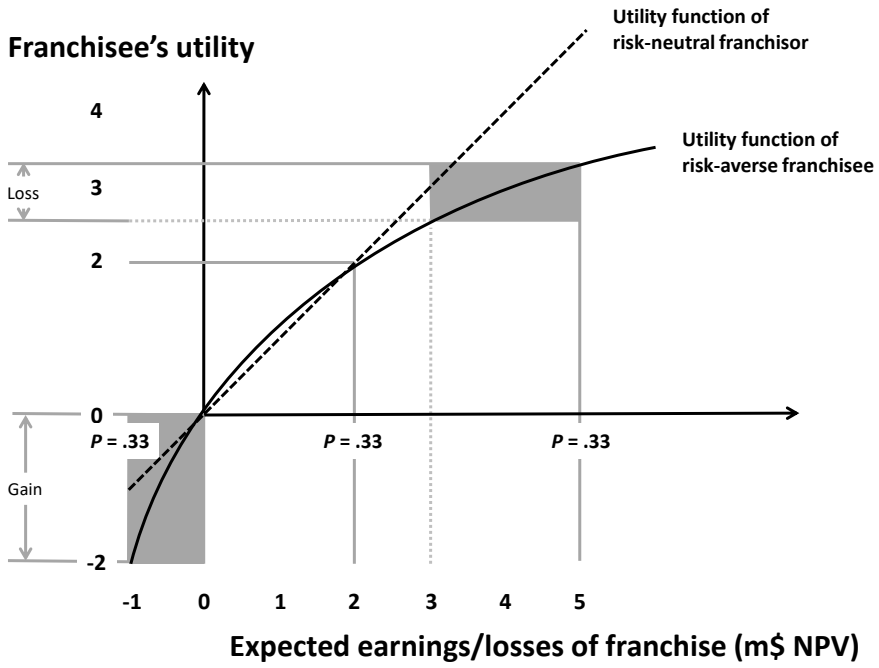

Figure 6. Franchisee's gain and loss when swapping a call option for a put option.

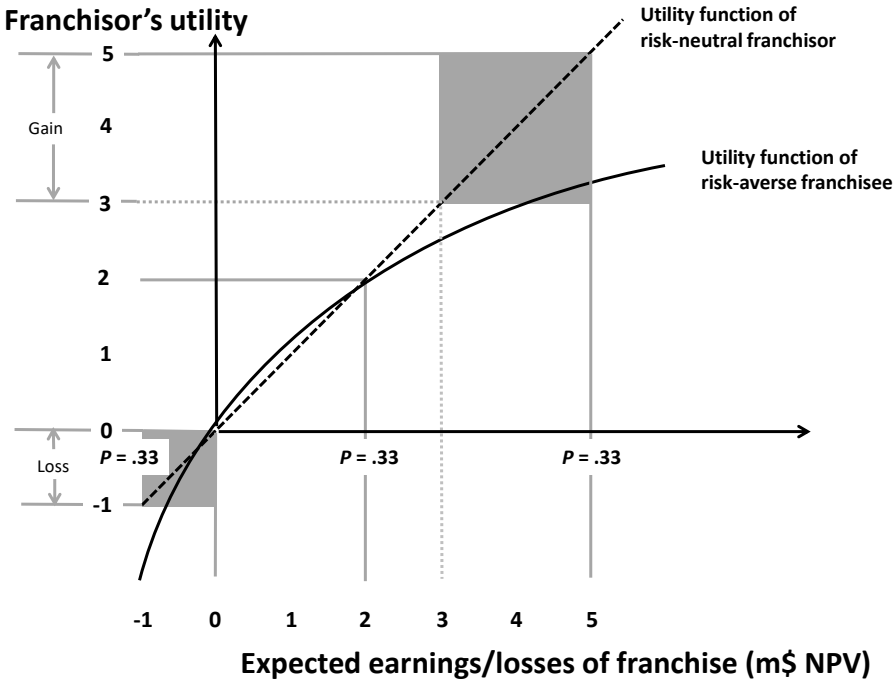

Figure 7. Franchisor's gain and loss when swapping a put option for a call option.

TABLES

Table 1. Expected earnings/losses (in $) of franchisee in the two contract types.

Market scenario	Conventional franchise contract	Franchise contract with call/put options	Difference between the two contracts
Average	333,333	333,333	0
Lucrative	1,333,333	800,000	-533,333
Ruinous	-333,333	0	+333,333
∑	1,333,333	1,133,333	-200,000

Table 2. Expected earnings/losses (in $) of franchisor in the two contract types.

Market scenario	Conventional franchise contract	Franchise contract with call/put options	Difference between the two contracts
Average	66,666	66,666	0
Lucrative	166,666	700,000	+533,333
Ruinous	0	-333,333	-333,333
∑	233,333	433,333	+200,000

NOTES

[1] We adopt Thompson's classic distinction between three basic types of interdependencies (Thompson, 1967): pooled, sequential, and reciprocal. Pooled (or modular) interdependency is associated with the lowest coordination costs. The various organizational units (*in casu*, operation modes) provide inputs to a central unit that coordinates and reallocates the pool of inputs. The coordination of inputs and related activities takes place on a bilateral basis between the central and affiliated units. Hence, the central unit administrating the resource pool guides the other units as to what to deliver to the central pool. The key difference between pooled and sequential interdependence is that in the latter case the coordinating unit not only has to coordinate what the other units have to deliver, the unit also has to coordinate when each unit has to deliver inputs\resources and to whom. This implies extra coordination costs. The importance of timing of inter-firm delivery resonates with the transaction cost theory concepts of "temporal specificity" (Masten, Meehan, and Snyder, 1991) or "time specificity" (Malone, Yates and Benjamin, 1987), where an asset is time-specific if its value is highly dependent on its reaching the user within a specified time-period. Reciprocal interdependence implies that each unit coordinates with all other units in the value chain. Moreover, the coordination among the units is done in a simultaneous way given the time specificity. In other words, the units are integrated but with no central, coordinating unit in the foreign market. The units coordinate bilaterally. This type of interdependence is cost-sensitive to the number of units (*in casu*, operation modes). Whereas pooled and sequential interdependencies only experience linearly and monotonically increasing coordination costs when new units are added, coordination costs increase exponentially.

[2] We exclude the highly unlikely situation where a licensor or franchisor transfers its international trademarks and other copyrights to the local licensee or franchisee, see also Lafontaine and Bhattacharyya (1995).

[3] We are indebted to an unknown referee for pointing this out; but we also notice that the findings of studies of risk preferences of entrepreneurs (e.g., Brockhaus, 1980; Forlani and Mullins, 2000; Ketchen, Short and Combs, 2011; Vereshchagina and Hopenhayn, 2009) are very mixed which makes it difficult to establish whether or not entrepreneurs at large are more risk-willing than business people in general.

[4] As an example, Martin (1988: 954) challenges the view that franchisees in general are the more risk averse vis-à-vis the franchisor because the latter has a more diversified business portfolio: "It has been observed by Rubin (1978, pp. 225-26) and others that the representative franchisee's investment is undiversified relative to the representative franchisor. From this it is concluded that the franchisee will be more risk averse than the franchisor. *I suggest that the choice of a less diversified investment reflects less risk aversion on the part of franchisees. Recall that franchisees are drawn from the more entrepreneurial agents in our society, since they chose to start their own business rather than seek employment*." [Emphasis (italics) added by the authors]. So even though the general contention found in the literature on franchising is that franchisees are the more risk averse party in these arrangements there are indeed proponents of opposite views such as the one aired by Martin (1988). For an overview of this academic controversy, see for example Lafontaine and Bhattacharyya (1995).

[5] In the same vein, one may think of entrant MNCs that are geographically diversified but at the same time are characterized by delegating decision rights in a very decentralized manner (e.g., Robinson and Stocken, 2013). Hence, the MNC-managers making entry mode decisions are disinclined to take into account the risk appetite prescribed by the business diversification of the wider corporation.

[6] Specific details about the call and put options, including the transfer fees (calculated as multiples), are held strictly confidential by the company and are only available to approved joint-venture partners. In October 2018, we approached the company's board of directors (the parent company is Zebra A/S) and asked for access to this information but received a polite refusal.

[7] While we have only come across one example of reciprocal use of real options, we know of several practical examples of non-reciprocal use of call options described in the literature (e.g., Benito et al. 2013; Jensen and Petersen 2013a, 2013b) in addition to the Joe & The Juice example mentioned in the introduction.

[8] Even though a call option in itself seems unsuitable as an instrument for achieving mode flexibility, there might be other good reasons to use a call option without necessarily combining it with a put option. One argument for using a call option as a substitute for an irrevocable contract with a fixed length relates to the free riding risk associated with contract expiry. A call option may eliminate this risk. It is well described in the literature (e.g. Brickley and Dark, 1987; Brickley, Dark and Weisbach, 1991; Ghemawat, 1991; Lafontaine and Bhattacharyya, 1995) how economic agents are inclined to free ride as a contract comes closer to expiration and has to be either terminated or renegotiated. If market prospects turn out to be better than expected the principal/contractor will be tempted to either end the collaboration and take over the territory, or renegotiate the contract and take the lion's share of any future quasi rent or windfall gain. In anticipation of this adverse outcome the agent (*in casu* the local contractual partner) is enticed to appropriate as much market value as possible during the time up to contract expiry, e.g. by compromising on service quality and/or postponing investments in maintenance and marketing – even though this effectively means free riding on the reputation of the contractor. Alternatively, the agent may deliberately underperform in order to make the local market look less lucrative and therefore less attractive for the principal to take over (Ellis, 2005; Petersen et al., 2006). Such conduct is probably at least as harmful to the contractor by taking on the characteristics of a Nash equilibrium (e.g. Fudenberg and Tirole, 1991). The conclusion is that a call option eliminates this growing free riding risk towards contract expiry inasmuch as the transfer fee at any time compensates the agent adequately for exercising the call option.

[9] Because of the franchisee's 2-year grace period assumed in this numerical example, a call option only allows the franchisor to exercise its call option from the third year and get half of the earnings in the lucrative scenario the next eight years. The franchisor therefore gets less than half of the gross earnings during the ten years that the contract runs. This is why the dotted vertical line that in Figure 6 and 7 indicates the franchisor's and franchisee's sharing of the earnings intersects $ 3m and not $ 5m/2 = $ 2.5m. In the lucrative scenario the franchisee's gross earnings are 2 @ $ 500,000 = $ 1m during the 2-year grace period and 8 @ $ 250,000 = $ 2m in the remaining 8 years of the contract. All in all $ 3m. The franchisor's gross earnings when exercising the call option immediately after the grace period are 8 @ $ 250,000 = $ 2m.