

# **Collaborating in an Imperfect World:**

## **Understanding How Category Captain Arrangements Work**

Authors: Upender Subramanian<sup>1</sup>, Jagmohan S. Raju<sup>2</sup>

(Published in *International Commerce Review*, Spring 2011)<sup>3</sup>

Many retailers often partner with one supplier in each product category, referred to as the “category captain”, and work closely with this supplier on consumer-centric, demand-enhancing initiatives within the store. While the promise of joint growth has spurred many such initiatives, some suppliers and retailers are unclear about the true returns from collaboration. Regulators, at times, are worried about potential anti-competitive effects.

At the heart of these concerns are the interdependent, yet diverging interests of suppliers and retailers. This has led a few to question the wisdom behind collaboration and minimize their involvement in such initiatives. We believe such abandonment is premature. What is needed instead is a more balanced perspective. Managers need a more accurate account of how collaboration works in the light of diverging interests.

To this end, in our research, we constructed a formal economic model utilizing tools from game theory to answer four fundamental questions: (i) Can category captains be objective? (ii) When should a retailer use a category captain? (iii) How are excluded suppliers affected? (iv) When does the category captain and when does the retailer benefit the most?

### **Making Sense of Collaboration**

#### *The Promise of Joint Growth*

For over a decade and a half, suppliers and retailers around the world have been increasingly working together on category management. The motivation behind their collaboration has been that neither of them holds all pieces of the puzzle. While retailers have store-level data on consumer purchases that is valuable for building an in-depth understanding of consumers, suppliers have an intimate knowledge of how to market the product category and can offer important advice on product assortment, shelf and display space management, promotions and pricing. By pooling their resources and capabilities, the industry wisdom went, they can jointly achieve their respective objectives.

---

<sup>1</sup> Assistant Professor of Marketing, School of Management, University of Texas at Dallas, Texas, USA. Email: [upender@utdallas.edu](mailto:upender@utdallas.edu)

<sup>2</sup> Joseph J. Aresty Professor of Marketing, Marketing Chair, The Wharton School, University of Pennsylvania, Pennsylvania, USA. Email: [rajuj@wharton.upenn.edu](mailto:rajuj@wharton.upenn.edu)

<sup>3</sup> Published version available at <http://www.springerlink.com/content/r43471m185257756/> or at [https://www.whu.edu/fileadmin/\\_migrated/content\\_uploads/ICR101B\\_website.pdf](https://www.whu.edu/fileadmin/_migrated/content_uploads/ICR101B_website.pdf)

Often, the retailer selects one supplier in each category to be its primary advisor to help manage the entire category. This supplier is often referred to as the “category captain”. While retailers in the U.S. were perhaps the first to use category captains, the practice is now seen in many countries, including emerging economies such as Brazil and India.

Driven by the promise of joint growth, suppliers and retailers have invested substantial resources and effort in joint marketing initiatives. But often, neither group seems clear about the returns from their collaboration. At the heart of this issue are their diverging interests.

### *The Perils of Diverging Interests*

Suppliers have trouble determining whether category captain assignments are a source of competitive advantage or whether they are simply another cost of doing business with the retailers. Certainly, a category captain occupies a unique position vis-à-vis other suppliers in the category; not only does it have access to the retailer’s data but also to the retailer’s management team. As a result, category captains may wield considerable influence over the retailer’s category decisions and store environment.

But to be selected and retained as a category captain, a supplier must make considerable investments. For instance, category captains at Wal-Mart must maintain a dedicated team of analysts and managers, co-located at Wal-Mart headquarters. Similarly, category captains must often invest in retailer-specific databases, planning tools or other systems and software. Failure to comply with such requirements or perform up to the retailer’s expectations is likely to result in the loss of the category captain position.

In fact, since these arrangements are usually not governed by contracts, a retailer is free to switch its category captain at any time, even if the current category captain has been meeting all of the retailer’s requirements and expectations. This is especially likely if the retailer receives a better proposal for category captaincy from a rival supplier.

At the same time, retailers too are unclear about the value proposition behind using category captains. If a category captain is not completely objective and places the performance of its own brands above that of the overall category, should the retailer still use a category captain? Alternately, if it is beneficial to partner with one supplier, would it not be more beneficial to partner with more than one? For instance, Kroger, a leading U.S. grocery retail chain, does not use a category captain but collaborates with multiple suppliers in each category.

Underlying these concerns is a basic difference of interests; while suppliers and retailers have a shared interest in creating value for consumers, they have diverging interests when it comes to appropriating this value. Further, while a retailer is concerned about the performance of the entire category, a supplier is primarily interested only in the performance of its own brands.

Businesses have not been alone in questioning this practice. Regulatory authorities have also been skeptical at times and regard these partnerships with extreme suspicion. They are primarily concerned about the objectivity of category captains, their impact on rival suppliers and ultimately consumers. As a result, category captain arrangements continue to attract regulatory scrutiny in some countries.

### *Developing a Balanced Perspective*

Thus, while on paper, the promise of collaboration might appear sensible, in practice, the divergence of interests raises complex questions. If neither suppliers nor retailers are sure whether collaboration is paying off and regulators too are wary, why persist?

But if the initial exuberance about the prospects of joint growth was overly optimistic, then the above view is overly pessimistic. What is needed is a balanced perspective that accounts for both the promise and perils of collaboration. This would not only avoid further misconceptions and disappointment but also guide managers in making better investment decisions.

To develop this deeper understanding, in our research, we constructed a formal economic model using tools from game theory. Game theory provides a natural way to analyze how firms that are motivated by differing, yet interrelated interests interact with one another. Discussion Box 1 highlights the operating assumptions in our model and explains why these are important. For a detailed description of our methodology, we refer interested readers to our research article referenced at the end.

Using this model, we examined to what extent suppliers and retailers can achieve their objectives through collaboration even though their interests are not perfectly aligned. We were also interested in how the outcome depended on product category characteristics. We looked specifically at two: (i) category growth potential, and (ii) supplier brand differentiation. The first characteristic determines how easy or difficult it is for suppliers to develop initiatives to grow the overall category. For instance, categories that are more mature tend to have low growth potential and are more difficult to grow. The second characteristic, determines to what extent suppliers compete on the basis of price; when brand differentiation is high, there is lesser price-based competition. In applying our findings, managers can use these factors to determine their specific context.

### **Can Category Captains be Objective?**

Clearly, the retailer benefits the most when the category captain's initiatives are category expanding. One might typically expect that a category captain would be naturally inclined to grow only its own market share. We find that this premise turns out to be incorrect (see Discussion Box 1 for why this premise indicates an incorrect mental model).

Instead, our results indicate that a category captain will always invest in some level of category expansion. When the category expands, the category captain faces lesser pricing pressure from rival suppliers as they too have benefited from category growth. Conversely, if the category captain increased only its own market share at the expense of competing brands, then it faces increased pricing pressure from rival suppliers. Thus, the category captain benefits indirectly from category expansion.

Now in our analysis, we assumed that initiatives to grow the entire category are likely to be more difficult and costly to develop and execute than those that only increased the category captain's own market share. But suppose, for the sake of argument, category expanding initiatives were not costlier. Then, we find that a category captain would invest exclusively only in category expansion.

This is an important conclusion from our model: just because a category captain is more concerned about the performance of its own brands, it does not automatically follow that it will not invest in category expansion.

Our analysis also provides an optimistic message for retailers: category captains do have a natural tendency to invest in category expansion as they too benefit from it. But the costs involved may be a deterrent. Therefore, if retailers can directly or indirectly reduce the cost of these initiatives, then category captains will focus more on category expansion. For instance, many retailers already share their consumer purchase data with their category captains. This can help the category captain in identifying opportunities to grow the category. But retailers should also explore other means to support category expanding initiatives.

We also found another driver for investments in category expansion, namely, competition for category captaincy. When faced with competition for its position, not only will a category captain invest more overall in demand initiatives, but in particular, it will invest more in initiatives that are more profitable for the retailer, namely, category expansion. Otherwise, the category captain risks being replaced by another supplier who is willing to make such investments and deliver better results for the retailer.

This is good news for retailers already soliciting competing category captain proposals. Our analysis shows that retailers can expect more category expansion when there is robust competition for this position. This could be, for instance, in categories where there are multiple suppliers who can take on the role of a category captain. Retailers should also keep the position competitive by periodically inviting category captain proposals from multiple suppliers.

### **When Should a Retailer Use a Category Captain?**

If a category captain is not completely objective, should a retailer still use one? Remember, that it is the retailer that gets to decide when to "hire and fire" a category captain. Unless a supplier vying for the position invests in suitable initiatives the retailer will choose not to collaborate. We

find from our model that it is in the supplier’s own interest to commit to such initiatives. Thus, we find it is sensible for the retailer to use a category captain even if the category captain is not completely objective.

But the question remains whether the retailer should collaborate with one or multiple suppliers. On the surface, it might appear that more is better. After all, if it is beneficial to collaborate with one supplier, then it must be even more beneficial to collaborate with more than one. Why stop with one?

But this overlooks the fact that suppliers value an exclusive relationship with the retailer. As a result, the promise of an exclusive position can elicit higher commitments from a supplier than when the retailer involves more suppliers. This is especially true when competition for the position is robust. Suppliers vying for the position bid up the investments to such a level that collaborating exclusively with one supplier is the best option for the retailer.

		<b>Supplier Brand Differentiation</b>	
		<b>Lo</b>	<b>Hi</b>
<b>Category Growth Potential</b>	<b>Lo</b>	Category Captain	Category Captain
	<b>Hi</b>	Multiple Manufacturers	Category Captain

*Figure 1: When Should a Retailer Use a Category Captain?*

In other words, less can indeed be more. In fact, only in categories with high growth potential and low supplier brand differentiation do we find that a retailer should involve multiple suppliers (see Figure 1). In this case, there is insufficient competition for category captaincy amongst suppliers, and involving multiple suppliers leads to higher category growth. But in other cases, using a category captain is more beneficial.

### **How are Excluded Suppliers Affected?**

If competing suppliers are vying for this exclusive position, where does this leave those that do not get selected? Wouldn’t their products be side-lined as the category captain leverages its influence with the retailer? Surprisingly, we find that the picture is not so gloomy for the excluded suppliers, for two reasons.

First, even if the category captain is somewhat biased towards its own brand, its initiatives still ease price-based competition in the category. This can compensate for the category captain’s bias, provided it is not too stark.

Second, as we discussed previously, the competitive selection process itself limits the degree to which the category captain can be biased. The threat of being displaced drives the category captain supplier to invest in category expanding initiatives as these are more profitable for the retailer. This also benefits the other suppliers.

Only when the category growth potential is quite low and the supplier brand differentiation is high, do we find that rival suppliers’ profits are hurt by the category captain arrangement (see Figure 2). In other cases, these suppliers also benefit from the category captain’s initiatives.

		<b>Supplier Brand Differentiation</b>	
		<b>Lo</b>	<b>Hi</b>
<b>Category Growth Potential</b>	<b>Lo</b>	Benefit from Arrangement	Hurt by Arrangement
	<b>Hi</b>	-*	Benefit from Arrangement

\*: Retailer does not use a Category Captain

*Figure 2: How are Excluded Suppliers Affected?*

Now it might initially seem counterintuitive that a supplier can benefit when its rival becomes the category captain. But this is consistent with empirical findings by other researchers who conducted surveys of retailers and suppliers in the U.K. and in Finland. Therefore, while the category captain may be the one deriving the most benefits, this does not preclude excluded suppliers from also benefiting.

Suppliers should bear this in mind when they compete for category captaincy: not being selected for the position does not necessarily doom them to failure. Instead, they should consider their specific situation at each retailer.

## The Value of Category Captain Arrangements

An important concern for suppliers is whether they ultimately benefit from serving as a category captain. We find that this primarily depends on how much competition there is for this position. If suppliers get drawn into a spiral of escalating commitments as they try to outbid each other to become the category captain, then they do not benefit even if they win this position.

We find that this is most likely to occur in categories with low growth potential and high supplier brand differentiation (see Figure 3). In this case, suppliers commit to increasing levels of initiatives that are not very focused on category expansion (see also Discussion Box 2). Remember that these were also the categories where the non-category captain suppliers were worse off. Therefore, each supplier competes hard to avoid being left out.

		Supplier Brand Differentiation	
		Lo	Hi
Category Growth Potential	Lo	<p><b>Low</b> <b>Low</b></p>	<p><b>Very Low</b> <b>Medium</b></p>
	Hi	<p>-*</p>	<p><b>High</b> <b>High</b></p>

\*: Retailer does not use a Category Captain

(**Red** – Value for Category Captain, **Green** – Value for Retailer)

Figure 3: Value from Category Captain Arrangements

But, with every supplier thinking the same way, it pushes them to make very high commitments, ultimately destroying the value they derive from becoming the category captain. For those familiar with the language of game theory, suppliers in such categories face a classic “Prisoner’s Dilemma”. Thus, the category captain and other suppliers are all worse off.

In the case of other categories, even though there is competition for category captaincy, suppliers are able to avoid the deadly spiral since they commit to investing in initiatives that are reasonably category expanding. This is especially true in categories where the growth potential as well as supplier brand differentiation is high (see also Discussion Box 2). In such categories,

suppliers are relatively less concerned about not winning the position. In fact, we find that both the category captain and the rival suppliers benefit from the arrangement.

This point is important to note: if a category captain can be more objective, then it faces lesser threat of displacement from rival suppliers, which in turn increases the value gained from category captaincy. In other words, when the category captain is objective not only do consumers, retailers and rival suppliers benefit, but the category captain benefits as well. Suppliers focused on the long-term will find this easy to understand. While being self-serving can be beneficial in the short-run, it destroys value in the long-run.

Like the category captain, the retailer also benefits the most in categories with high growth potential and high supplier differentiation (see Figure 3). In such categories, not only is the category captain's investment level high, but also it invests relatively in more of category expanding initiatives.

### **What Next?**

For retailers, we recommend that they encourage competition for the category captain position, but at the same time support or subsidize category expanding initiatives by the category captain. For those who currently collaborate with multiple suppliers in each category, we recommend that they invite competing proposals for category captainship and evaluate whether this can stimulate higher investments in initiatives.

For suppliers who are category captains, we recommend that they invest in category expanding initiatives taking a longer term perspective of how this can reduce competition for their position. For suppliers who are not category captains, we recommend that they maintain their category management capabilities since this keeps the current captain in check.

Our suggestion for regulators is that they base their stance on hard evidence and sound economic analysis. Our findings suggest that category captain arrangements can indeed enhance consumer welfare and improve market efficiency (See Discussion Box 3).

Lastly, in the course of our research, we came across two areas that need further attention from managers:

1. *Quantifying Value from Collaboration:* Few organizations systematically measure the true value they gain from collaboration. The operational portion of the returns is typically easier to measure. But our current analysis suggests that a significant portion of the value is strategic. For instance, a category captain must often make investments not to improve operational performance but to retain its position at a retailer. To quantify such aspects are considerably more difficult. Nevertheless, this is important if managers are to make sound investment decisions.



2. *Aligning Interests in Collaboration:* Our current analysis provides a baseline for what to expect when individual interests hold sway. To outperform this baseline, suppliers and retailers must create appropriate incentives within and between their organizations to align their interests. Few organizations have their external and internal incentive structures properly aligned to support collaboration.

**Note to Readers:** We encourage questions and comments about our research and look forward to hearing about your experience in managing category captain relationships.

**Acknowledgements:** Our research for this article was supported by an ICI-Unilever research grant from the International Commerce Institute, ECR Europe.

### **Additional Reading**

Upender Subramanian, Jagmohan S. Raju, Sanjay K. Dhar and Yusong Wang, The Competitive Consequences of Using a Category Captain. *Management Science*. Oct 2010.

#### **Discussion Box 1: Operating Assumptions**

Any model is only as good as its operating assumptions. Based on our discussions with managers, we identified four conditions that characterized most category captain arrangements and adopted these as our operating assumptions.

1. It is the retailer that decides whether or not to collaborate with suppliers and whether to “hire or fire” a category captain.
2. Suppliers must compete with each other for the category captain position and the retailer selects the supplier that commits to delivering the best results.
3. A category captain can be potentially biased: it can invest in initiatives that grow the entire category but also in initiatives that grow only its market share at the expense of its rivals.
4. The decisions made by the retailer and suppliers are guided by individual profit-maximization; after all each is answerable to their own shareholders.

Some of the concerns and confusion about category captains can be readily traced back to a lack of understanding of these conditions or how they interact. For instance, based on the potential for category captain bias and the focus on individual profit-maximization, some might arrive at a conclusion that category captains will be necessarily biased. But this ignores the other conditions. In other words, the concern is based on an incorrect mental model. As we discuss in “Can Category Captains be Objective?”, incorporating all conditions lead to a different conclusion.

## Discussion Box 2: Category Captain's Investment in Marketing Initiatives

In our analysis, we considered that a category captain can invest in initiatives that grow the entire category as well as in initiatives that only increase its market share at the expense of rivals. Figure B1 shows how the overall investment level and investment mix change with category characteristics.

With respect to supplier brand differentiation (see Figure B1, graph on left), when their brand differentiation is low, suppliers compete primarily on the basis of price. This leads the category captain to invest more in category expansion as it relieves pricing pressure. Category expansion, in turn, reduces the competition for this position from rival suppliers. Therefore, there is not much pressure on the category captain to escalate its overall investment level. Conversely, in categories with high supplier brand differentiation, there is lower emphasis on category expansion, more competition for the position and high overall investment level.

With regards to category growth potential (see Figure B1, graph on right), when growth potential is high, this attracts more investment in category expansion to such an extent that overall investment levels are also high. Conversely, when growth potential is low, it suppresses investment in category expansion to such an extent that overall investment level is also low.

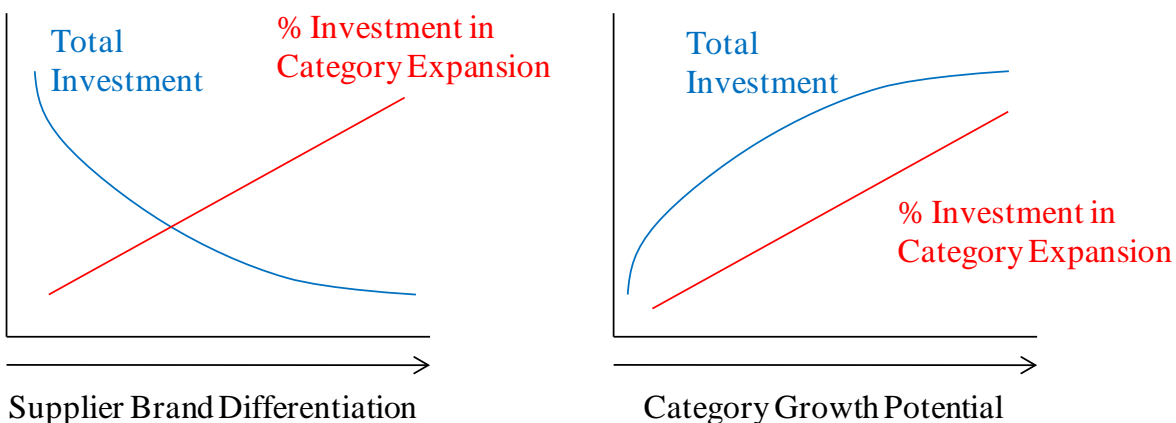


Figure B1

## Discussion Box 3: Alleviating Regulatory Concerns

Based on our analysis, we take a closer look at some common regulatory concerns.

1. *A non-exclusive relationship is better than an exclusive one: Sometimes.* An exclusive arrangement can lead to significantly higher category growth than a non-exclusive relation. (See “When Should a Retailer Use a Category Captain?”).

2. *A category captain will be biased towards its own brands:* **Partially True.** A category captain is never fully objective. At the same time, it has a natural tendency to grow the entire category. (See “Can Category Captains be Objective?”).
3. *Excluded (non-category captain) suppliers do not benefit from the arrangement:* **Sometimes.** Excluded suppliers can actually benefit since the category captain’s initiatives may sufficiently expand the category and ease pricing pressure. (See “How are Excluded Suppliers Affected?”)
4. *Consumers are hurt by such collaboration:* **False.** In our analysis, we find that consumers always benefit and overall category demand is always higher. This is true irrespective of the fact that a category captain is never fully objective and that rival suppliers may not benefit from the arrangement. Given the need to convince the retailer to hire and retain it, the category captain invests sufficiently in category expansion.