New study offers insights for suppliers to online marketplaces

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In a new paper, Assistant Professor of Management Science Hongseok Jang explores how suppliers should navigate their presence on online retail sites that enable both traditional reselling and agency-based marketplaces.

With the growing dominance of online retailers like Amazon and China's JD.com, businesses face critical questions about how to navigate their presence on these expansive and multifaceted platforms. Should they sell exclusively through resellers, operate direct-to-consumer channels, or adopt a hybrid approach that integrates both? And why are online retailers tacitly allowing this hybrid selling?

In a new study, Hongseok Jang, assistant professor of management science, investigates these issues, offering research-based insights to help guide practitioners. His paper, “Supplier Encroachment through Online Marketplaces,” co-authored by Quan Zheng and Xiajun Amy Pan, is forthcoming in *Production and Operations Management*.

Suppliers generally sell their products through reselling channels, in which online retailers buy their products at a wholesale price and then resell them to consumers at a markup. Suppliers can also take advantage of online marketplaces like Amazon and JD, which offer them the ability to sell their products directly to consumers by paying the marketplace a commission fee. “Supplier encroachment through online marketplaces” refers to this phenomenon, when suppliers start selling their products directly to end consumers, potentially competing with retail partners who traditionally served as intermediaries.

“The traditional methods of supplier encroachment — creating standalone direct channels, such as establishing their own retail stores to bypass retailers — was limited to offline,” explains Jang. “Traditional supplier encroachment results in competition between existing retailers and encroaching suppliers at the retail level. Online marketplaces, however, have shifted the game by making supplier encroachment easier but also more strategically complex. The competitive relationships arising from encroachment, intertwined with the revenue-sharing nature of marketplaces, lead to dynamic interactions among market players.”

For their study, the researchers employed a theoretical model to explore the dynamics of a bilateral monopoly supply chain. They analyzed scenarios in which a supplier could sell through both traditional reselling channels and agency-based online marketplaces. Using game theory and optimization techniques, they evaluated supplier and retailer strategies under different commission rates, order quantities and pricing strategies. Their approach allowed the authors to uncover surprising dynamics, such as the supplier’s preference for simultaneous ordering and the counterintuitive impact of high commission rates on supplier profitability. By comparing these outcomes with established supplier encroachment literature, the authors highlight the unique challenges and opportunities presented by online marketplaces.

For companies grappling with online channel strategy, the study provides a number of practical insights.

1. **The Strategic Value of Hybrid Models:** Companies like Dell and Samsung often adopt a hybrid model, selling products via both traditional reselling and direct agency channels on platforms like Amazon or China’s JD.com. This approach can unlock a win-win scenario for both suppliers and retailers, especially when commission rates are moderate. “Hybrid models leverage the strengths of both channels, mitigating double marginalization and increasing overall efficiency,” Jang says.

2. **Encroachment Isn't Always Better:** Consulting firms often suggest that suppliers should always utilize direct marketplaces to gain price control. However, the study suggests that firms should exercise caution when pursuing that strategy. "Our findings show that having an option to encroach doesn't always translate to higher profits," Jang says. "When commission rates are too high, the benefits of listing products in an agency channel can be offset by reduced wholesale leverage and increased fees."

3. **More information does not always guarantee high profits:** Traditionally, suppliers might set their order quantities after observing retailer decisions. But the study reveals this can backfire in online marketplaces. Suppliers benefit from deciding their quantities simultaneously with retailers, as delaying decisions can alter the retailers' reselling strategy and reduce negotiating power.

4. **Retailers' Strategic Commission Rates:** Retailers, the study finds, often adjust commission rates based on the type of products and the competitive dynamics they want to foster. For example, low-cost goods like clothing may face higher commissions, while premium electronics might have lower rates to incentivize supplier participation.

The research also sheds light on a hotly debated topic: the role of online platforms as both resellers and marketplaces. While critics have raised antitrust concerns about companies like Amazon operating dual roles, Jang's findings suggest these hybrid setups can benefit consumers by diversifying channel selections and lowering costs through enhanced efficiency.

For businesses, however, Jang suggests proceeding with caution. "Consulting firms often recommend strategies that may overlook nuanced outcomes, such as the risk of over-reliance on agency channels," he says. "Businesses need to make data-driven and farsighted decisions in the context of considering the interacting players in the supply chains holistically."

For retail or supply chain management practitioners, the study underscores the importance of having flexible, informed strategies to navigate today's digital marketplaces.

"As platforms evolve, so too must the strategies of businesses that depend on them," Jang concludes. "Our study is just the beginning of understanding how supplier encroachment through marketplaces impacts vertical channel relationships."

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