Perceived external uncertainty, new product development, and the timeliness of international product launch: A commentary essay

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Abstract

New product launch is a critical stage of the innovation process, mainly because of the high risks and costs that it entails. Despite this importance, many scholars and managers consider the product launch the least well-managed phase of the entire innovation process. This commentary reflects on a recent empirical study (Lee and Wong, in press) on how to efficiently organize for, develop, and roll out new products internationally in markets characterized by varying degrees of competitive and technological uncertainty. The central premise of the study is that this external uncertainty requires innovating companies to match their product development approaches to the uncertain context in order to achieve on-time launch. Based on a discussion of this research, its merits and contributions, this essay suggests potential future research opportunities.

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1. Introduction

After decades of research into developing new products on time, much remains unknown about the contingent effect that the external environment has on the managerial decisions involved in product innovation and multi-country launch. New product development and international launch are costly, risky, and complex, as internationalization adds unique challenges that need to be addressed, including geographic, legal, or cultural considerations. Further complicating the international launch of new products are the uncertainties related to developments in markets and technologies.

Firms can expect to face strong competition by domestic and international players in attractive country-markets while having to respond to a diversity of customer needs on a timely—and oftentimes country-by-country—basis. Firms may also face rapidly changing technologies that could drive a new product into technological obsolescence before launch. This uncertainty alone can contribute to major adoption delays due to waiting time for newer technology (Gupta & Wilemon, 1990).

Environments that are perceived to be highly uncertain tend to generate a lack of confidence on the part of managers, which affects new product development and launch. There is agreement among most scholars that this lack of confidence originates in the unpredictability of, unfamiliarity with, or inability to fully understand technological or market related developments or other changes in the external environment (Bstieler, 2005). Contingent on the context within which new product development and launch take place, it is crucial to consider managerial adjustments to varying forms of perceived uncertainty to reduce the odds that markets or technologies have changed between development and launch periods and to maximize on-time performance (Wind & Mahajan, 1997).

However, the lack of research incorporating the influence of the external environment on managerial decisions involved in international new product launch limits the depth of our understanding on this issue and provides ample opportunities for further inquiry (Harvey & Griffith, 2007). While there is a significant body of research on the relation between new product development and its timely performance component (e.g., Chen, Damanpour, & Reilly, 2010) or how strategic and tactical decisions affect new product launch (e.g., Di Benedetto, 1999; Hultink, Hart, Robben, & Griffin, 2000), we know much less about how to achieve on-time performance when rolling out new products internationally. Likewise, we know little about new product development and launch by companies in emerging markets, as research is still in its infancy (Burgess & Steenkamp, 2006), yet it would be interesting to gain insights into how successful development and launch activities differ from companies in Western economies. As products and brands are becoming increasingly global, the effective management of international product innovation and launch is a major concern to management and a source of competitive advantage. Against this background I will comment on Lee and Wong's (in press) recent study and its contributions, discuss some issues the research raises, and suggest potential future research opportunities.
2. Synopsis and contributions of the study

In their article “Organizational coordination, development proficiency, and on-time completion of development and international roll-out: A contingency analysis of external environments” Lee and Wong (in press) examine the important issue of how competitive intensity and technological uncertainty affect new product development and a project’s adherence to schedule and efficiency (timeliness). With this research Lee and Wong respond to calls to consider environmental and organizational factors when studying the management of the process leading to successful international product and brand launch (Harvey & Griffith, 2007; Song & Montoya-Weiss, 2001; Yeniyurt, Townsend, & Talay, 2007).

The empirical study of South Korean manufacturers looks at two distinct, temporal, aspects of product rollout—the on-time development of new products and on-time launch of the new products into country markets. Using data of 232 new products rolled out internationally, the authors investigate moderating effects of perceived external uncertainty on the relationships between cross-functional integration, product development proficiencies, headquarter-subsidiary interaction, and on time product development and launch.

Lee and Wong find partial support for their moderating hypotheses and make several contributions to the field of product development. Among these, the relationships between marketing proficiency and the timeliness of project completion and international rollout are monotonic and positive. This finding suggests that with increasing competitive intensity marketing must make greater efforts in order to achieve on-time performance. Lee and Wong find that higher technological uncertainty reduces the otherwise positive relation of cross-functional integration with on-time project completion, which seems to be counterintuitive and in contrast to research conducted outside East-Asia (e.g., Bstieler, 2005). Such a potential country-specific effect points to further antecedents that we yet must understand.

Another interesting finding relates to the headquarters-subsidiary relationship, which tends to be problematic in general (e.g., Gates & Egelhoff, 1986): The results suggest a reduced importance of this relationship for international rollout timelines under higher competitive intensity while the association of the headquarters-subsidiary relationship with international rollout is monotonic and positive under higher technological uncertainty. What accounts for this ambiguity is unclear. Lee and Wong speculate that greater autonomy and decentralized decision-making by subsidiaries facilitates local adaptation under competitive pressure, while a tighter coordination is beneficial when facing technological uncertainty. Clearly, this reasoning has merit, but further examination of this perspective is necessary as the current headquarters-subsidiary construct encompasses relational quality rather than decentralization or coordination. The important contribution here is to establish the necessity of a balanced, yet effective, collaboration between headquarters and subsidiaries when launching new products internationally that future research cannot ignore.

Providing additional clarification would be beneficial on the hypothesized moderated relationships that do not receive support by the data analysis. This clarification is achievable by fully examining possible explanations. For instance, Lee and Wong find that technology proficiency does not have a significant impact on timeliness under conditions of technological uncertainty, which appears to be counterintuitive and contradicts prior research outside Asia (e.g., Bstieler, 2005). Could some of the possible explanations for unexpected findings, statistically significant or not, originate in the institutional or cultural context of emerging Korea? Unfortunately, Lee and Wong do not take full advantage of the study context. South Korea is an emerging market (Burgess & Steenkamp, 2006), but Lee and Wong do not consider the distinguishing characteristics of emerging economies to further differentiate this study.

The hypotheses and developed theory are not specific to emerging countries, even though incorporating aspects of the institutional and cultural context in the model could greatly contribute in achieving a novel perspective on new product development and international launch. As a result, how new product development and launch differ by companies from an emerging country versus Western economies remains unclear.

In sum, the study provides some important and interesting insights into product development and international launch by Korean manufacturers suggesting that a one-size-fits-all may not be the best approach to a multi-country on-time rollout. Lee and Wong advance our understanding of how environmental factors affect managerial decision making in an emerging economy, even though we realize that we still lack an adequate understanding of these forces, including legal or ecological uncertainty, and how these may affect new product development and launch. The study also provides fertile ground for future research opportunities.

3. Looking ahead

Effective product development and multi-country launch are increasingly critical for many companies. Enabling a timely launch requires capabilities and resources, organizational structures, the right mix of people, and a supporting culture that allow an organization to efficiently manage the product from concept to launch (Calantone & Griffith, 2007). The research context of South Korea as one of the top R&D spenders (OECD, 2010) along with the rise of Korean companies to global competitors is intriguing and provides a rich setting for studying new product development. The context also raises questions as to how the Korean culture intertwines with the effective organization of new product development and international launch considering the worldwide success of companies such as Hyundai, LG, Posco, or Samsung. Future research should examine how characteristics of organizational or national culture foster time efficient new product development in emerging economies.

Several additional themes for further inquiry follow from the article. Pursuing these themes in an emerging market context could further advance marketing theory and practice (Burgess & Steenkamp, 2006). Collaboration is an enabler of successful product innovation and launch, and arguably the most important antecedent. As products and brands are becoming more global, the necessity of collaboration among multiple functional areas, between headquarters and subsidiaries, or with upstream and downstream suppliers, intermediaries, and customers increases significantly.

While building good relationships among those involved in the product development and launch decision making process is crucial, such as among members of global new product teams (Barczak & McDonough, 2003), achieving a high level of collaboration that facilitates on-time launch performance is a complex issue. Given the challenges when synchronizing, sequencing, or adapting launch efforts, Harvey and Griffith (2007) point to the importance of trust building in global new product development and launch. For instance, future research could examine how trust building processes can reduce or minimize the almost always present tensions and conflicts between headquarters and subsidiaries.

Effective multi-country launch and product management are also difficult because of the sheer complexity of the processes involved. The level of external coordination increases because of the movement of component design, sourcing, and product assembly often to lower-cost countries, multi-tiered logistics, or customer service needs. This opens up research opportunities that examine how supply-chain configurations or interorganizational networks affect successful international launch.

The importance of a proficient preparation and execution of the new product launch cannot be overstated (Cooper, 2001) and Kleinschmidt, De Brentani, and Salomo (2007) report pre-launch activities to be crucial for successful international launch. However, Kleinschmidt et al. (2007) examine launch at the aggregate new product development program level opening up research opportunities on how to effectively and
efficiently conduct pre-launch activities in the international rollout of individual new products, while at the same time offering opportunities to study how companies apply the lessons learned in one country to anticipate problems that may arise in another.

Timeliness is an important but somewhat unsatisfying outcome measure as it is rarely an end in itself (on-time completion, in Lee and Wong’s study). Launch timeliness increases the likelihood to surpass competitors in the marketplace (Chen, Reilly, & Lynn, 2005) and, thus, should result in a performance premium. In fact, De Brentani, Kleinschmidt, and Salomo (2010) recently studied the performance of international B-to-B new product programs out of North-America and Europe and report that time-to-market has an overall positive impact on financial outcomes, among other factors.

Researchers and managers have high interest in timeliness, time-to-market, cycle time, acceleration or similar constructs that all deal with some aspect of time and new product development. However, the relation to other performance metrics is anything but clear cut (e.g., Langerak, Hultink, & Griffin, 2008). Thus, future research could examine the antecedents and effects of launch timeliness on other performance metrics across multiple countries.

Finally, Lee and Wong’s study identifies several moderating effects of competitive intensity and technological uncertainty, but future research should extend this study by also investigating alternative sources of uncertainty and how these affect managerial decision making in emerging countries, including regulatory or political uncertainty or uncertainties related to supply-chain and distribution management.

4. Conclusion

Lee and Wong’s contingency perspective on the topic of on-time development and multi-country launch is worthy of commendation. This perspective is an appealing research view and adds to the literature by explicitly testing and establishing contingency effects of competitive intensity and technological uncertainty on new product development and launch timelines with data from an emerging country that has a low level of tolerance for uncertainty. The topic of international new product launch has yet to receive a greater deal of research attention and Lee and Wong’s study should motivate scholars to develop this area further.

Lee and Wong contribute by taking on a managerial important and challenging issue while providing ample opportunities for future research. In order to develop and launch new products on time marketing and engineering efforts, cross-functional integration, and headquarters-subsidiary relationships require careful calibration based on the external environment within which product innovation and launch take place as a one-size-fits-all approach is unlikely to succeed.

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