



경영학 석사 학위 논문

The effect of M&A experience on M&A deal premiums

인수 경험이 인수 프리미엄에 미치는 영향

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경영학과 전략 및 국제경영전공

심 승 현

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지도교수 박남규

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Abstract

The effect of M&A experience on M&A deal premiums

Seunghyeon Sim Strategy and International Management The Graduate School of Business Seoul National University

This paper studies the effect of acquirers' acquisition experience acquisition premiums and the impact of moderator variables, on relatedness, and platform firms. The result is that acquirers with more acquisition experience pay lower acquisition premiums. In addition, the effect of acquisition experience on acquisition premiums is weakened by relatedness as a moderator variable. Additional moderation analysis shows that the negative impact of acquisition experience on acquisition premiums is more profound in the platform than in non-platform firms. Specifically, the relationship between acquirers' acquisition experience, acquisition premiums, and relatedness (moderator variable) was determined by sampling 5,243 acquisitions from all industries from 2000 to 2020. In addition, the relationship between acquisition premiums and acquisition experience with platform firms as the moderator variable was determined from a sample of 198 acquisitions of 66 firms in the NASDAQ 100. This paper builds on the learning theory with the argument that acquisition experience reduces the overpayment of acquisition premiums. In addition, this paper contributes to the claim that relatedness has a higher potential for value creation while also contributing to the claim that platform firms could set reasonable prices through information based on the characteristic of having uncertain demand compared to non-platform firms. Additionally, this paper contributes to Cusumano et al. (2019)'s claim that platform firms affect business.

Keyword : M&A deal premium, M&A experience, Relatedness, Platform firm, Learning theory, Value creation
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I. Introduction

Prior studies on mergers and acquisitions (M&A) have used several significant variables, including acquisition premiums and acquisition experience. This literature shows the relationship between acquisition premiums and acquisition performance as their function as dependent variables. Acquisition premiums have been studied with various determinants. Kim, Haleblian, and Finkelstein (2011) studied acquisition premiums with acquisition experience (moderator variable), while other studies on acquisition premiums focused on focal deals (Malhotra, Zhu, & Reus, 2015). Cho & Arthur (2018) studied alliance experience and acquisition premiums, and many studies take acquisition premiums as a dependent variable.

Additionally, there have been many studies on the relationship between acquisition experience and acquisition performance. Mohite (2017) examined the relationship between a target's acquisition experience and acquisition premiums, while other studies that take acquisition experience as an independent variable are being actively conducted.

Many studies have used acquisition premiums and acquisition experience as dependent or independent variables. However, alliance experience, which correlates with acquisition experience (Mellewigt et al., 2017), has a positive and significant relationship with acquisition premiums (Cho & Arthurs, 2018). In addition, the target's acquisition experience—rather than the acquirer's acquisition experience—has a significant effect on

acquisition premiums (Mohite, 2017). However, since there have been no studies on the relationship between acquisition premiums and acquirers' acquisition experience, this study analyzes this relationship and poses the following questions:

- 1. How does the acquirers' acquisition experience affect acquisition premiums?
- 2. How do relatedness and platform firms contribute to the relationship between acquirers' acquisition experience and acquisition premiums during the acquisition period?

This paper focuses on acquirers and studies how acquirers' acquisition experiences affect acquisition premiums based on the theory. This paper also studies how relatedness and platform firms influence the relationship between the two variables.

This paper contributes to the literature in several ways. First, it contributes to acquisition premiums literature and acquisition experience literature by showing that acquirers' acquisition experience negatively affects acquisition premiums (Haleblian & Finkelstein, 1999; Kim & Finkelstein, 2009). Second, it shows that the relationship between acquirers' acquisition experience and acquisition premiums weakens when relatedness increases as a moderator variable. Thus, it contributes to the claim that relatedness has a higher potential for value creation (Valachovic, 2008). Third, it shows that platform firms have a more significant impact on acquisition premiums than non-platform firms. Thus, it supports the finding that platform firms—firms with more uncertain demand due to their characteristics—make profits by

identifying consumers' locations and setting more reasonable prices when they receive information (Cho, 2019). Additionally, it supports the assertion that platform firms influence business (Cusumano et al., 2019).

The next chapter explains the mechanisms that affected acquisition premiums in prior studies. In addition, it explains the relationship between acquisition experience and acquisition premiums based on the theoretical background and the critical role of acquirers' acquisition. Finally, the relationship between acquisition premiums and acquirers' acquisition experience is explained through the moderator variables of relatedness due to higher potential for value creation and platform firms (acquirers' firms) due to their unique characteristics.

II. Theory and Hypotheses

2.1 Acquisition Premium

Acquisition premiums have been studied as a major topic in M&A research. Most studies have focused on the effects of various dependent variables on the size of the acquisition premium paid by acquirers. Table 1 summarizes prior studies on acquisition premiums.

IV	DV	Source
Acquisition premium	Post-acquisition premium	Krishnan et al., 2007
IPO firm	Acquisition premium	Reuer et al., 2012
Earning guidance	Acquisition premium	Koch et al., 2012
Anchoring effect	Focal acquisition premium	Malhotra, Zhu, & Reus, 2015
Target information	Acquisition premium	Gheng et al., 2016
asymmetry		
Alliance experience	Acquisition premium	Cho & Aurthor, 2018
Prior acquisition	A lower acquisition	Amel-Zadeh & Meeks, 2019
announcements	premium	
Target CEO	Acquisition premium	Russel & Andrew, 2020
celebrity		
CSR performance	Deal premium	Ozdemir et al., 2021
Sources of Value	Acquisition premia	Slusky & Caves, 1991

Table 1. Prior Studies of Acquisition Premium

Through examining prior studies on acquisition premiums, we can reveal the arguments and theories surrounding acquisition premiums. Based on the value creation theory (Argote & Miron-Spektor, 2011), it is argued that acquisition premiums provide superior decision-making quality by allowing various views and more information (Meno & Pfeffer, 2003). In addition, arguments based on the agency theory (Berle & Means, 1932, Manne, 1965; Jensen, 1986) claim that managers pay acquisition premiums to prevent reductions in profits for the firm's shareholders (investors) and maintain the relationship between shareholders and managers. Signaling theory (Cornell & Shapiro, 1987; Casado-Diaz et al., 2014) suggests that acquisition premiums are influenced by firms gaining an information advantage through knowledge asymmetry (Laamanen, 2007; Coff, 1999; Samuelson, 1984; Cuypers et al., 2017). All these viewpoints show that the effects and influences of acquisition premiums have many arguments based on several theories.

Acquisition premiums have been affected by several mechanisms, namely the acquirers' acquisition performance (Kim, Haleblian, & Finklestein, 2011), bidder competition (Giliberto & Varaiya, 1989), and interlocking directors (Galaskiewicz & Burt, 1991; Haunschild, 1994; Mizruchi, 1996). Interlocking directors refers to the network of directors on the governing boards of two or more firms. CEO overconfidence also affects acquisition premiums (Hayward & Hambrick, 1997), similar to CEO hubris, and potential synergies (Slusky & Caves, 1991; Sirower, 1997).

Prior literature has generally argued that firms pay acquisition premiums greater than their market value to achieve their goals (Hunter & Jagtiani, 2003), and this has two main underlying mechanisms. First, there is an overpayment due to potential synergies (Sirower, 1997). In the acquisition process, firms may judge that a synergistic effect can be obtained while acquiring the technology and knowledge of target firms. Therefore, acquisition premiums will be high as their future value is judged to be elevated. However, this can also be a misjudgment that causes acquisitions to fail because the premiums are too high (Eccles et al., 1999). Second is CEO hubris and overconfidence (Hayward & Hambrick, 1997), which arises because even if a firm pays the target firm a higher acquisition premium during the acquisition process, the CEO may believe that their firm has a competitive advantage over an acquirers' firm. Thus, they will pay higher acquisition premiums based on the performance of other firms without adequately judging the price through their knowledge and performance. These findings show that high acquisition premiums

are paid due to several potential mechanisms.

2.2 Acquisition Experience

Acquisition experience has also become a big topic in M&A research. Acquisition experience has been studied in the Journal of Strategic Management in connection with various factors such as experience similarity, acquisition timing, and performance feedback. Additionally, the effect of acquisition experience on many dependent variables has been studied. Generally, acquisition experience has been studied as either an independent or moderator variable. Table 2 summarizes the prior studies on acquisition experience.

IV	DV	Source
Acquisition experience	Acquisition performance	Haleblian & Finkelstein, 1999;
		Hayward, 2002;
		Zollo & Singh, 2004
First acquisition on the second	Acquisition performance	Finkelstein & Haleblian, 2002
Number of acquisitions in the	Change in acquirer ROA	Porrini, 2004a
past four years		
Acquisition experience	Three types of	Zollo & Reuer, 2010
	performance	
Target's acquisition	Premium	Mohite, 2017
experience		
Acquisition experience	Production resource	Kim & Davis, 2019
	efficiency	
Past acquisition experience	Acquisition performance	Schriber & Degischer, 2020
Self-learning acquisition	Completion of CBAs	Zhou et al., 2020
experience		
M&A experience	Deal completion time	Roh et al., 2021
Growth patterns	Acquisition premium	Kim, Haleblian, & Finkelstein,
(moderating variable		2011
=acquisition experience)		

Table 2. Prior Studies of Acquisition Experience

Prior studies also apply several theories to acquisition

experience. First is behavioral learning theory (Cyert & March, 1963). According to Haunschild and Bechman (1998), different experiences or information produce learning outcomes with divergent characteristics based on the learning curve, suggesting an important role that could help firms with acquisition experience become more effective acquirers (Barkema & Schijven, 2008). Second, there is the knowledge-based view (KBV) (Nelson & Winter, 1982; Kogut & Zander, 1992; Grant, 1996), which argues that a firm's knowledge and capabilities have a critical role in determining its outcomes (DeCarolis & Deeds, 1999). Thus, it is argued that it is essential to integrate the knowledge and skills of previous acquisition experience for future acquisitions to create synergies. As such, experience facilitates the development of knowledge and skills in subsequent acquisitions.

This study focuses on acquirers and explains the role of their acquisition experience. Acquisition experience can help firms achieve better deals by learning from previous deals (Haleblian & Finkelstein, 1999; Hayward, 2002). Haleblian and Finkelstein (1999) distinguished between expert acquirers who have more acquisition experience and novice acquirers who have less; they argued that inappropriate generalization (Chi, Feltovich & Glaser, 1981) would be reduced among expert acquirers, unlike in novice acquirers. In addition, acquirers' acquisition experience could reduce takeover threats during bad deals (Mitchell & Lehn, 1990). Finally, acquisition experience provides a comprehensive checklist of key factors to ensure that acquisitions are not misguided (Zollo & Singh, 2004). Thus, firms often rely on comparisons of data obtained through past acquisition experience (Menon & Pfeffer,

2003). Therefore, acquirers' acquisition experience helps firms evaluate the potential value creation related to their goals (Haleblian & Finkelstein, 1999; Kim & Finkelstein, 2009).

Despite the importance of acquisition experience, acquisition premiums and experience have a complex relationship, as evidenced by prior studies, which can be sorted into three categories. First, some studies show that acquisition experience has either a negative or no effect on acquisition performance (Zollo, & Singh, 2004; Haleblian & Finkelstein, 1999; Levinthal & March, 1993). Haleblian and Finkelstein (1999) argued that the unrelatedness of acquisition experience influences other acquisitions and causes lower performance. Second. other studies show that acquisition experience positively affects acquisition performance (Hayward, 2002; Vermeulen & Barkema, 2001), which argues that knowledge accumulated by the learning curve helps subsequent acquisitions through acquisition experience. Third, other studies show a Ushaped relationship between acquisition experience and acquisition performance (Baum & Ingram, 1998; Haleblian & Finkelstein, 1999; Nadolska & Barkema, 2007), Haleblian and Finkelstein (1999) established a U-shaped relationship by classifying expert and novice acquirers, although there was a negative effect between acquisition experience and performance. They argued that expert acquirers are better able to recognize fundamental differences and similarities between various events than novice acquirers because they recognize both surface and structural features.

There are two theories that the prior studies on the relationship between acquisition experience and acquisition

premiums have not examined: potential synergies (Sirower, 1997) and CEO hubris and overconfidence (Hayward & Hambrick, 1997). First, based on KBV, the possible synergistic effect could be explained similarly to Cho and Arthurs (2018), which showed a relationship between acquisition premiums and alliance experience that is highly similar to acquisition experience (Zollo & Reuer, 2010). If a firm acquires more alliance experience, it can gain extensive knowledge and skills and develop better absorption capacity. Absorption capacity (Cohen & Levinthal, 1990) is the organizational capacity to recognize and commercialize new knowledge, leading to desirable outcomes (Cho & Arthurs, 2018). Firms with good absorption capacity can achieve a better competitive advantage (Lane, Slak, & Lyles, 2001; Tsai, 2001; Zahra & Hayton, 2008; Salomon & Jin, 2010; Zhang et al., 2010) because they can easily acquire and use the new knowledge. The firm would be better prepared for the acquisition process, synergies may occur, and would pay higher acquisition premiums due to its judgment and competitive advantage over other firms.

However, firms that pay high premiums based on synergies may erroneously judge their value based on "social comparison" (Festinger, 1954), particularly when a firm compares its value to similar firms. A firm with no acquisition experience pays high acquisition premiums because it is overvalued and makes incorrect judgments. Therefore, firms need to gain more internal acquisition experience to judge value accurately. Similarly, acquisition experience can prevent poor decisions by evaluating risk and value (Kim, Haleblian, & Finkelstein, 2011).

Second, if a firm's CEO displays hubris and over-confidence, the firm will pay more significant acquisition premiums, especially if a firm has less acquisition experience. These high premiums tend to occur when a firm with limited acquisition experiences that may have gone well concludes that its next performance will unfold in the same way. More experience in a firm typically means that they will have had exposure to both successes and failures, attributed to the expert and novice acquirers mentioned by Haleblian and Finkelstein (1999). Therefore, this paper includes both success and failure acquisition experiences to test whether studying acquisition experience can be generalized. We further examined the results of generalization by reviewing acquisitions across all industries.

Based on prior studies on the role of acquisition experience in behavioral learning theory (Haleblian & Finkelstein, 1999; Hayward, 2002), this paper studies the relationship between acquisition experience and acquisition premiums. CEO decisions determine almost all the acquirers' acquisition experience. However, it is assumed that the firm stores' acquirers' acquisition experience as a resource. Acquisition experience and knowledge allow the acquirers to better judge risks and value help with future acquisitions. Thus, the knowledge and competencies associated with acquisition experience help firms avoid making poor decisions such as paying acquisition premiums that are too high (Kim, Haleblian, & Finkelstein, 2011). In addition, acquisition experience allows for a more accurate assessment of potential value creation (Haleblian & Finkelstein, 1999; Kim & Finkelstein, 2009). Similarly, as acquisition experience increases, it is expected that acquisition premiums can be more accurately judged. Therefore, acquisition

experience will result in a reduction in acquisition premiums.

Hypothesis 1: Acquisition experience is negatively related to acquisition premiums.

2.3 Relatedness

Many prior studies have investigated relatedness and acquisition premiums (Valachovic, 2008; Slusky & Caves, 1991; Hayward & Hambrick, 1997; Haunschild, 1994; Kaufman, 1988; Russo & Perrini, 2006; Flanagan & O'Shaughnessy, 2003). Russo and Perrini (2006) studied the complexity of acquisitions (unrelated acquisitions, cross-border acquisitions, and hostile acquisitions). In addition, Flanagan and O'Shaughnessy (2003) studied the relationship between core-relatedness acquisitions and acquisition premiums. Prior literature has generally argued that a critical role of relatedness is vital for M&A success and synergy creation (Haleblian & Finkelstein, 1999; Rumelt, 1982; Tanriverdi & Venkatraman, 2005; Ko, 2020). However, studies examining the correlation between acquisition and target firms (apart from Flanagan & O'Shaughnessy, 2003) have not shown that relatedness affects acquisition premiums. Russo and Perrini (2006) concluded that acquisition premiums for relatedness might not be affected by complexity of an unrelated acquisition. Flanagan and the O'Shaughnessy (2003) studied which firms paid higher premiums for core-related acquisitions than non-core-related acquisitions. When there were no competing bidders, they reasoned that it was easy for a target firm to infer the price desired by the acquirer and to require higher premiums. In the case of unrelated acquisitions,

the existence of multiple bidders affects premiums. Thus, although relatedness may not directly affect premiums, it is expected to moderate the relationship between acquisition experience and acquisition premiums.

The role of relatedness is primarily investigated through the theory of value creation. The degree of relatedness may increase the potential value creation through synergy (Valachovic, 2008). Based on studies of synergy potential (Black, 1989; Singh & Montgomery, 1987; Seth, 1990), the more an acquiring firm's characteristics approach those of a new and related market, the more likely it becomes that the maximum value of the acquisition will be attained (Shelton, 1988). A strategy of building on similar experiences may create value by bringing a more competitive orientation to the core business (Haring & Rivet, 2004). Firms are less likely to own new assets if they have less knowledge of unrelated industries than related industries (Chatterjee & Singh, 1999). In addition, it has been shown that a related acquisition generates higher profits for the acquirer than an unrelated acquisition (Singh & Montgomery, 1987). Therefore, we expect acquisition experience to impact acquisition premiums—particularly in related acquisitions—as related acquisitions have a much higher potential for value creation than unrelated acquisitions (Valachovic, 2008).

This study examines the relationship between acquisition experience and acquisition premiums based on previous research on relatedness and the effect of value creation. Relatedness is expected to have a moderating effect on the correlation between acquisition experience and acquisition premiums.

Hypothesis 2. The impact of acquisition experience on acquisition premiums is weakened by relatedness.

2.4 Platform Firm

Platform firms are emerging in acquisitions research with various definitions and views (Sanderson & Uzumeri, 1995; Ulrich, 1995; Evans, 2003; Rochet & Tirole, 2003; Gawer, 2015; Cusumano et al., 2019). This paper defines platform firms by mirroring Cusumano et al. (2019)'s ecosystem view, whose platform firm has three features. First, a platform firm is a company that has a business that connects a group of producers who provide products or services and a group of users who need them based on a mobile or internet platform, rather than directly providing products or services. Second, a platform firm is a company that creates value and extracts profits by allowing active transactions to occur within its platform. Third, a platform firm is a company where at least 20% of the revenue depends on network effects (Cusumano et al., 2019).

Platform firms influence businesses in several fields (Cusumano et al., 2019) and consequently found many prior studies. These include the platform business model and concept studies (Zhao et al., 2020; Facin et al., 2016; Cusumano et al., 2019), platform ecosystem studies (Kappor et al., 2021, Ceccagnoli et al., 2012), a digital platform study (Gawer, 2021), a multi-faceted platform study (Hagiu & Wright, 2015), competition studies

between traditional firms and platform firms (Van Alstyne et al., 2016; Mody et al., 2020), platform competition studies (Cennamo & Santalo, 2013; Eisenmann, 2007; Rietveld & Schilling, 2021), and a study on the role of acquisition in platform firms (Toppenberg et al., 2016). However, since there seems to be scant research on M&A strategies (apart from Dolata, 2017 and Park et al., 2021), this paper investigates how platform firms moderate the relationship between acquirers' acquisition experience and acquisition premiums.

This paper also focuses on acquirers and argues that acquiring firms with platform businesses tend to be firms with more uncertain demand than non-platform firms. Most non-platform firms have pipeline businesses which means that they are relatively stable as a result of being able to easily distinguish not only their consumers but also their suppliers and producers (Van Alstyne et al., 2016)

Platform firms have uncertain demand due to three reasons. First, in platform firms, participants' activities (consumers, producers, and suppliers) can be easily created or exhausted compared to those of non-platform firms (Van Alstyne et al., 2016). While consumers of platform firms place a higher value on platforms with many users (Cennamo & Santalo, 2013), such firms often fail because they do not attract enough market users to realize a positive network effect (Cusumano et al., 2019). In the fourth quarter of 2021, the number of daily active Facebook users had decreased by one million from the third quarter, their first decline in 16 years (Heath, 2022). Prior studies of network economics have claimed that the value of platforms and the size of the user base are

closely related (Katz & Shapiro. 1986; Farrell & Saloner, 1985). Therefore, platform firms have uncertainty about the demand for users compared to non-platform firms, which are stable.

Second, the interaction between producers and consumers on platform firms could effortlessly move to a competing platform if their needs can be better met elsewhere (Van Alstyne et al., 2016). The competitive advantage of non-platforms is primarily from sales growth (Machek & Machek, 2014). In contrast, platform firms have competitive advantage through the interactions between а producers and consumers (Van Alstyne et al., 2016). In addition, interactions on platform firms are affected by demand-side economies of scale and affect the value of platform firms (Van Alstyne et al., 2016). In other words, platform firms increase their value by ensuring the value of their interactions rather than the volume (Van Alstyne et al., 2016). Despite the importance of these interactions, platform firms may still lose them to competitors from other platform firms if they can lower their transaction and search costs to attract more consumers (Cennamo & Santalo, 2013). For example, if platform A's transaction cost is 10 dollars while platform B's is one dollar, because the interaction offered by platform A can be done on platform B, platform A will lose demand for interactions and face uncertain demand. Therefore, platform firms are threatened by their interactions related to their needs and can experience more demand uncertainty than non-platform firms.

Third, platform firms do not have entry barriers resulting in unfettered access, which could cause problems (Van Alstyne et al., 2016). Platform firms should manage users by distinguishing between what is allowed or controlled since there is no barrier to entry. Unfettered access might cause other users to secede, as in the case of Chatroulette, a random chat platform that suffers from the "naked hairy man" problem that cannot be controlled and thus has caused many users to secede (Parker et al., 2016). Platform firms show more uncertainty in demand than non-platform firms because demand will secede with low entry barriers. This study is based on the premise that platform firms' unique characteristics moderate the relationship between acquisition experience and acquisition premiums.

This basis is formulated from a prior study that claimed that firms facing uncertain demand, such as platform firms, could accurately identify consumers' locations through shared information, which could help set prices and positively affect expected profits (Cho, 2019). Thus, this paper explains how having a platform business may affect a firm's relationship between acquirers' acquisition experience and acquisition premiums. Suppose firms with uncertain demand—such as platform firms—continue to accumulate information through experience. In that case, they can set more reasonable prices, which can be expected to affect the containment of acquisitions premiums. Therefore, platform firms are expected to make more prudent decisions than non-platform firms by evaluating risks and values through acquisition experience due to the unique characteristics of their uncertain demand.

Assuming that platform firms exhibit this characteristic, this paper hypothesizes that platform firms have more effect on the relationship between acquisition experience and acquisition premiums than non-platform firms. Additionally, acquirers' acquisition experience helps them set appropriate prices; therefore, it is expected that platform firms have more influence on the relationship between acquisition experience and acquisition premiums than non-platform firms. In other words, platform firms (acquirers' firms) that tend to be more experienced pay lower acquisition premiums than non-platform firms.

Hypothesis 3: The impact of acquisition experience on acquisition premiums is more strongly influenced by platform firms than non– platform firms.

III. Data and Methods

3.1 Sample and Data

This paper collected M&A data from the Securities Data Corporation (SDC) Platinum database and included public firms including both US and non-US firms from 2000 to 2020. The sample data consists of completed and non-completed samples across all industries. The sampling for Hypotheses 1 included transaction values greater than \$10 million (Cho & Arthurs, 2018) and had acquisition premiums (offer price to target stock price premium, one day prior to announcement) between -50% and 200% (Teohd, 2005). The sample excluded any missing values of the acquirers' total assets (in mil). Finally, to measure the number of acquisition experiences from 2000 to the focal deal, the first acquisition of each deal was excluded. Therefore, the samples for Hypotheses 1 and 2 included 5,243 acquisitions and 2,294 firms.

This paper collected data from Nasdaq-100 firms from the pool of samples for Hypotheses 1 and 2 to create a new sampling for Hypothesis 3. Hypothesis 3 did not exclude the first acquisition of each deal to include deals with zero acquisition experience. Based on Cusumano et al. (2019), this paper used a sample from a prior study that classified Nasdaq-100 firms as platform firms and non-platform firms (Park et al., 2021); this sample was obtained from the COMPUSTAT database and excluded missing values of current ratio and return on assets (ROA). Finally, the selection from the Nasdaq-100 had no missing firm data and information on acquisition premiums. Consequently, the sample for Hypothesis 3 contained 198 acquisitions and 66 firms. Table 3 shows platform and non-platform firms, where platform firms have 53 acquisitions and 11 firms, while non-platform firms have 145 acquisitions and 55 firms.

Platform Firm ((11)		Non-Platfo	rm Firm (55)	
Name	Ticker	Name	Ticker	Name	Ticker
Amazon.com Inc	AMZN	Adobe Inc	ADBE	Intuitive Surgical Inc	ISRG
Analog Devices Inc	ADI	Advanced Micro Devices Inc	AMD	KLA Corp	KLAC
Apple Inc	AAPL	Alexion Pharmaceuticals Inc	ALXN	Lam Research Corp	LRCX
Cisco Systems Inc	CSCO	Amgen Inc	AMGN	Liberty Global Inc	LBTYA
eBay Inc	EBAY	Applied Materials Inc	AMAT	Marriott International Inc	MAR
Expedia Group Inc	EXPE	ASML Holding NV	AMS	Maxim Integrated Products Inc	MXIM
Intel Corp	INTC	Autodesk Inc	ADSK	Microchip Technology Inc	MCHP
Microsoft Corp	MSFT	Automatic Data Processing Inc	ADP	Micron Technology Inc	MU
NVIDIA Corp	NVDA	Biogen Inc	BIIB	Mondelez International Inc	MDLZ
PayPal Holdings Inc	PYPL	BioMarin Pharmaceutical Inc	BMRN	NetApp Inc	NTAP
QUALCOMM Inc	QCOM	Broadcom Corp	BRCM	Netflix Inc	NFLX
		Cadence Design Systems Inc	CDN	O'Reilly Automotive Inc	ORLY
		Celgene Corp	CELG	PepsiCo Inc	PEP
		Cerner Corp	CERN	Sirius XM Holdings Inc	SIRI
		Charter Communications Inc	CHTR	Skyworks Solutions Inc	SWKS
		Cintas Corp	CTAS	Starbucks Corp	SBUX
		Citrix Systems Inc	CTXS	Symantec Corp	SYMC
		Comcast Corp	CMCSA	Synopsys Inc	SNPS
		Dollar Tree Inc	DLTR	T-Mobile US Inc	TMUS
		Electronic Arts Inc	ERTS	Take-Two Interactive Software Inc	TTWO
		Fiserv Inc	FISV	Tesla Inc	TSLA
		Fox Corp	FOXA	Texas Instruments Inc	TXN
		Gilead Sciences Inc	GILD	VeriSign Inc	VRSN
		Hasbro Inc	HAS	Vertex Pharmaceuticals Inc	VRTX
		Henry Schein Inc	HSIC	Western Digital Corp	WDC
		Illumina Inc	ILMN	Wynn Resorts Ltd	WYNN
		Incyte Corp	INCY	Xcel Energy Inc	XEL
		Intuit Inc	INTU		

Table 3. Platform Firms and Non-Platform Firms

This paper used a hierarchical moderated regression analysis on IBM's SPSS for Hypotheses 1 and 2. Hypotheses 1 and 2 were analyzed using four models (with control, independent, independent variable*moderator moderator. and variable (relatedness)). For Hypothesis 3, this paper used IBM's SPSS generalized estimating equations (GEE) analysis (Liang & Zeger, 1986). Hypothesis 3 was analyzed using four models (with control, independent, moderator, and independent variable* moderator variable (platform firms)). This paper specified а normal distribution for the dependent variable and conducted GEE analysis with the commonly used correlation matrix, an identity link function, robust standard error estimators (White, 1980), and the "repeated" function.

3.2 Measurement

3.2.1 Dependent Variable

Acquisition premium. Acquisition premium was normally measured with the premium-day/week prior to the announcement date according to the SDC manual. Furthermore, the acquisition premium was calculated to offer a price close to the target stock price the day/week prior to the announcement date. This paper follows the announcement one-day premium (Cho & Arthurs, 2018), which calculated the offer price divided by the target stock price announced one day prior and is expressed as a percentage.

3.2.2 Independent Variable

Acquisition experience. Acquisition experience was measured through the number of acquisitions. All the samples of Hypotheses 1, 2, and 3 were set as focal acquisitions. Hypotheses 1 and 2 included acquisition counts of one, and Hypothesis 3 included acquisition counts of zero. For example, Analog Devices Inc. had an SDC Platinum database for acquisition premiums during 2000, 2014, 2016, and 2020. If all acquisitions were calculated as a focal deal each year, the value of past acquisition experience for 2000 would be zero, 2014 would be one, 2016 would be two, and 2020 would be three. Several other studies have argued that the maximum duration of acquisition experience should be five years (Haleblian & Finkelstein, 1999) because the average CEO turnover is seven years (Kaplan & Minton, 2012). Additionally, the forgetting curve states that acquisition experience of 15 years (between 2000 and 2014) and five years (between 2016 and 2020) are easily forgotten without a record. Therefore, this paper used the number of acquisition experiences as much as possible.

3.2.3 Moderate Variable

Platform firm. Platform firm was a dummy variable; this paper used a platform firm list analyzed by Park et al. (2021), based on Cusumano et al. (2019)'s definition that platform firms' revenues were at least 20% dependent on network effects. Platform firm was coded as 1 for a platform firm and 0 for a non-platform firm.

Relatedness. Relatedness was collected from SDC Platinum. The relatedness of Hypotheses 1 and 2 was coded by comparing the SIC code of the acquirer's firm and of the target firm based on the Primary Standard Industrial Classification (SIC) code (King et al., 2008; Wang & Zajac, 2007). The value was coded 4 if the first four digital codes of the two firms were the same, 3 if the first three digital codes were the same, 2 if the first two digital codes were the same, and 1 if only the first digital code were the same, and 0 if all four digital codes were different. However, Hypothesis 3 was changed to a dichotomous variable of "relatedness1" based on the mean of 3 for ease of interpretation.

3.2.4 Control Variable

Subsidiary. Subsidiaries were collected from SDC Platinum. A subsidiary was coded as 1 if the parent name of the acquirer and the acquirer's name were the same. They were coded as 0 if otherwise. Acquirer diversification. Acquisition diversification was collected at SDC Platinum. Acquisition diversifications of Hypotheses 1 and 2 were coded with the number of total SIC codes of target firms (Mitchell & Shaver, 2003). However, Hypothesis 3 was changed to a dichotomous variable "diversification1" based on the mean of 3 for ease of interpretation. Acquirer size. Acquirer size was coded as the log(1 + total asset) of the acquirers' total assets (Chakrabarti & Mitchell, 2013). The total assets were determined as (t + 1) in COMPUSTAT. Acquirer slack resources. Acquirer slack resources were coded with the current ratio calculated by current assets divided by current liabilities. The current ratio was determined as (t + 1) in COMPUSTAT. Acquirer ROA. Acquirer ROA was the ROA calculated as net income divided by total assets. The ROA was determined as (t + 1) in COMPUSTAT. Firm age. Firm age was calculated as the establishment year minus the announced year. The year of publication was collected from SDC Platinum. Completed M&A. Completed M&A was collected from SDC Platinum. Completed M&A was coded 1 if there was a competing bid deal code and 0 otherwise (Yang & Hyland, 2006). International M&A. International M&A was collected at SDC Platinum. International M&A is coded 1 if there was a cross border and 0 otherwise.

	Variable Name	Mean	Std. Dev.	Min.	Max	1	2	ĸ	4	Ω	9
-	Acquisition Premium	23.56	30.48	-49.66	198.13	1.00					
2	Acquisition Experience	2.89	3.13	1.00	29.00	-0.039** (0.004)	1.00				
ŝ	Relatedness	212	1.65	000	400	0.102*** (0.000)	-0.105*** (0.000)	1.00			
4	Subsidiary	0.82	0.38	000	1.00	0.004 (0.767)	0.057*** (0.000)	0.003 (0.823)	1.00		
Ŋ	Acquirer Diversification	3.67	3.01	1.00	73.00	-0.042** (0.003)	-0.012 (0.378)	-0.138*** (0.000)	0.022 (0.117)	1.00	
9	Acquirer Size	3.95	0.91	0.04	6.58	-0.024 (0.082)	0.269*** (0.000)	-0.084*** (0.000)	-0.009 (0.507)	0.095*** (0.000)	1.00
7	Completed M&A	0.06	0.23	000	1.00	0.134*** (0.000)	-0.002 (0.867)	0.052*** (0.000)	0.026 (0.061)	-0.006 (0.671)	-0.016 (0.260)
Not	es: N=5,243, P-values in parenti	neses.									

Table 4. Descriptive Statistics and Correlations for Hypotheses 1 and 2

Notes: N=5,243, P-values in pare ***p < .001, **p < .01, *p < .05

Table 5. Result of Regression Analyses for Hypotheses 1 and 2

	p-value	0.827	0.038	0.788	0000	0.002	0.002	0.002		0000						
Model 4	Т	0218	-2.071	-0.269	9.453	-3.098	3.096	2334		9.913	0:030	0.028	22.951***	1.769		
	β	0.003 (1.082)	-0.029* (0.140)	-0.004 (0.479)	0.129*** (1.807)	-0.061** (0.191)	0.058** (0.349)	0.052**	(0.085)	(2.249)						
	p-value	0.841	0.037	6///0	0000	0.040	0000			0000						
Model 3	Т	0.201	-2.084	-0281	9,455	-2.055	6.365			9.651	0.029	0.028	25.846***			
	β	0.003 (1.083)	-0.029* (0.140)	-0.004 (0.479)	0.129*** (1.807)	-0.029* (0.139)	0.088*** (0.257)			(2216)						
	p-value	0.792	0.003	0.580	0,000	0.008				0000					2,294	5,243
Model 2	Т	0264	-2963	-0.553	-9.752	-2.649				12.338	0.021	0:020	22.742***			
	β	0.004 (1.087)	-0.041** (0.139)	-0.008 (0.480)	0.133*** (1.812)	-0.038** (0.139)				(2.104)						
	p-value	0.923	0.004	0.185	0000					0000						
Model 1	t	260.0	-2.855	-1.325	9.746					12.555	0.020	0.019	26.643***			
	β	0.001 (1.085)	-0.039** (0.139)	-0.018 (0.462)	0.133*** (1.813)					(2.100)						
- concly oldering	עמו ומחוב ואמו ווב	Subsidiary	Acquirer Diversification	Acquirer Size	Completed M&A	Acquisition Experience	Relatedness	Acquisition Experience *	Relaatedness	Constant	R-squared	Adj, R-squared	F (ANOVA p-value)	Dubin-Watson	# of firms	# of observations

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Notes: Standard errors in parentheses. ***p < .001, **p < .01, *p < .05

	2	500	1			5			- > >	,~~~		5			
	Variable Name	Mean	Std. Dev.	Min.	Max.	-	0	m	4	ъ	9	7	œ	6	10
-	Acquisition_Premium	36.54	31.55	-34.74	168.60	1.00									
7	Acquisition_Experience	1.89	2.11	0.00	00.6	-0.04 (0.54)	1.00								
m	Platform_Firm	0.27	0.44	0.00	1.00	-0.13 (0.07)	0.23 (0.00)	1.00							
4	Relatedness	2.58	1.64	0.00	4.00	0.13 (0.06)	-0.06 (0.40)	-0.29 (0.00)	1.00						
ъ	Acquisition_Diversification	3.10	1.80	1.00	13.00	-0.07 (0.35)	-0.13 (0.06)	-0.01 (0.85)	-0.11 (0.14)	1.00					
9	Acquirer_Size	4.00	0.66	1.97	5.45	00.0 (66.0)	-0.07 (0.36)	0.39 (0.00)	-0.16 (0.03)	0.30 (0.00)	1.00				
~	Acquirer_ROA	0.17	0.11	-0.37	0.50	0.06 (0.39)	0.19 (0.01)	0.14 (0.05)	0.17 (0.02)	0.09 (0.24)	0.29 (0.00)	1.00			
00	Acquirer_Slack_Resources	2.79	1.91	0.00	12.82	0.05 (0.52)	0.15 (0.03)	-0.05 (0.53)	0.16 (0.02)	-0.19 (0.01)	-0.33 (0.00)	-0.15 (0.04)	1.00		
σ	Firm_Age	26.33	15.53	0.00	96.00	0.07 (0.31)	-0.26 (0.00)	-0.03 (0.72)	-0.04 (0.59)	0.20 (0.01)	0.33 (0.00)	0.16 (0.03)	-0.11 (0.11)	1.00	
10	Completed_MnA	0.06	0.24	0.00	1.00	0.03 (0.63)	-0.04 (0.61)	-0.11 (0.14)	0.17 (0.02)	0.09 (0.19)	0.08 (0.26)	0.09 (0.23)	-0.05 (0.50)	0.13 (0.07)	1.00
, -	International_MnA	0.77	0.42	0.00	1.00	0.08 (0.24)	0.08 (0.27)	-0.13 (0.08)	-0.06 (0.40)	-0.01 (0.88)	-0.05 (0.49)	-0.03 (0.71)	0.01 (0.88)	0.06 (0.44)	0.09 (0.21)
Z	ite: N=198, P-vlaues in parent	heses.													

Table 6. Descriptive Statistics and Correlations of Hypothesis 3

	۲	уре 🎞	
Source	Wald Chi-Square	df	Sig.
(constant)	0.161	1	0.689
Relatedness1	1.846	1	0.174
Acquisition_Diversification1	0.425	1	0.515
Acquirer_Size	0.677	1	0.411
Acquirer_ROA	0.381	1	0.537
Acquirer_Slack_Resources	0.178	1	0.673
Firm_Age	0.177	1	0.674
Completed_MnA	0.159	1	0.690
International_MnA	1.119	1	0.290
Acquisition_Experience	163.319	9	0.000
Platform_Firm	11.958	1	0.000
Acquisition_Experience * Platform_Firm	52.482	8	0.000

Table 7. Result of GEE Analyses of Hypothesis 3 (summary)

Note: QIC(Quasi-likehood under the independence model criterion)=171064.160

QICu(QIC when the GEE model is correctly specified)=171078.987



	Moc	lel 1	Moc	Jel 2	Mod	el 3	Mod	el 4
DV = Acquisition Fremium	В	SE	В	SE	В	SE	В	SE
Relatedness1	9.01†	(4.83)	8.46†	(4.88)	6.68	(4.87)	6.50	(4.79)
Acquisition_Diversification1	-2.73	(5.31)	-2.53	(5.77)	-3.44	(5.65)	-3.72	(5.70)
Acquirer_Size	0.84	(4.54)	1.14	(4.46)	3.41	(5.01)	4.02	(4.89)
Acquirer_ROA	11.02	(23.01)	17.51	(23.02)	18.99	(22.67)	14.31	(23.17)
Acquirer_Slack_Resources	0.42	(1.19)	0.58	(1.21)	0.75	(1.22)	0.53	(1.24)
Firm_Age	0.15	(0.13)	0.09	(0.14)	0.07	(0.14)	90:0	(0.14)
Completed_MnA	-0.85	(8.32)	-2.14	(8.49)	-3.18	(8.25)	-3.25	(8.13)
International_MnA	6.08	(5.21)	6.75	(5.78)	5.80	(2.96)	6.38	(6.03)
[1] Acquisition_Experience (AE=8)			21.50	(21.32)	23.75	(20.37)	52.80***	(8.28)
[2] Acquisition_Experience (AE=7)			-15.69	(10.53)	-13.77	(10.32)	-8.65	(13.57)
[3] Acquisition_Experience (AE=6)			-2.74	(12.68)	-1.45	(12.16)	15.32	(13.27)
[4] Acquisition_Experience (AE=5)			0.48	(8.32)	2.20	(8.28)	12.08	(11.36)
[5] Acquisition_Experience (AE=4)			-5.00	(7.32)	-3.75	(7.41)	-5.63	(8.96)
[6] Acquisition_Experience (AE=3)			-13.99†	(7.97)	-13.25	(8.17)	-19.16*	(9.01)
[7] Acquisition_Experience (AE=2)			-11.92†	(7.17)	-11.68	(7.28)	-10.94	(9.16)
[8] Acquisition_Experience (AE=1)			-9.10	(7.75)	-8.83	(7.67)	-6.57	(8.63)
[9] Platform_Firm					-7.83	(5.40)	-1.43	(10.84)
[1] * [9]							-62.62***	(14.04)
[2] * [9]							-17.31	(17.42)
[3] * [9]							-41.96**	(16.44)
[4] * [9]							-24.68†	(14.68)
[5] * [9]							1.43	(16.07)
[6] * [9]							12.02	(17.79)
[7] * [9]							-4.68	(14.34)
[8] * [9]							-11.83	(13.52)
(Constant)	16.93	(18.34)	21.40	(18.72)	16.01	(19.70)	13.68	(19.39)
Note: N=198, P-vlaues in parentheses. ***p < .001, **p < .	.01, *p < .05, tp <	1.2						

Table 8. Results of GEE analysis of Hypothesis 3 (detail)

IV. Results

Table 4 shows the results of the correlation analysis for Hypotheses 1 and 2 and includes a dependent, an independent, a moderator, and control variables. Table 4 shows that Hypothesis 1 of the correlation between acquisition premiums and acquisition experience is r = -0.039 (0.004**) with a p-value of 0.004 < 0.01. Therefore, the relationship between the two variables is linear and has a significant negative correlation. In addition, Table 4 shows that the correlation between relatedness and acquisition premiums is r = 0.102 (0.000), and the correlation between relatedness and acquisition experience is r = -0.105 (0.000). Therefore, these are significant correlations.

Table 5 shows the results of a hierarchical moderated regression analysis for Hypotheses 1 and 2. Model 2 in Table 5 has an R-squared of 0.021, indicating that the regression model is suitable by 2.1%. Additionally, the p-value of F is <0.000; thus, it is suitable for the regression model. The relationship between acquisition premiums and acquisition experience of Model 2 is β = -0.038 (0.008**), with a p-value of 0.008 < 0.01. Therefore, Hypothesis 1 was accepted because acquisition premiums have a significant negative effect on acquisition experience. Model 4 in Table 5 shows the interaction effect by relatedness (moderator variable). The relationship between acquisition premiums and Acquisition_Experience * Platform_Firm in Model 4 is $\beta = 0.052$ (0.002^{**}) , with a p-value of 0.002 < 0.01. Therefore, the relationship between acquisition premiums and acquisition

experience weakens when relatedness increases as a moderator variable because acquisition premiums and acquisition experience have a negative effect. Relatedness (moderator variable) has a positive effect.

Table 6 shows the results of correlation analysis for Hypothesis 3. Variables consist of a dependent, an independent, a moderator, and control variables. As a moderator variable, table 6 shows that platform firms are significant for acquisition premiums by r = -0.13 (0.07†) and acquisition experience by r = 0.23(0.00**). Platform firms and acquisition premiums negatively correlate, whereas platform firms and acquisition experience positively correlate. However, the relationship between acquisition premiums and acquisition experience is negative but non-linear, with a p-value of 0.54.

Table 7 shows the test results of model effects from the GEE analysis for Hypothesis 3. Table 7 shows the effect of interactions on acquisition experience and platform firms to analyze the moderating influence, and there was a significant result of Acquisition_Experience * Platform_Firm = 0.000 (Sig.).

Table 8 shows the estimated value from the GEE analysis. The result was confirmed through the unstandardized beta (B) because the dependent variable was continuous. Although Model 3 is not significant, it was found that platform firms pay a 7% lower premium than non-platform firms. In Model 4, significant results were found in the relationship between platform firms and nonplatform firms when acquisition experience had a value of five, six, or eight. Specifically, platform firms with five acquisition experiences paid a 24% lower premium than non-platform firms. Platform firms with six acquisition experiences paid a 41% lower premium than non-platform firms. Finally, platform firms with eight acquisition experiences paid a 62% lower premium than nonplatform firms. The interaction effect of platform firms is shown through the graph in Figure 1.

V. Discussion and Conclusion

This paper examined how the acquisition experience of acquirers' affects acquisition premiums. In addition, this paper studied the relationship between these two variables using relatedness and platform firms as moderator variables. This paper found that acquirers' acquisition experience resulted in them paying acquisition premiums because acquirers' lower acquisition experience negatively affects acquisition premiums. Furthermore, this paper found that the relationship between acquirers' acquisition experience and acquisition premiums weakens when relatedness increases as a moderator variable. In addition, this paper found that platform firms are more affected than non-platform firms in the relationship between acquirers' acquisition experience and acquisition premiums.

This paper contributes to acquisition premium and acquisition experience literature by showing that the acquirers' acquisition experience negatively affects acquisition premiums. Based on learning theory, this finding significantly impacts the

argument that acquirers gain knowledge and competencies through learning, which helps them better evaluate risks and values and reduces overpayments such as acquisition premiums (Kim, Haleblian, & Finkelstein, 2011).

This paper contributes to the relatedness literature by showing that relatedness affects acquirers' acquisition experience and acquisition premiums by taking advantage of its higher potential for value creation (Valachovic, 2008; Flanagan & O'Shaughnessy, 2003). Model 3 in Table 5 indicates a positive effect between relatedness and acquisition premiums. This paper shows similarities to Flanagan and O'Shaughnessy (2003) but differs from some prior research. The primary deviation is that most previous studies only used acquisition premiums of positive numbers in their samples, whereas this study defined acquisition premiums from -50% to 200% (Teohd, 2005). Second, unlike prior research, this study derived generalizable results by examining all industrial structures. One similarity with Flanagan and O'Shaughnessy (2003) arose from the number of bidders. Herein, only 299 acquisitions of 5,243 acquisitions were found to have more than one competitive bidder. Therefore, as in Flanagan and O'Shaughnessy (2003), the possibility of value improvement was converted into acquisition premiums due to the small presence of multiple bidders (Valachovic, 2008; Flanagan & O'Shaughnessy, 2003), and relatedness appears to have affected the acquisition premiums.

This paper also supports the claim that platform firms can set reasonable prices through information based on having uncertain demand (Cho, 2019) compared to non-platform firms. Additionally, this paper supports the claim that platform firms influence business (Cusumano et al., 2019). The correlation between platform firms and acquisition premiums was negative at r = -0.13 (0.07†). Platform firms and acquisition experience were also significant, with a positive correlation of r = 0.23 (0.00**), and the interaction effect of platform firms was significant (0.000 (Sig.)). In detail, the interaction effect was significant when the acquisition experience had a value of five, six, or eight, which confirms that more acquisition experience increased the difference between platform firms and non-platform firms. In addition, this difference suggests that platform firms could influence the relationship between acquisition premiums and acquisition experience.

This paper has several limitations. First is the premiums; this paper studied acquisition premiums between -50% and 200% because there was insufficient data for premiums greater than 200%. If there had been data with premiums greater or equal to 200% available, overpayments could have been analyzed in stages.

The second limitation is the various analysis methods for dividing dependent and independent variables into dichotomies. First, firms were categorized into those with and without acquisition experience. The analysis results were insignificant after classifying firms without acquisition experience as 0 and firms with acquisition experience as 1. In another method, the number of acquisition experiences was classified based on the average or median and additionally analyzed by dividing them into low and high acquisition experiences. However, these results were also insignificant. Since acquisition experience did not follow a normal distribution, a normal distribution was created and analyzed, with the result also negligible. Finally, the acquisition premiums were analyzed by dividing them into low and high premiums through the average or median and proved insignificant. As such, this paper could not do much with available analysis methods.

The third limitation relates to platform firms; if this paper had not used data with the definition of platform firms and a list of platform firms, there resulting research would have been prohibitively time-consuming. In addition, finding platform firms requires analyzing the business related to the platform business in the firm's income statement. Then, based on Cusumano et al. (2019), it is necessary to extract information from a business field pool amounting to greater than 20% of total platform businesses, which requires significant time and effort. In addition, this study conducted a comparative analysis by dividing platform firms into 1 and 0. However, this paper's analysis could produce a new comparative study based on the industrial profit ratio. For example, suppose the industrial profit ratio classifies firms. In that case, firms at 0-20% are 0, firms at 20-65% (non-platform firms) are 0-0.5 (platform firms with a low percentage of platform business), and firms greater than 5% are 0.5-1 (platform firms with a high percentage of platform business). These characteristics of platform firms may reveal more than those studied in this paper.

The final limitation is the classification of experience. The experience was segmented and analyzed as prior studies from the success and failure of acquisition experience or domestic acquisition experience and overseas acquisition experience. While it was possible to find some successful experiences based on the learning effect, the data based on failure were scarce (Shimizu et al., 2004). Due to these limitations, it was impossible to analyze the success and failure of acquisition experience properly, and future study is warranted with more varied data.

References

Abramson, L. Y., Seligman, M. E., & Teasdale, J. D. (1978). Learned helplessness in humans: critique and reformulation. *Journal of abnormal psychology*, 87(1), 49.

Argote, L., & Miron-Spektor, E. (2011). Organizational learning: From experience to knowledge. *Organization science*, 22(5), 1123-1137.

Barkema, H. G., & Schijven, M. (2008). How do firms learn to make acquisitions? A review of past research and an agenda for the future. *Journal of Management*, 34(3), 594–634.

Baum, J. A., & Ingram, P. (1998). Survival-enhancing learning in the Manhattan hotel industry, 1898–1980. *Management science*, 44(7), 996–1016.

Berle, A., & Means, G. (1932). The modern corporation and private property. 356 (Macmillan 1933)

Billett, M. T., & Qian, Y. (2008). Are overconfident CEOs born or made? Evidence of self-attribution bias from frequent acquirers. *Management Science*, 54(6), 1037–1051.

Black, B. S. (1988). Bidder overpayment in takeovers. *Stanford Law Review*, 41, 597-660.

Bromiley, P. (1991). Testing a causal model of corporate risk taking and performance. *Academy of Management journal*, 34(1), 37–59.

Casado-Díaz, A. B., Nicolau-Gonz**á**lbez, J. L., Ruiz-Moreno, F., & Sellers-Rubio, R. (2014). The differentiated effects of CSR actions

in the service industry. Journal of Services Marketing.

Ceccagnoli, M., Forman, C., Huang, P., & Wu, D. J. (2012). Cocreation of value in a platform ecosystem! The case of enterprise software. *MIS quarterly*, 263-290.

Cennamo, C., & Santalo, J. (2013). Platform competition: Strategic trade-offs in platform markets. *Strategic management journal*, 34(11), 1331–1350.

Chakrabarti, A., & Mitchell, W. (2013). The persistent effect of geographic distance in acquisition target selection. *Organization Science*, 24(6), 1805–1826.

Chatterjee, S., & Singh, J. (1999). Are tradeoffs inherent in diversification moves? A simultaneous model for type of diversification and mode of expansion decisions. *Management Science*, 45(1), 25-41.

Cheng, P., Li, L., & Tong, W. H. (2016). Target information asymmetry and acquisition price. *Journal of Business Finance & Accounting*, 43(7-8), 976-1016.

Chi, M. T., Feltovich, P. J., & Glaser, R. (1981). Categorization and representation of physics problems by experts and novices. *Cognitive science*, 5(2), 121–152.

Cho, M. H. (2019). Information sharing and price competition of the firms under uncertain demand. *The Korea Journal of Industrial Organization (KJIO)*, 27, 1–30.

Cho, S. Y., & Arthurs, J. D. (2018). The influence of alliance experience on acquisition premiums and post-acquisition performance. *Journal of Business Research*, 88, 1–10.

Clifford, M. M., Kim, A., & McDonald, B. A. (1988). Responses to failure as influenced by task attribution, outcome attribution, and failure tolerance. *The Journal of Experimental Education*, 57(1), 17–37.

Coff, R. W. (1999). How buyers cope with uncertainty when acquiring firms in knowledge-intensive industries: Caveat emptor. *Organization Science*, 10(2), 144-161.

Cohen, W. M., & Levinthal, D. A. (1990). Absorptive capacity: A new perspective on learning and innovation. *Administrative science quarterly*, 128–152.

Cornell, B., & Shapiro, A. C. (1987). Corporate stakeholders and corporate finance. *Financial management*, 5-14.

Cusumano, M. A., Gawer, A., & Yoffie, D. B. (2019). The business of platforms: Strategy in the age of digital competition, innovation, and power (pp. 1–309). *New York: Harper Business*.

Cuypers, I. R., Cuypers, Y., & Martin, X. (2017). When the target may know better: Effects of experience and information asymmetries on value from mergers and acquisitions. *Strategic Management Journal*, 38(3), 609–625.

Cyert, R. M., & March, J. G. (1963). A behavioral theory of the firm (Vol. 2, No. 4, pp. 169-187).

DeCarolis, D. M., & Deeds, D. L. (1999). The impact of stocks and flows of organizational knowledge on firm performance: An empirical investigation of the biotechnology industry. *Strategic management journal*, 20(10), 953–968.

Dolata, U. (2017). Apple, Amazon, Google, Facebook, Microsoft: Market concentration-competition-innovation strategies (No. 2017-01). SOI Discussion Paper.

Dutton, J. M., Thomas, A., & Butler, J. E. (1984). The history of progress functions as a managerial technology. *Business History Review*, 58(2), 204–233.

Eccles, R. G., Lanes, K. L., & Wilson, T. C. (1999). Are you paying too much for that acquisition?. *Harvard Business Review*, 77(4), 136–136.

Eisenmann, T. R. (2007). Platform-mediated networks: definitions and core concepts. *Harvard Business School* Note, 9(807-049), 1-34.

Evans, P. C., & Gawer, A. (2016). The rise of the platform enterprise: A global survey. *University of Surrey*.

Evans, D. S. (2003). Some empirical aspects of multi-sided platform industries. Review of Network Economics, 2(3).

Evans, D. S., & Schmalensee, R. (2016). What platforms do differently than traditional businesses. *Harvard Business Review*, 11(05), 2016.

Facin, A. L. F., de Vasconcelos Gomes, L. A., de Mesquita Spinola,
M., & Salerno, M. S. (2016). The evolution of the platform concept:
A systematic review. *IEEE Transactions on Engineering Management*, 63(4), 475-488.

Farrell, J., & Saloner, G. (1985). Standardization, compatibility, and innovation. *the RAND Journal of Economics*, 70–83.

Festinger, L. (1954). A theory of social comparison processes. *Human relations*, 7(2), 117–140.

Finkelstein, S., & Haleblian, J. (2002). Understanding acquisition performance: The role of transfer effects. *Organization Science*, 13(1), 36-47.

Flanagan, D. J., & O'Shaughnessy, K. C. (2003). Core-related acquisitions, multiple bidders and tender offer premiums. *Journal of Business Research*, 56(8), 573–585.

Fralich, R., & Papadopoulos, A. (2020). The impact of target CEO celebrity on M&A premiums. *Canadian Journal of Administrative Sciences/Revue Canadienne des Sciences de l'Administration*, 37(3), 268–282.

Fuller, K., Netter, J., & Stegemoller, M. (2002). What do returns to acquiring firms tell us? Evidence from firms that make many acquisitions. *The journal of finance*, 57(4), 1763–1793.

Galaskiewicz, J., & Burt, R. S. (1991). Interorganization contagion in corporate philanthropy. *Administrative science quarterly*, 88–105.

Gawer, A. (2015, June). What drives shifts in platform boundaries: an organizational perspective. *In Academy of Management Proceedings* (Vol. 1, p. 13765). Briarcliff Manor, NY 10510: Academy of Management.

Gawer, A. (2021). Digital platforms' boundaries: The interplay of firm scope, platform sides, and digital interfaces. *Long Range Planning*, 54(5), 102045.

Giliberto, S. M., & Varaiya, N. P. (1989). The winner's curse and bidder competition in acquisitions: Evidence from failed bank auctions. *The Journal of Finance*, 44(1), 59–75.

Gong, Y., Zhang, Y., & Xia, J. (2019). Do firms learn more from small or big successes and failures? A test of the outcome-based

feedback learning perspective. *Journal of Management*, 45(3), 1034-1056.

Grant, R. M. (1996). Toward a knowledge-based theory of the firm. *Strategic management journal*, 17(S2), 109–122.

Hagiu, A., & Wright, J. (2015). Multi-sided platforms. *International Journal of Industrial Organization*, 43, 162–174.

Haleblian, J., & Finkelstein, S. (1999). The influence of organizational acquisition experience on acquisition performance: A behavioral learning perspective. *Administrative Science Quarterly*, 44(1), 29–56.

Harding, D., & Rovit, S. (2004). The mega-merger mouse trap. *The Wall Street Journal*, 17(02), 2004.

Haunschild, P. R. (1994). How much is that company worth?: Interorganizational relationships, uncertainty, and acquisition premiums. *Administrative Science Quarterly*, 391–411.

Haunschild, P. R., & Beckman, C. M. (1998). When do interlocks matter?: Alternate sources of information and interlock influence. *Administrative science quarterly*, 815–844.

Hayward, M. L. (2002). When do firms learn from their acquisition experience? Evidence from 1990 to 1995. *Strategic management journal*, 23(1), 21–39.

Hayward, M. L., & Hambrick, D. C. (1997). Explaining the premiums paid for large acquisitions: Evidence of CEO hubris. *Administrative science quarterly*, 103–127.

Heath, A. (2022.02.02). Facebook lost daily users for the first time ever last quarter. *The Verge*.

https://www.theverge.com/2022/2/2/22914970/facebook-app-loses-daily-users-first-time-earnings

Hunter, W. C., & Jagtiani, J. (2003). An analysis of advisor choice, fees, and effort in mergers and acquisitions. *Review of Financial Economics*, 12(1), 65–81.

Jensen, M. C. (1986). Agency costs of free cash flow, corporate finance, and takeovers. *The American economic review*, 76(2), 323-329.

Kaplan, S. N., & Minton, B. A. (2012). How has CEO turnover changed?. *International review of Finance*, 12(1), 57–87.

Kapoor, K., Bigdeli, A. Z., Dwivedi, Y. K., Schroeder, A., Beltagui, A., & Baines, T. (2021). A socio-technical view of platform
ecosystems: Systematic review and research agenda. *Journal of Business Research*, 128, 94-108.

Katz, M. L., & Shapiro, C. (1986). Technology adoption in the presence of network externalities. *Journal of political economy*, 94(4), 822–841.

Kaufman Jr, D. J. (1988). Factors affecting the magnitude of premiums paid to target-firm shareholders in corporate acquisitions. *Financial Review*, 23(4), 465-482.

Khan, L. M. (2016). Amazon's antitrust paradox. *Yale Law Journal*, 126, 710.

Kim, D. Y., & Davis, S. M. (2019). Acquisition experience and production resource efficiency: evidence from US manufacturing industries. *Journal of Manufacturing Technology Management*.

Kim, J. Y., & Finkelstein, S. (2009). The effects of strategic and

market complementarity on acquisition performance: Evidence from the US commercial banking industry, 1989–2001. *Strategic management journal*, 30(6), 617–646.

Kim, J. Y., Haleblian, J., & Finkelstein, S. (2011). When firms are desperate to grow via acquisition: The effect of growth patterns and acquisition experience on acquisition premiums. *Administrative science quarterly*, 56(1), 26–60.

King, D. R., Slotegraaf, R. J., & Kesner, I. (2008). Performance implications of firm resource interactions in the acquisition of R&D-intensive firms. *Organization science*, 19(2), 327-340.

Klasa, S., & Stegemoller, M. (2007). Takeover activity as a response to time-varying changes in investment opportunity sets: Evidence from takeover sequences. *Financial Management*, 36(2), 1-25.

Ko, C. Y. (2020). Why Did Google Buy Fitbit? The Propensity of Platform Businesses to Select Unrelated Acquisition Targets (Doctoral dissertation, 서울대학교 대학원).

Koch, A. S., Lefanowicz, C. E., & Robinson, J. R. (2012). The effect of quarterly earnings guidance on share values in corporate acquisitions. *Journal of Corporate finance*, 18(5), 1269–1285.

Kogut, B., & Zander, U. (1992). Knowledge of the firm, combinative capabilities, and the replication of technology. *Organization science*, 3(3), 383-397.

Krishnan, H. A., Hitt, M. A., & Park, D. (2007). Acquisition premiums, subsequent workforce reductions and post-acquisition performance. *Journal of management studies*, 44(5), 709–732.

Laamanen, T. (2007). On the role of acquisition premium in

acquisition research. *Strategic Management Journal*, 28(13), 1359-1369.

Lane, P. J., Salk, J. E., & Lyles, M. A. (2001). Absorptive capacity, learning, and performance in international joint ventures. *Strategic management journal*, 22(12), 1139–1161.

Levinthal, D. A., & March, J. G. (1993). The myopia of learning. *Strategic management journal*, 14(S2), 95–112.

Levitt, B., & March, J. G. (1988). Organizational learning. *Annual review of sociology*, 14(1), 319-338.

Liang, K. Y., & Zeger, S. L. (1986). Longitudinal data analysis using generalized linear models. *Biometrika*, 73(1), 13-22.

Lieberman, M. B. (1987). The learning curve, diffusion, and competitive strategy. *Strategic management journal*, 8(5), 441-452.

Loftus, G. R. (1985). Evaluating forgetting curves. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 11(2), 397.

Machek, O. N. D. **Ř**. E. J., & Machek, M. A. R. T. I. N. (2014). Factors of business growth: A decomposition of sales growth into multiple factors. *WSEAS Transactions on Business and Economics*, 11(1), 380-385.

Malhotra, S., Zhu, P., & Reus, T. H. (2015). Anchoring on the acquisition premium decisions of others. *Strategic Management Journal*, 36(12), 1866–1876.

Manne, H. G. (1965). Mergers and the market for corporate control. *Journal of Political economy*, 73(2), 110–120.

Mellewigt, T., Thomas, A., Weller, I., & Zajac, E. J. (2017). Alliance or acquisition? A mechanisms-based, policy-capturing analysis. *Strategic Management Journal*, 38(12), 2353–2369.

Meschi, P. X., & Métais, E. (2013). Do firms forget about their past acquisitions? Evidence from French acquisitions in the United States (1988–2006). *Journal of Management*, 39(2), 469–495.

Menon, T., & Pfeffer, J. (2003). Valuing internal vs. external knowledge: Explaining the preference for outsiders. *Management science*, 49(4), 497–513.

Mitchell, M. L., & Lehn, K. (1990). Do bad bidders become good targets?. *Journal of Political Economy*, 98(2), 372–398.

Mitchell, W., & Shaver, J. M. (2003). Who buys what? How integration capability affects acquisition incidence and target choice. *Strategic Organization*, 1(2), 171–201.

Mizruchi, M. S. (1996). What do interlocks do? An analysis, critique, and assessment of research on interlocking directorates. *Annual review of sociology*, 22(1), 271–298.

Mody, M., Wirtz, J., So, K. K. F., Chun, H. H., & Liu, S. Q. (2020). Two-directional convergence of platform and pipeline business models. *Journal of Service Management*.

Mohite, I. (2017). The value of target's acquisition experience in M&A. *The European Journal of Finance*, 23(13), 1238-1266.

Na, Y. K., Hong, B. S., & Kang, S. M. (2008). A study on the effect of the perceived value and risk of internet shopping on the purchase intention of the fashion merchandise. *Journal of the Korean Society of Clothing and Textiles*, 32(8), 1213–1225.

Nadolska, A., & Barkema, H. G. (2007). Learning to internationalise: the pace and success of foreign acquisitions. *Journal of International Business Studies*, 38(7), 1170-1186.

Nelson, R. R. (1985). An evolutionary theory of economic change. *harvard university press*.

Ozdemir, O., Binesh, F., & Erkmen, E. (2021). The effect of target's CSR performance on M&A deal premiums: a case for service firms. *Review of Managerial Science*, 1–34.

Park, N. K., Ko, C. Y., Kim, J., & Kim, H. (2021). Merger and Acquisition Strategies of Platform vs. Non-Platform Firms. *In Academy of Management Proceedings* (Vol. 2021, No. 1, p. 14835). Briarcliff Manor, NY 10510: Academy of Management.

Parker, G. G., Van Alstyne, M. W., & Choudary, S. P.(2016). Platform revolution: How networked markets aretransforming the economy and how to make them work for you. WWNorton & Company.

Porrini, P. (2004). Can a previous alliance between an acquirer and a target affect acquisition performance?. *Journal of management*, 30(4), 545-562.

Reuer, J. J., Tong, T. W., & Wu, C. W. (2012). A signaling theory of acquisition premiums: Evidence from IPO targets. *Academy of Management Journal*, 55(3), 667–683.

Rietveld, J., & Schilling, M. A. (2021). Platform competition: A systematic and interdisciplinary review of the literature. *Journal of Management*, 47(6), 1528–1563.

Rochet, J. C., & Tirole, J. (2003). Platform competition in two-

sided markets. *Journal of the european economic association*, 1(4), 990–1029.

Roh, T., Hwang, J., & Park, B. I. (2021). M&A successes: Breadth, depth, and deal completion time in the US semiconductor industry. *BRQ Business Research Quarterly*, 2340944421998056.

Roll, R. (1986). The hubris hypothesis of corporate takeovers. *Journal of business*, 197–216.

Roschelle, J. (1997). Learning in interactive environments: Prior knowledge and new experience (pp. 37–54). San Francisco, CA, USA: *Exploratorium Institute for Inquiry*.

Rothaermel, F. T., & Deeds, D. L. (2006). Alliance type, alliance experience and alliance management capability in high-technology ventures. *Journal of business venturing*, 21(4), 429–460.

Rumelt, R. P. (1982). Diversification strategy and profitability. *Strategic management journal*, 3(4), 359–369.

Russo, A., & Perrini, F. (2006). The real cost of M&A advice. *European Management Journal*, 24(1), 49-58.

Salomon, R., & Jin, B. (2010). Do leading or lagging firms learn more from exporting?. *Strategic Management Journal*, 31(10), 1088-1113.

Samuelson, W. (1984). Bargaining under asymmetric information. Econometrica: *Journal of the Econometric Society*, 995–1005.

Sanderson, S., & Uzumeri, M. (1995). Managing product families: The case of the Sony Walkman. *Research policy*, 24(5), 761-782. Schriber, S., & Degischer, D. (2020). Disentangling acquisition experience: A multilevel analysis and future research agenda. *Scandinavian Journal of Management*, 36(2), 101097.

Seth, A. (1990). Sources of value creation in acquisitions: an empirical investigation. *Strategic Management Journal*, 11(6), 431-446.

Shah, A. K., Shafir, E., & Mullainathan, S. (2015). Scarcity frames value. *Psychological science*, 26(4), 402–412.

Shelton, L. M. (1988). Strategic business fits and corporate acquisition: Empirical evidence. *Strategic Management Journal*, 9(3), 279–287.

Shimizu, K., Hitt, M. A., Vaidyanath, D., & Pisano, V. (2004). Theoretical foundations of cross-border mergers and acquisitions: A review of current research and recommendations for the future. *Journal of international management*, 10(3), 307–353.

Singh, H., & Montgomery, C. A. (1987). Corporate acquisition strategies and economic performance. *Strategic Management Journal*, 8(4), 377–386.

Sirower, M. L. (1997). The synergy trap: How companies lose the acquisition game. *Simon and Schuster*.

Slusky, A. R., & Caves, R. E. (1991). Synergy, agency, and the determinants of premia paid in mergers. *The Journal of Industrial Economics*, 277–296.

So, Y. H., & Kim, S. I. (2006). The effects of self-efficacy and task choice on interest and attribution for success and failure. *The Korean Journal of Educational Psychology*, 20(4), 855-872.

Tanriverdi, H., & Venkatraman, N. (2005). Knowledge relatedness and the performance of multibusiness firms. *Strategic management journal*, 26(2), 97–119.

Teohd, S. H. (2005). Does Investor Misvaluation Drive the Takeover Market? *Ming Donga David Hirshleiferb Scott Richardsonc*.

Thompson, L. (1990). The influence of experience on negotiation performance. *Journal of Experimental Social Psychology*, 26(6), 528–544.

Toppenberg, G., Henningsson, S., & Eaton, B. (2016, January). Reinventing the platform core through acquisition: A case study. *In 2016 49th Hawaii International Conference on System Sciences (HICSS)* (pp. 4634-4643). IEEE.

Tsai, W. (2001). Knowledge transfer in intraorganizational networks: Effects of network position and absorptive capacity on business unit innovation and performance. *Academy of management journal*, 44(5), 996–1004.

Ulrich, K. (1995). The role of product architecture in the manufacturing firm. *Research policy*, 24(3), 419–440.

Valachovic, M. (2008). The Influence of Relative Size Difference and Relatedness on Acquisition Premium (Doctoral dissertation, *University of Groningen. Faculty of Economics and Business*).

Van Alstyne, M. W., Parker, G. G., & Choudary, S. P. (2016). Pipelines, platforms, and the new rules of strategy. *Harvard business review*, 94(4), 54–62.

Vermeulen, F., & Barkema, H. (2001). Learning through acquisitions. *Academy of Management journal*, 44(3), 457–476.

Wang, L., & Zajac, E. J. (2007). Alliance or acquisition? A dyadic perspective on interfirm resource combinations. *Strategic management journal*, 28(13), 1291–1317.

White, H. (1980). A heteroskedasticity-consistent covariance matrix estimator and a direct test for heteroskedasticity. Econometrica: *journal of the Econometric Society*, 817-838.

Wortman, C. B., & Brehm, J. W. (1975). Responses to uncontrollable outcomes: An integration of reactance theory and the learned helplessness model. *In Advances in experimental social psychology* (Vol. 8, pp. 277–336). Academic Press.

Yang, M., & Hyland, M. (2006). Who do firms imitate? A multilevel approach to examining sources of imitation in the choice of mergers and acquisitions. *Journal of Management*, 32(3), 381–399.

Zahra, S. A., & Hayton, J. C. (2008). The effect of international venturing on firm performance: The moderating influence of absorptive capacity. *Journal of business venturing*, 23(2), 195–220.

Zhang, Y., Li, H., Li, Y., & Zhou, L. A. (2010). FDI spillovers in an emerging market: the role of foreign firms' country origin diversity and domestic firms' absorptive capacity. *Strategic Management Journal*, 31(9), 969–989.

Zhao, Y., Von Delft, S., Morgan-Thomas, A., & Buck, T. (2020). The evolution of platform business models: Exploring competitive battles in the world of platforms. *Long Range Planning*, 53(4), 101892.

Zhou, J., Jiang, Y., Tam, O. K., Lan, W., & Ye, S. (2021). Success in completing cross-border acquisitions by emerging market firms: What matters?. *The World Economy*, 44(7), 2128–2163.

Zollo, M., & Reuer, J. J. (2010). Experience spillovers across corporate development activities. *Organization Science*, 21(6), 1195–1212.

Zollo, M., & Singh, H. (2004). Deliberate learning in corporate acquisitions: post-acquisition strategies and integration capability in US bank mergers. *Strategic management journal*, 25(13), 1233–1256.

국문초록

인수 경험이 인수 프리미엄에 미치는 영향

심 승 현

경영학과 전략 및 국제경영전공

서울대학교 대학원

본 연구는 인수자 중심에서 인수 프리미엄에 대한 인수 경험의 영향 을 연구한다. 또한 조절 변수인 관련성과 플랫폼 기업이 두 변수 사이에 어떻게 영향을 미치는지에 대해 연구한다. 결과는 인수 경험이 많은 인 수자가 인수프리미엄을 더 적게 지불한다. 또한 인수 경험이 인수 프리 미엄에 미치는 영향은 조절변수로써 관련성이 클수록 효과가 약해진다. 그리고 인수 경험이 인수 프리미엄에 미치는 영향은 플랫폼 기업이 비플 랫폼 기업에 비해 더 크게 영향을 미친다. 구체적으로, 인수 프리미엄과 인수 경험과 관련성(조절변수)의 관계는 2000년부터 2020년까지 5,243개의 모든 산업에 대한 인수를 표본으로 연구한다. 또한 플랫폼 기업을 조절변수로 두고 인수 프리미엄과 인수 경험의 관계는 나스닥 100 (NASDAQ-100) 기업들 중 66개의 기업을 대상으로 198개의 인 수를 표본으로 연구한다. 본 연구는 학습이론에 따라 인수경험이 인수프 리미엄의 초과 지불을 억제시킨다는 주장에 기여한다. 또한 관련성이 더 높은 가치창출 가능성을 갖는다는 주장에 기여한다. 그리고 플랫폼 기업 은 비플랫폼 기업에 비해 불확실한 수요를 가지고 있는 특징에 의해 정 보를 통해 적절한 가격을 설정할 수 있다는 주장에 기여하며, 플랫폼 기 업이 비즈니스에 영향을 미친다는 Cusumano의 주장에 기여한다.

주요어 : 인수 프리미엄, 인수 경험, 관련성, 플랫폼 기업, 학습 이론, 가 치창출

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