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Rent-Seeking by Rent Concession: An Analysis of Rent-Free Periods in the Seoul Office Market

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Rent-free periods (RFPs) have been used in property markets worldwide especially during economic downturns as a discount pricing strategy in marketing. However, this research study proposes that RFPs play a role in increasing or, at least, sustaining face rent that can be reflected in the property price. This study focuses on the Korean office market which has experienced growing vacancy rates since the global financial crisis possibly leading to a decrease in effective rent with greater RFP incentives. In this period, face rent has increased as offering extended RFPs. Hence, high vacant rates with high face rent have been observed, which is seemingly contradictory against the commonly known rent-vacancy negative relationship. This research analyses the rent, transaction prices and RFPs during 2003 – 2017 in the Seoul office market. The findings reveal that positive future anticipations of owners and investors are reflected in extended RFPs to sustain and increase face rent that will eventually lead to higher property transaction prices. The role of RFPs is not effective in attracting tenants as a marketing tool. Instead, professionals, including investors/buyers, owners/sellers and real estate agencies, have been doing rent-seeking by offering rent recessions in the Seoul office market.

Keywords

Rent-free period; rent-seeking; Seoul office market; effective rent; face rent

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1. Introduction

Rent and vacancy rate trends are negatively correlated in ordinary property markets. However, in the Korean office rental market, face rent has been steadily increasing along with growing vacancy rates since the global financial crisis (GFC). This research study proposes that this seemingly unreasonable trend has been created by the introduction of rent concessions, such as offering rent-free periods (RFPs). RFPs have been used in property markets worldwide especially during economic downturns when vacancy rates are high as a discount pricing strategy in marketing. The use of RFPs is debatable because it is also possible to reduce both face and effective rents without offering RFPs during economic downturns. The objective of this research study is to analyse the effectiveness and the rationale of RFPs in the Seoul office market. The study finds that the use of RFPs, strengthened by professionalism in real estate management, has been associated with the desire to gain from increases in property prices in the Seoul office market. That desire is framed with a ‘*rent-seeking*’ hypothesis in rent concessions. Professional management of office buildings has been introduced in Seoul along with office market growth. After the Asian financial crisis in 1997/98, there was an initial influx of global property investors who facilitated office transactions and commercial property industries in Seoul (Kim, O'Connor and Han, 2015). This growth was further spurred with the GFC in 2007/08 through which more complicated property management tools were introduced resultant of professionalism in real estate and one of them is the use of RFPs in the office rental market. This research study focuses on the marketing and price effects of RFPs by addressing the following research questions:

- *RQ1 (a marketing effect): Is offering RFPs effective in attracting tenants (or reducing vacancy)?*¹
- *RQ2 (a price effect): Will offering RFPs boost office transaction prices?*

By investigating these questions, this research will explore *rent-seeking* behaviours or aspirations for capital gains by offering RFPs. *Rent-seeking* refers to an attempt to obtain economic gains without improving productivity (Krueger, 1974; Tullock, 1993). Corruption, lobbying, and bribery are common examples of *rent-seeking* activities in business and public affairs. However, some *rent-seeking* actions take place without involving illegality. In the property market, land speculation is a typical example of *rent-seeking* (Ho and Spoor, 2006). Taylor (2016) also addresses the *rent-seeking* behaviour of

¹ There might be a causality issue between vacancy rates and RFPs. When the office market is tight with low vacancy rates, the use of RFPs might be rare. On the contrary, when vacancy rates are becoming high, the office market might introduce RFPs in response to increasing office vacancy. However, this paper focuses on the effectiveness of the RFP once it is offered.

landowners in the urban growth boundaries (UGBs) of the urban fringe areas in Melbourne, Australia, where windfall gains were highly anticipated when the UGBs were re-zoned. As such, *rent-seeking* (or land speculation) is an important urban issue, which has been manifested in the property market domains. In the expression of *rent-seeking*, rent means neither face rent nor effective rent. Rather, rent-seeking refers to the desire for windfall gains from property price escalation.

Section 2 establishes the theoretical frameworks to understand the use of RFPs. Section 3 provides the details of the data collection process and analysis methods. Section 4 presents the analysis results with a focus on the two research questions and provides evidence of *rent-seeking* by reviewing a *proforma* cash flow example for an office investment project. The final section provides the conclusions.

2. Understanding RFPs

2.1 The (Ir)rationality of RFPs

The use of RFPs is not a brand-new idea. Since the early 1990s, RFPs have been widely used in commercial real estate markets such as the United Kingdom (UK) office market (Frew, Jud and Winkler, 1990; Sirmans, Sirmans and Benjamin, 1990b). However, there has been surprisingly limited research on rent concessions despite their prevailing use. Rent concessions have been more frequently observed in the commercial real estate markets than the housing markets but have not attracted academic attention in both the real estate and the housing literature. The presence of rent concessions means two prices in the market: face and effective rents. The widening gap between the two requires further investigation. RFPs might be explained by the three following aspects.

First, RFPs are perceived to be a marketing tool. A common belief of RFPs is that they are the dangling ‘*carrot*’ in enhancing marketing. From a neo-classical real estate economics perspective, the literature on rent concessions has claimed that RFPs are used to maximise the net total rental income by reducing vacancy as offices with a rental contract will have higher value than those without a contract (Sirmans, Sirmans and Benjamin, 1990a, 1990b, 1994; Frew, Jud and Winkler, 1990). From this view, the offering of RFPs can reduce the vacancy rate of office buildings because a special offer is provided. Previous studies have asserted that RFPs can lead to an increase in occupancy (or a decrease in vacancy) of properties; they “*reduce the leasing-up period of a new or refurbished building*” (Australian Property Institute, 2007, p.133), and therefore, maximise the total profit (Sirmans, Sirmans and Benjamin, 1990a, 1990b, 1994). However, it is questionable whether offering rent concessions without a reduction in effective rent can attract tenants to increase the occupancy rate of properties in practice. Allen, Rutherford and Thomson (2009)

finds that lowering effective rent reduces the time for finding new tenants, thus implying that direct change in effective rent could be more useful for attracting tenants than offering rent recessions (although Allen, Rutherford and Thomson (2009) do not examine RFPs).

According to the marketing literature, providing information about both the discounted and the external reference prices is believed to be efficacious in promoting sales (Urbany, Dickson and Kalapurakal, 1996). By doing so, buyers could clearly see the benefit from the discount by comparing their purchase price with the reference price. However, if the discount is available for long periods in the market, the effect of this seemingly regular discount would be short-lived, thus discouraging the willingness of buyers to purchase (Liefeld and Heslop, 1985; Berry, 1986). When a discount is routinised like the current offers of RFPs in the Seoul office market, the effect on attracting tenants might be limited as discussed in the marketing literature. A 'cashback' strategy in marketing is different from the RFPs in the Seoul office market. While the former is a temporary or one-off offer (Ballestar, Grau-Carles and Sainz, 2016), the latter has been in operation over increasingly extended periods of time. This research will analyse whether the use of RFPs has reduced vacancy rates (RQ1). If this does not hold, this neo-classical approach does not explain for the rationale of RFPs in the Seoul office market.

Secondly, it is perceived that RFPs are a tool for managing conflicts among tenants. A decrease in office rent can cause a conflict in which older tenants with higher rents might ask for a reduction in rent (Frew, Jud and Winkler 1990). The use of RFPs could mitigate this potential conflict by seemingly keeping the rent at least at the same level with existing rental contracts. However, this view fails to verify the role of effective rent in the market with access to information about RFPs. Only when the offering of rent concessions is secretly negotiated, will this view be convincing. Offering RFPs results in the same economic effect as decreasing effective rent (see Figure 1 in Section 3). The use of RFPs will generate the same conflict issue if lower effective rent is offered to new tenants. In The Seoul office market, information of RFPs is not hidden from investors. In fact, existing rental contracts are disclosed to the buyer for all office transactions by law in South Korea. Moreover, RFPs are used even in new office buildings that have no former tenant; therefore, no conflict between tenants are expected. Thus, this perspective provides a weak theoretical base to explain the current use of RFPs in Seoul.

Thirdly, RFPs might be a tool for boosting office transaction values in an imperfect market. Property values are the sum of net operating income in perpetuity. Theoretically, property values are more closely associated with effective rent rather than face rent (Whipple, 2006). Despite high face rent, what matters is effective rent (although face rent levels are largely bounded to effective rent levels), which exclude all types of rent concessions in deciding the value of the properties. It is irrational to assume that high face rent with

RFPs can increase property value although this groundless concept can be seemingly observed in the Seoul office market, thus calling for an investigation. Asymmetric access to information about RFPs in imperfect market conditions might make this happen, in which asking prices (or face rent) are the only source of information for property valuation while buyers do not recognise the active use of rent concessions in the market. Indeed, hidden information about effective rent is an act of deceiving buyers in property transactions. Information about RFPs is explicitly known to buyers/investors and real estate agencies in practice.

None of the three approaches above in the literature can fully rationalise the use of RFPs in the Seoul office market. Moreover, no empirical studies have been done on the role of RFPs in the office market for these aspects. This research will find supporting evidence for the use of RFPs in anticipation of property value increases given the presence of uncertainty.

2.2 The Myth of ‘Real-Estate-Never-Fails’

This research study argues that the active use of RFPs is an expression of the anticipation of property value increases in the future and ironically *rent-free* is an outcome of the *rent-seeking* behaviour of property owners in the Seoul office market. The belief or (over-)confidence in property value appreciation has been accumulated through lessons and experiences from modern Korean history. Like Asian property states such as Hong Kong and Singapore (Haila, 2000, 2015, 2017), South Korea has rapidly undergone urbanization in which properties play a fundamental role in accruing personal wealth and corporate assets. After the Korean War (1950 – 1953), advancements in medical services, increased longevity, and high birth rates contribute to nationwide population growth, and aspiration to new opportunities in urban areas triggered rural-to-urban migration to large cities. In particular, Seoul is a predominantly favoured destination for rural peasants, thus resulting in a rapid population increase from 1.6 million in 1955 to 10.6 million in 1990 – a 6.6-fold increase over 35 years (Kim and Han, 2012). Approximately a quarter of the total Korean population gathered into Seoul and half of the Korean population into Seoul’s extended metropolitan area in the 1990s. A sudden influx of people caused urban issues among which include the lack of infrastructure, congestion, poor sanitation, growth of informal settlements, housing and land shortage, and unaffordable housing prices. Property owners pocketed capital gains from seemingly never-ending spirals in the property values of Seoul. Manifest property booms were observed in Gangnam developments in the late 1960s and the 1970s and these booms further attracted speculators (Bae and Joo, 2020). The 1990s also witnessed land value escalation primarily observed in new town development projects in peripheral Seoul (Lee and Ahn, 2005). The endless growth in property values have created a firm belief that ‘*real estate never fails* (Kim, 2013, p.70).’ Despite sudden falls in property values during economic

recessions such as the Asian financial crisis in 1997/8, immediate recoveries were observed, which has strengthened trust in future property values.

The aspiration that property would appreciate in value also appeared in the office market. Office transactions were rare until the late 1990s because most office buildings were owned and occupied by Korean firms for their headquarters (Kim, O'Connor and Han, 2015). However, as the Korean economy faced the Asian financial crisis, Korean firms sold their office buildings mostly to cash-abundant global investors. These office transactions established an office market driven by global investors at the beginning. The post-Asian financial crisis period witnessed the rapid recovery of office transaction prices and domestic investors realised '*real-estate-never-fails*' in the office market once again. Opportunistic funds such as Morgan Stanley, Lone Star, Goldman Sachs, and Lehman Brothers achieved high rates of return over a short period of time (generally under 5 years). Sovereign wealth and pension funds such as GIC in Singapore, Ascendas of Rodamco and the Deutsche Bank in Europe invested in the mid- and long-terms for both capital gains and operating income (Kim, O'Connor and Han, 2015). Their success in investment in office buildings intensified the anticipation of office price spirals. The intense influx of global capital into Seoul not only generated frequent office transactions but also facilitated professionalism indirectly in the office market. Financial products in commercial real estate such as real estate investment trusts (REITs) and real estate funds were introduced, and professional real estate service firms appeared such as asset management companies (AMCs), real estate brokers, and consulting and valuation firms. With both ongoing fervent desire for property value appreciation and sporadic real estate downturns after the GFC, real estate professionals introduced a more complicated tool, RFPs, to reflect these two contradictory conditions. While the former has been understood from repeated property booms, the latter was an expression of market fundamentals at that moment.

No one can predict future property booms precisely, but office owners and professionals have looked forward to the land value spirals. The offerings of RFPs seem to be the same as lowering rent in an economic sense, but the difference is that RFPs can be more easily removed once a property boom appears. RFPs provide for a more flexible rental management instrument.

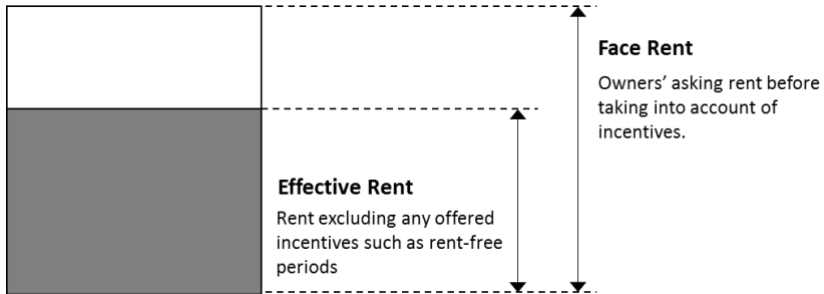
3. Research Methods

This section clarifies the key terms, describes the data sources, and details the analysis methods. Figure 1 visualises face rent, effective rent and, rent concessions (or RFPs). While face rent refers to the quoted rental rate without taking account of incentives, effective rent (or net rent) means the average rental rate over the lease contract that takes incentives into consideration, such as RFPs and improvements for tenants (Brown, 1995) (Figure 1). If there are

no other incentives, by definition, $\text{Effective Rent} = \text{Face Rent} - \text{the monetised value of rent concessions}$.

With this understanding, the econometric models are specified. The key variable used in the regression models is (1) face rent, (2) effective rent, or (3) effective rent and RFPs.

Figure 1 Face Rent, Effective Rent, and Rent Concessions



3.1 Models

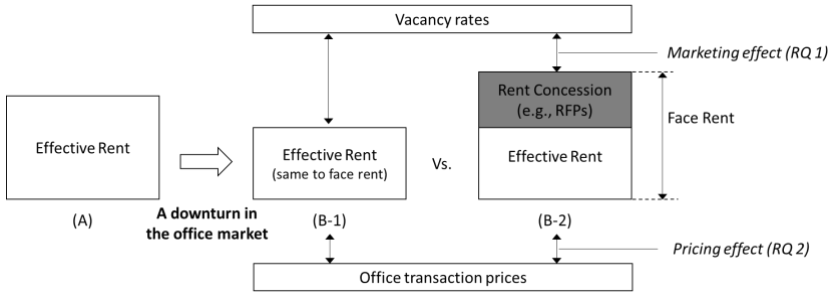
During a downturn in the office market, there are two ways to decrease effective rent (Figure 2). First, without the use of RFPs, effective rent can be decreased (B-1). This is the way to directly reflect the market rental value as effective rent. Second, while maintaining or increasing face rent, effective rent can be decreased (B-2) by offering RFPs. For instance, for a one-year rental contract, which would be more attractive between (B-1) \$1000/year of rent and (B-2) \$1200/year + 2 month rent free? Both options have the same annual effective rent, but (B-2) is being employed in the Seoul office market and this research is investigating why this is happening.

If offering RFPs is effective in marketing, the use of RFPs will result in lower vacancy rates. As there is no economic difference between B-1 and B-2, this research seeks to determine the hidden role described as *rent-seeking* in this study.

Six econometric models are specified. The first three models are designed to determine the marketing effect (RQ 1) by using vacancy rates as the dependant variable. These first three models test the ‘dangling the carrot’ effect – whether RFPs can reduce the vacancy rate with effective rent unchanged – whether the use of RFPs reduces vacancy rates. A larger gap (or discount) between face and effective rents can increase the utility perceived by the tenants, which can potentially result in lower vacancy rates if the rent concession strategy is successful. This might have a similar reaction with consumers who perceive

higher utility when the gap between the discounted price and the external reference price becomes increasingly larger in marketing (Urbany, Dickson and Kalapurakal, 1996).

Figure 2 Conceptual Framework: The Effects of RFPs on Marketing and Transaction Prices



The rent variables are expected to positively affect the vacancy rates because tenants want to avoid a higher rent rate as observed in a typical demand curve (DiPasquale and Wheaton, 1996; Fang and Lu, 2009). While the vacancy trend has a negative association with effective rent, the high (effective) rent is expected to result in high vacancy rates.² In Models 1 - 3, the gross domestic product (GDP), office workers, office supply, and GFC variables are included as control variables. Explanatory variables are face rent in Model 1, effective rent in Model 2, and both effective rent and RFPs in Model 3. The GDP level and number of office workers will negatively affect vacancy rates because they represent the demand for office space (Wheaton, Torto and Evans, 1997; Thompson and Tsolacos, 2000). The office space supply in the market will increase the vacancy rate. Furthermore, since the GFC in 2008, firms have downsized their office space to save operating costs. Thus, it is expected that the vacancy rate has increased after the GFC. So, a dummy variable is included to control for the GFC effect. The basic model for the marketing effect with vacancy rate is as follows:

$$Vacancy\ Rate = f(Rent, RFPs, GDP, the\ number\ of\ office\ workers, office\ supply, GFC)$$

Models 4 – 6 are used to examine the association of RFPs with office transaction prices (RQ 2). According to the income approaches to commercial real estate valuation, office prices are positively associated with (effective) rent and negatively associated with vacancy rates. It is known that the net operating

² Vacancy that appears after the current rental contract, generally annually renewed, is terminated, and a time lag needs to be included in the model. In Models 1, 2, and 3, a 3-quarter time lag is applied to reflect the time to terminate (or renew) the contract.

income (NOI) increases with higher rent and lower vacancy rates and vice versa. In addition, international investors have been proactive in the Seoul office market since the Asian financial crisis (Kim, O'connor and Han, 2015; Kim, Jin and Lee, 2021). To reflect the possible impact of international investors, foreign exchange rates are included as a control variable (Sirmans and Worzala, 2003). Favourable foreign exchange rates, or high foreign exchange rates here (KWR/USD), will attract international investors. The key explanatory variable in question is face rent in Model 4, effective rent in Model 5, and both effective rent and RFPs in Model 6. If RFPs are positively associated with office transaction prices, Model 6 with both effective rent and RFP variables will have higher explanatory power than Models 4 and 5. Besides, the literature has identified money supply (Collins and Senhadji, 2002; Goodhart and Hofmann, 2008), interest rates (DiPasquale and Wheaton, 1996), and inflation rates (Follain, 1982) as key variables for property prices, so these are included in the models. The basic functional form for Models 4 – 6 is as follows:

$$\text{Office transaction price} = f(\text{Rent, vacancy rate, GDP}, \\ \text{, money supply, interest rate}, \\ \text{, inflation rate, foreign exchange rate})$$

3.2 Data and Descriptive Statistics

The analyses are based on indexes for effective rent, face rent, vacancy rates, RFPs, and transaction prices. Data at the office building level for all of these indicators are unavailable. Thus, using indexes is the most viable approach to analyse RFPs in the context of the Seoul office market. To establish the indexes, this research study collected data on vacancy rates, face rent, RFPs, and transaction prices from two real estate project management and data companies.³ These companies have established a databank of entire office buildings with a floor area of larger than 1,650 m² (or 500 *pyeong* with the Korean traditional unit). The total number of office buildings in the databank is approximately 3,500. The real estate consultancy company, IGIS, use the repeat sales model in Shiller (1991), which has been widely accepted in the housing market as well as stock markets, to estimate the rent and price indexes based on lease contracts and transaction records and published them on its website on a quarterly basis. Shiller's method has been accepted in Korean real estate studies too (Ryu, Park and Lee, 2011). Rent-related indexes have been generated by another real estate advisory company, GenstarMate, which has surveyed from 300 to 800 sample office buildings for vacancy rates and rent. The RF index, the average value of RFPs among new lease contracts in each quarter, was produced by the dataset from GenstarMate. These two real estate data companies rely on the same portfolio of office properties in Seoul, but the

³ IGIS for the transaction price index (<https://www.igisam.com/>) and the RF index. GenstarMate for the rent index (<https://www.genstarmate.com/ko/service/mateplus.asp>).

former uses contracts and transactions while the latter uses sampling for vacancy rates and face rent. Seoul, as a mega-city with almost 10 million people, has multiple business districts including the CBD, and the Yeouido and Gangnam business districts (Kim, O'Connor and Han, 2015).

However, unlike housing markets, not enough transactions have been made in each of Seoul's office sub-markets and, thus, it is difficult to generate a reliable transaction index for each sub-market with a small number of office transactions. Hence, analysis is centred on the Seoul office market as a whole.

This study uses quarterly data from 1Q 2001 to 4Q 2017. All of the indexes used in this research study are derived from the same geographical area – Seoul. Other fit-outs and tenant improvements (TIs) are not included in the calculation of the effective rent index because these benefits are offered temporarily only when the tenants moved in and the renewal of the contract did not occur additional costs. There are only a handful of leasing cases that include TIs in the analysis period. TIs are newly introduced in the Seoul office market and contract renewals do not involve TIs and fit-outs but can include rent free. Thus, only RFPs are considered in estimating effective rent, but the exclusion of TIs in the effective rent index would not generate a bias. Effective rent is calculated by deducting the average of RFPs from the face rent as follows:

$$\text{Effective Rent} = \text{Face Rent} \times \left(1 - \frac{\text{RFPs per annum}}{12 \text{ months}} \right)$$

RFPs have been increasing, which means growing differences between face and effective rents. In 4Q 2017, effective rent was 78.1% of face rent (see Section 4). This research study refers to the official building register records in the Ministry of Land, Infrastructure, and Transport to measure office supply. Buildings with over 50% of the total building area for office space are identified as an office building, which is the same approach used as the two real estate data companies have identified. Other macro-economic data, such as the GDP, money supply, and interest and foreign exchange rates are from the Bank of Korea. Major international investors are from Singapore, Europe, USA, and Australia (Kim, O'Connor and Han, 2015) but the currency of international investments is largely based on the USD, so the model uses the foreign exchange rate against the USD.

For a clear interpretation of the results, the natural *log* is taken to the variables – the transaction price index, rent index, GDP, and face rent index. By doing so, the coefficient will represent the elasticity of the variables. However, to avoid confusion, the natural *log* is not taken to the vacancy rate and interest rate variables (because their unit is a percentage), and the dummy variable. A unit root test is carried out to avoid possible econometric problems from a spurious regression in the time-series model. The unit root tests show that the time-series

data has a unit root. Thus, the difference operator to the series is applied. AR(1) is added to the models to control for autocorrelation.

All of the variables, except for the number of office workers, include 67 quarterly data out of the total 68 quarters from 2001 to 2017.⁴ The transaction price index is increased by 1.6% for each quarter, which is higher than the inflation rate, or a 0.6% increase per quarter. However, face rent is increased by 0.4% which is lower than the inflation rate increase. There is almost zero increase in effective rent over the analysis period (even lower than the inflation rate), thus demonstrating that the office market is not in a boom.

The number of office workers – a key demand variable for office space – is increased by 0.15% per quarter (Table 1). This is lower than the increase in office supply, 0.73% per quarter, possibly leading to growing vacancy rates. Interest rates decreased after the GFC, so the interest rate variable has a negative sign in Table 1. The average quarterly increase in the GDP is 0.93%, slightly lower than 4% per year.

Table 1 Descriptive Statistics

Variable	Mean	SD	Min.	Max.	N
Transaction Index	0.0162	0.0353	-0.0697	0.0808	67
Face Rent (FR) Index	0.0043	0.0069	-0.0272	0.0260	67
Effective Rent (ER) Index	0.0006	0.0095	-0.0272	0.0260	67
RFPs	0.0037	0.0052	-0.0055	0.0195	67
Inflation Rate	0.0061	0.0054	-0.0042	0.0206	67
Vacancy Rate	0.0008	0.0049	-0.0084	0.0177	67
Office Workers*	0.0015	0.0085	-0.0146	0.0209	55
Interest Rate	-0.0007	0.0045	-0.0150	0.0110	67
Money Supply	0.0199	0.0094	0.0031	0.0502	67
GDP	0.0093	0.0083	-0.0336	0.0276	67
Foreign Exchange Rate (KWR/USD)	-0.0021	0.0448	-0.0937	0.2488	67
Office Supply	0.0073	0.0032	0.0028	0.0163	67
Dummy Variable (Post-GFC or 2009 – 2017 = 1)	0.5373	0.5024	0.0000	1.0000	67

Note: Statistics Korea has published office worker statistics since 2004. Data about office workers, classified by occupation (not by the industrial code), is only available for 55 quarters. The following analysis is subject to this data availability as seen in Table 2, where N=53 (which reflects time-series modelling).

⁴ No seasonality is identified in the quarterly data from the analysis that includes quarter dummy variables (although not presented in this paper). Accordingly, seasonal variables are excluded in the final models.

4. Results of Regression Analysis

4.1 Trend in Seoul Office Market

The trend of face rent in the Seoul office market has shown a different pathway than that of other major office markets (Figure 3). This research study finds a clue for explaining this seemingly irrational trend from the introduction of RFPs. Up to 2009 when RFPs were not employed in the Seoul office market, the vacancy rate was negatively associated with (face) rent, which is usual in most commercial property markets. This negative correlation is clearly seen in 3Q 2008 when (face) rent increased with the decreasing vacancy rate (Figure 3). However, the opposite pattern is observed since RFPs are adopted in the Seoul office market. In fact, face rent has increased along with increasing vacancy rates since 2011, while a negative association is observed in most office markets worldwide (Figure 3). This distinctive trend observed in the Seoul office market might be attributable to the introduction of RFPs after the GFC (Figure 3). However, given the fact that RFPs have been also used in other office markets, the use of RFPs in the Seoul office market needs further investigation.

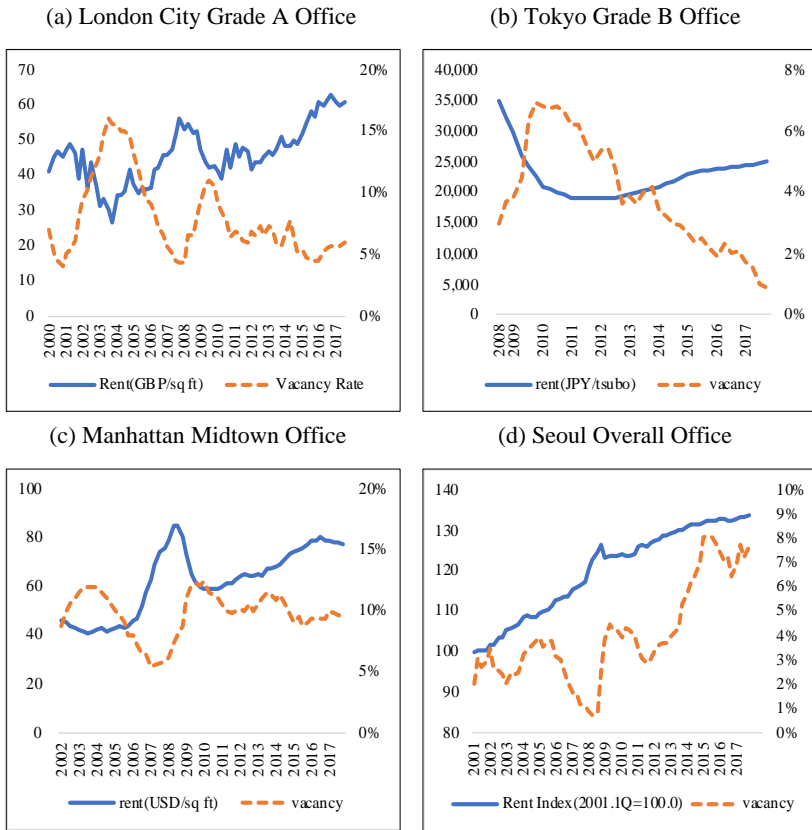
News media provides a plausible clue about when RFPs were introduced. Online searches on NAVER, a popular Korean online portal website⁵, show that the number of news reports about RFPs have increased markedly after 2009 (Figure 4). The search results from NAVER are to provide contextual background for this research study to stress the frequency used in the news media, and not for statistical analysis. It seems that RFPs were introduced around 2009 and became popular in conjunction with a decrease in rent when vacancy rates dropped in the face of the GFC⁶. Figure 4 shows the number of news reports from a search with three keywords – “rent-free”, “free lease”, and “free rent” in Korean. In addition, data from the Korean asset management corporation show increasing RFPs on average from 2010 to 2017 (Figure 4). In fact, the average RFP is a half month per year in 2010 thus implying RFPs had been just introduced to the office market. Despite the increases in RFPs and vacancy rates, both office face rent and transaction prices have been increasing (Figures 4 and 5).

Figure 6 shows the trends for face rent, effective rent, and RFPs (in percentage). The write-down from the RFPs increased up to 21.9% in 2017 (Figure 6). Effective rent is decreasing as the use of RFPs is growing. The next two sections will interrogate the marketing and price effects by carrying out multiregression analyses.

⁵ NAVER Portal website, www.naver.com

⁶ Personal conversations with three professionals who have worked in the office rental sector from 2000 also confirm that there were no RFPs before the GFC. Furthermore, no RF arrangements can be observed when the authors reviewed the rental contracts of 20 office buildings in the period of 2000 – 2008.

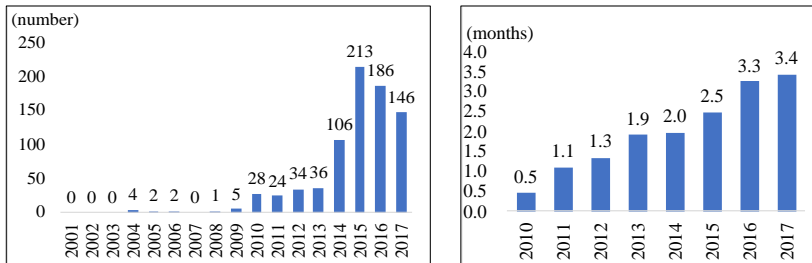
Figure 3 Face Rent and Vacancy Rates in Selected Office Markets



Sources: Savilles for (a) London and (b) Tokyo; Cushman & Wakefield for (c) Manhattan; and (d) GenstarMate for Seoul

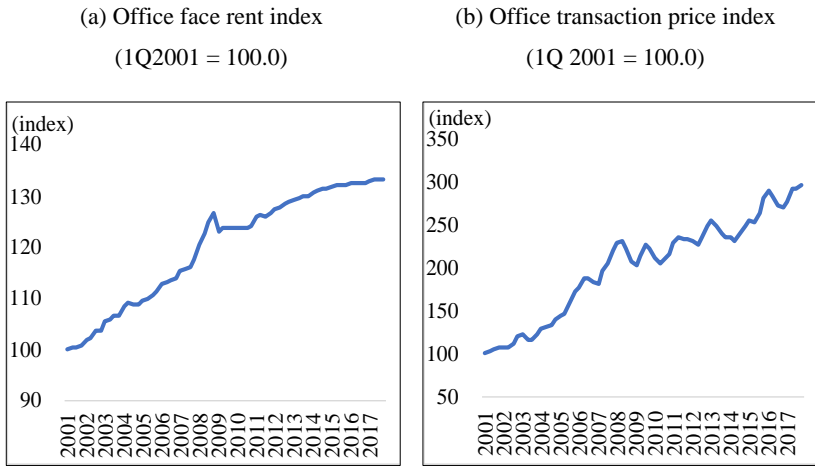
Figure 4 Use of RFPs in Seoul Office Market

(a) Number of news media articles about RFPs (b) RFPs (months/year)



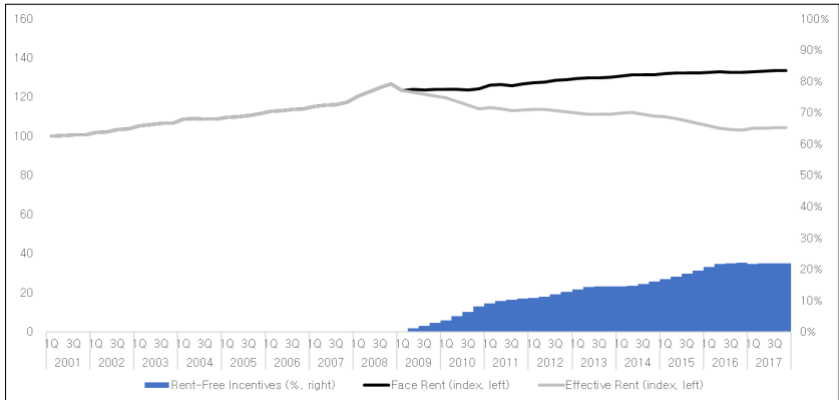
Sources: (a) NAVER Portal website(www.naver.com) and (b) IGIS

Figure 5 Office Rent and Transaction Indexes



Sources: (a) GENSTAR and (b) IGIS AMC

Figure 6 Face Rent, Effective Rent and Rent-free Incentives, Quarterly Data from 2001 to 2017



Note: 1Q 2001 = 100.0 for face and effective rents index

4.2 Does the Offer of RFPs Decrease Vacancy Rates? (RQ 1: Marketing Effect)

This section investigates the marketing effect of RFPs on whether the offering of rent concessions reduces the vacancy rate. Three models are specified to test this effect. In particular, the rent concession variable (RFPs) is included in Model 3. If the rent concession variable is statistically significant with a negative sign, the marketing effect can be confirmed.

The results of the analysis of the marketing effect are presented in Table 2. As usual, GDP growth and increase in office workers result in lower vacancy rates. A 1% GDP increase leads to a decrease in the office vacancy rate by 0.261% – 0.268%; a 1% increase in office workers leads to a decrease in the vacancy rate by approximately 0.1%. In contrast, office supply and the post-GFC market conditions increase vacancy rates. The coefficients of the office supply variable are 0.552, 0.430, and 0.406, in Models 1 – 3, respectively. The post-GFC period saw a minor increase in vacancy rates by 0.001% - 0.003%. All of these results make sense economically and most coefficients are statistically significant.

Table 2 Results: RFPs and Vacancy Rates

Variable	Model 1		Model 2		Model 3	
	Coefficient	t-value	Coefficient	t-value	Coefficient	t-value
Constant	-0.002	-1.333	-0.002	-1.187	-0.001	-0.922
Face Rent (FR)	0.143*	1.981				
Effective Rent (ER)			0.174***	2.747	0.155**	2.169
RFPs					-0.774	-0.572
GDP	-0.268***	-4.307	-0.261***	-4.329	-0.262***	-4.325
Office Workers	-0.098*	-1.741	-0.099*	-1.798	-0.096*	-1.725
Office Supply	0.552***	3.131	0.430**	2.462	0.406**	2.240
Dummy Variables (1Q 2009 =1)	0.001	0.814	0.003*	1.841	0.003*	1.895
AR(1)	0.112	0.756	0.063	0.423	0.062	0.410
R-squared	0.555		0.586		0.589	
Adjusted R-squared	0.497		0.532		0.525	
Durbin-Watson stat	1.987		1.991		1.991	
N	53		53		53	

Notes: * denotes $P < 0.1$, ** denotes $P < 0.05$, and *** denotes $P < 0.01$

The key objective of this analysis is to compare the coefficients of face and effective rents and determine the role of RFPs in lowering office vacancy rates. Model 1 with the face rent variable has a lower explanatory power than Model 2 with the effective rent variable over the analysis period. By changing the variable from face rent to effective rent, the R-squared value increases from 0.555 to 0.586. The result demonstrates that vacancy rates are more closely associated with effective rent than face rent, which is commonly acknowledged

economic reasoning (DiPasquale and Wheaton, 1996; Glascock, Jahanian and Sirmans, 1990).

To determine whether RFPs have an impact on the vacancy rates, Model 3 is specified. The coefficient of RFPs is not statistically significant at the 10% significance level. The t-value is merely -0.572, which signifies that there is very weak evidence that rent concessions lower vacancy rates. This implies that as the discount has become common, the pervasiveness of RFPs no longer attracts tenants possibly due to their mistrust and unpleasantness in the reference price – face rent, as discussed in Berry (1986) and Liefeld and Heslop (1985). These three models provide statistical evidence to prove that the use of RFPs is not effective in reducing vacancy as an incentive or a ‘dangling carrot’ (Table 2). To put it another way, the result rejects the marketing effect. Instead, effective rent is the key to vacancy changes. In Models 1 – 3, either face rent or effective rent positively influences vacancy rates. Here, there is a time-lag to reflect the influence of rent on vacancy due to rental contracts with terms that are normally fixed on a yearly basis. After the rental contracts expire, vacancy appears in the market (see Footnote #2). Thus, with a time-lag, increasing rent leads to decreasing vacancy rates (see rent variables in Models 1 – 3). This positive influence of effective rent on vacancy is in line with a normal demand curve that shows increasing prices (i.e., effective rent) reduce the demand for space, thus resulting in low occupancy and high vacancy. The next analysis discusses the different aspects of RFPs in association with office transaction prices.

4.3 Will Offering RFPs Increase Office Transaction Prices? (RQ 2: Price Effect)

The analysis in this section is done to find the key variables to determine office transaction prices by comparing the models with face rent (Model 4), effective rent (Model 5), and the inclusion of the RFP variable (Model 6) (Table 3). Vacancy and interest rates are the two key variables negatively associated with office transaction prices in a usual real estate market. In Model 4, a 1% point increase in vacancy rate leads to a decrease in transaction prices by 0.83%, and a 1% point increase in interest rate leads to a decrease in transaction prices by 0.80%, which is consistent with the common understanding of the property market. GDP growth and changes in the money supply are two variables positively associated with office transaction prices. Given the economic restructuring away from manufacturing towards knowledge-based economies in Seoul, GDP growth is directly associated with the demand for office space. The regression result confirms that a 1% increase in GDP leads to an increase in office transaction prices by 1.093% - 1.293%. Similarly, a 1% increase in the money supply leads to an increase in office prices by 0.849% - 0.880%. However, the effects of inflation and foreign exchange rates are statistically insignificant.

Models 4 and 5 compare face rent with effective rent to determine the association with office transaction prices. In both models, the coefficients are statistically significant at the 1% and 5% significance levels, respectively, but Model 4 with face rent has a higher explanatory power than Model 5 with effective rent. The R-squared value increases from 0.482 in Model 5 to 0.510 in Model 4. This statistical result shows that face rent has a greater association with office transaction prices than effective rent, which is contradictory against neo-classical real estate economic theories. In addition, through Model 6, the RFP variable is statistically significant at the 10% significance level, thus signifying that higher RFPs result in higher office transaction prices. The investment decision by rational buyers of office buildings is supposed to be based on effective rent rather than face rent. However, this empirical finding shows that RFPs also have a relationship with office transaction prices, thus implying the presence of *rent-seeking* behaviour by using RFPs. Given the uncertainties of the office market, the expectations for future price escalation are expressed in the use of RFPs. Model 6 has the highest R-squared value by decomposing face rent in Model 4 into effective rent and RFPs.

Table 3 Results: RFPs and Office Transaction Prices

Variable	Model 4		Model 5		Model 6	
	Coefficient	t-value	Coefficient	t-value	Coefficient	t-value
Constant	-0.016	-1.295	-0.008	-0.664	-0.018	-1.401
Face Rent (FR)	1.485***	3.131				
Effective Rent (ER)			1.094**	2.505	1.480***	3.106
RFPs					2.066*	1.881
Vacancy Rate	-1.769**	-2.471	-1.862**	-2.509	-1.712**	-2.365
Interest Rate	-1.614**	-2.315	-1.771**	-2.469	-1.574**	-2.241
Money Supply	0.880**	2.474	0.873**	2.356	0.849**	2.355
GDP	1.240***	2.891	1.093**	2.493	1.293***	2.951
Inflation Rate	-0.724	-1.211	-0.824	-1.338	-0.693	-1.153
Foreign Exchange Rate	0.107	1.454	0.092	1.208	0.113	1.522
AR(1)	0.496***	4.233	0.481***	4.049	0.510***	4.422
R-squared	0.510		0.482		0.513	
Adjusted R-squared	0.441		0.409		0.434	
Durbin-Watson stat	1.591		1.552		1.611	
N	66		66		66	

Notes: * denotes $P < 0.1$, ** denotes $P < 0.05$, and *** denotes $P < 0.01$

While the marketing effect of RFPs is rejected based on Model 3 (Table 2), the presence of the price effect of rent concessions can be observed in Model 6 (Table 3). From a neo-classical real estate economics perspective, the former is a driver for the latter, but the findings from the analysis are not aligned with economic reasoning, for which the *rent-seeking* hypothesis is proposed. The next section reviews a *proforma* cash flow used in practice to further understand the operation of RFPs and *rent-seeking* behaviour in greater detail.

4.4 Proforma cash flow approach

The bottom line is, by definition, effective rent is face rent *minus* the monetised value of RFPs. Then, how can RFPs increase the value of offices (or at least the transaction prices)? This research study proposes that the result from Model 6 does not demonstrate a causal relationship where RFPs increase office transaction prices, but that RFPs are associated with higher office transaction prices. According to the income approach in valuation, Equation (1), property values (P_0) are defined by the sum of the present value of future rental income (R_t) in perpetuity by using a discount rate (i) (Whipple, 2006). R_t is the effective rent that the owner of the property receives in Equation (1). Equation (1) can be simplified to Equation (2). Future expected growth (g) can also be reflected in the value of the property like Equation (3).

$$P_0 = \sum_{t=1}^{\infty} \frac{R_t}{(1+i)^t} \quad (1)$$

$$P_0 = \frac{R}{i} \quad (2)$$

$$P_0 = \frac{R}{(i-g)} \quad (3)$$

It is not a usual (or rational) market condition that landlords offer RFPs to increase the office transaction prices by simply increasing face rent. The behaviour of landlords is based on their firm belief that the office price will grow in the future. The landlords perceive that future effective rent can be higher than the current effective rent. This optimistic expectation is reflected in higher face rent with rent concessions. The landlords anticipate that the office market turns into an upturn over the lease period, so RFPs would not be necessary when renewing the rental contract in the future which has appeared in *proforma* cash flows in practice in commercial real estate valuation. Table 4 reports the simplified *proforma* cash flow of M-Tower over the future 11-year project period. When the investment decision was made, the potential buyer undertook valuation based on this *proforma* cash flow. M-Tower is a new mixed-use building that comprises two towers in Seoul and its construction was completed and transacted in 2017. With 30% of the floor areas pre-leased, the investor projected the occupancy rate would reach 95% starting Year 2. In this

cash flow, RFPs are 4 months (or 33.3%) and projected to decrease down to 2 months (or 16.8%) during Years 5–11. In estimating the NOI for valuation, RFPs are the write-down as explained above. The investor expected a 3% growth per annum in face rent, which reflects inflation. However, changes in RFPs and, to some extent, fast leasing within a year seem to reflect the fervent anticipation of the investor in the commercial property market as these predictions are not based on the market trend at that moment.

RFPs play a role like future expectations, *g*, in Equation (3). Market fundamentals are not strong enough to increase effective rent, but landlords/owners have optimistic outlooks on the future office rent and/or the future value of the office building. This gap has appeared in a newly introduced tool, RFPs, in the Seoul office market. In fact, face rent has been increased with offers of RFPs, but effective rent has decreased over the analysis period (see Figure 6). As effective rent is decided by the market, the landlord should accept it. When the market condition turns into an upturn, it will be easier to remove the temporarily offered RFP incentive than to formally change the face rent, but landlords might face disputes by their tenants if there is a sudden (radical) increase in face rent. RFPs might be an effective tool to manage the uncertainty in the market because this is a temporary offer that can be removed without difficulty, and regular moderate increases in face rent are generally accepted without much resistance.

However, office transaction prices are not determined only by sellers but via negotiation with buyers/investors. Only when investors agree with the positive expectations of the seller on the future office market would buyers/investors accept the transaction price which is seemingly based on higher face rent. When the buyers/investors do not have the same optimistic expectations, office transactions cannot be made at the offered price. The correlation of RFPs with office transaction prices is not a causal relationship but the reflection of the positive perception of both sellers and buyers/investors on the office market to better react to the uncertainty of future market conditions. The sellers offer RFPs to the tenants without lowering face rent, in hopes that the face rent is accepted as a market value. They might argue that the high face rent deserves high transaction prices. However, the buyers clearly understand that the office market is centred on effective rent rather than face rent. Nevertheless, from the perspectives of the buyers as seen in the *proforma* cash flow, their aspiration for price escalation is expressed in the already offered RFPs which can be easily removed. The transaction price is decided not by face rent as the seller claims, but effective rent and perceived future growth prospects of the buyer expressed in RFPs. Thus, in the dynamics of RFPs, *rent-seeking* behaviour is observed not only by sellers but also buyers although their rationales vary.

Table 4 Example of a Proforma Cash Flow of a Commercial Building – M Tower

	<u>Y1</u>	<u>Y2</u>	<u>Y3</u>	<u>Y4</u>	<u>Y5</u>	<u>Y6</u>	<u>Y7</u>	<u>Y8</u>	<u>Y9</u>	<u>Y10</u>	<u>Y11</u>
(1) Face rent (thousand KRW per 3.3m ²)	90.0	92.7	95.5	98.3	101.3	104.3	107.5	110.7	114.0	117.4	121.0
(2) RFPs (months)	4	4	3	3	2	2	2	2	2	2	2
(3) RFP incentives (%)	33.3%	33.3%	25.0%	25.0%	16.7%	16.7%	16.7%	16.7%	16.7%	16.7%	16.7%
(4) Monetised value of RFPs (thousand KW per 3.3 m ²)	30.0	30.9	23.9	24.6	16.9	17.4	17.9	18.4	19.0	19.6	20.2
(5) Effective rent (thousand KW) (thousand KW per 3.3m ²)	60.0	61.8	71.6	73.8	84.4	86.9	89.6	92.2	95.0	97.9	100.8
(6) Occupancy rate	30~90%	95.0%	95.0%	95.0%	95.0%	95.0%	95.0%	95.0%	95.0%	95.0%	95.0%

Notes: There is a pre-lease arrangement with 30% occupancy; 3.3m² is a Korean traditional area unit called *pyeong*; KW 1000 is roughly USD 1; (3) RFP incentives are estimated by (2) RFPs (months) / 12; (4) Monetised value of RFPs = (1) x (3); (5) Effective rent = (1) – (4)

Then, a fundamental question remains: why do buyers/investors perceive positive future growth in the Seoul office market? Where does this solid belief originate from? In fact, over the analysis period, face rent increased by 33.4% from 100.0 to 133.4, but the office transaction price almost tripled from 100.0 to 295.2.

According to Table 1, the average effective rental growth rate is 0.06% per quarter (or 0.24% per annum) and the average price growth rate is 1.62% per quarter (or 6.64% per annum), relative to the average inflation rate of 0.61% per quarter (or 2.46% per annum). The net effective rental growth is much lower than the inflation rate. In this downturn season, RFPs have become the tool that reflects the anticipation of future capital gains in the office market and this research study sees this as *rent-seeking* behaviour. A reduction in face rent is not acceptable to the current owners due to their desire to realise high rates of return on property assets. However, there has been a widening gap between the market fundamentals and their anticipated rental levels. Often this is called a real estate 'bubble' (Zhou and Sornette, 2006; Scheinkman and Xiong, 2003). This gap is expressed in a more flexible form which is the offering of RFPs strengthened by real estate professionals.

5. Discussion and Conclusion

This research work has investigated the role of RFPs in the Seoul office market. Key questions address the marketing and the price effects of RFPs. Econometric models show that the use of RFPs is not effective in marketing to attract tenants unless effective rent is lowered (RQ1). However, given the use of RFPs, face rent is a superior variable to explain for office transaction prices rather than effective rent. This irrational outcome is not attributable to asymmetric access to market information but reflects the fervent anticipation of future property values by both the sellers and the buyers/investors who need an instrument to manage uncertainty in the market. Extended rent recessions are indeed an indirect indicator that represents the widening gap between market fundamentals and anticipation. While the former has been shaped by macro- and micro-economic conditions such as the magnitude of GDPs and knowledge-based industries expressed in the number of office workers, the latter have been collectively formed through Korean modern experiences in property booms. Professionalism in real estate has enabled a more complicated rental structure through market analysis. Office market professionals, including investors/buyers, owners/sellers, and real estate agencies, have been doing *rent-seeking by offering rent recessions* in the Seoul office market. Here, *rent-seeking* is not an active exertion, like corruption, lobbying, and bribery, but a passive and flexible instrument to express their anticipation within the real estate profession. This research has revealed how real estate professionals have used RFPs as a tool to enhance flexibility in managing office buildings and handling market uncertainties with the aspiration for property value uplift.

Despite the detailed analysis in this research, some fundamental questions remain. First, is the rationale of RFPs unique to Seoul or applicable to other property markets? Property booms and pocketing capital gains have been pervasive worldwide as Georgists have strongly alerted (Obeng-Odoom, 2017; George, 1879; Hughes *et al.*, 2020). Most countries have experienced land value spirals in tandem with the progress of urbanisation (Cannon, 1995; SandercocK, 1979; Archer, 1973) and, so-called property states, Hong Kong and Singapore where excessive investment in properties has been observed, have developed property professionals. However, it is uncertain whether *rent-seeking* behaviour in the use of RFPs has appeared only in Seoul. Second, to what extent can RFPs be used in the Seoul market? Since its introduction to the market during the GFC, the use of RFPs has been increasing up to 3.4 months (or 21.9%) per year after 2017. The maximum level of RFPs is unknown in the market, but it is plausible to assume that face rent would fall once the offering of RFPs reaches the maximum level. It might be difficult to offer rent-free for the entire period of the year. Third, when the market turns into an upturn, will RFPs disappear first to reflect the market trend, or will the office market continue to rely on RFPs? Whether the use of RFPs is temporary or long-term is also unknown at this moment. These questions will need further rigorous investigation once the Seoul office market has gone through multiple cycles.

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