WHY GO PUBLIC? An EMPIRICAL ANALYSIS of IPO'S COMPETITIVE EFFECT on TURKISH FIRMS

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Abstract:

The motivation of this study is to approach the IPO issue from a different perspective. Most of the studies in the existing literature deal with three broad issues which are operating performance, stock performance, and the reasons to go public. However, there aren't many studies which tackle the IPO issue from a pure competitive perspective which enables limited but clear results. This study contributes to the literature, not by answering a broad and old question but by providing new and partial evidence which seem to contradict the whole at first glance. Most of the 60 BIST (Borsa Istanbul) listed large industrial firms in this study have improved their relative ranks after their IPOs, when compared to their own large competitors most of which are not listed in BIST. These ranks are available in Turkey's TOP 1.000 Industrial Enterprises annual lists and they are officially assigned by ICI (Istanbul Chamber of Industry) according to firms' sales revenue figures. Thus, they provide us with the single and clear window to observe. Keeping in mind that this window is limited, this study comes up with some non-negligible findings and then elaborates on their significance for the IPO literature, raising more questions than answers for the sake of a more solid theory.

Keywords: Initial public offerings (IPO), Borsa Istanbul (BIST), Competitive Effect, Finance and Product Market Competition, Large Industrial Firms

1. Introduction

There is a vast amount of studies on IPO subject which can be divided into at least three broad categories. Naturally, first of them is the basic question that why do firms go public. More specifically, why the motivation to do an IPO does ever exist and why it is stronger in some situations or times. There are a few theories in the literature, including entrepreneurs' chance to sell their companies/shares to a higher price (Zingales, 1995), control regain opportunity for entrepreneurs in favorable conditions (Black and Gilson, 1998), raising funds for further growth (Pagano et al., 1998), allowing more dispersion of ownership (Chemmanur and Fulghieri, 1999), inspiring more faith in the firm (Maksimovic and Pichler, 2001), first-mover advantage (Schultz and Zaman, 2001), IPO timing models based on asymmetric information (Lucas and McDonald, 1990), and window of opportunity due to investor sentiment (Baker and Wurgler, 2000). These are just some examples for the first category. The second category, short/long term stock performance after IPO, has very much to do with the concept of 'underpricing'. The main theories trying to explain it can be grouped as the ones which focus; asymmetric information between issuers and investors, legal liabilities of the issuers, share allocation concerns, and valuation methods. A very good review of these issues is available in Ritter and Welch (2002). However, neither stock performance nor the reasons and timings of IPOs is interesting for us for the time being, because the core subject of this study falls to the third and the last broad category which is operating performance before and after an IPO. Our interest in this latter category was aroused by a naive question that we

want to answer and also by the availability of a very good dataset to help us come up with that answer. That basic question is 'whether going public is a really bad signal, in general, for the future of the firm itself or not'. The important thing here is that we focus our attention on the firm itself and not on issuers, investors, or other third parties such as government bodies. Sure, we are aware that even this narrowed version of the issue has many dimensions to consider, but if we were forced to make a sweeping generalization, the quick and dirty result, from the literature, would be poor overall operating performance after IPOs. This is something that the authors of this study and some other researchers find hard to believe and to say out loud. Main reason for this ignorance is that one can, within seconds, think of many possible theoretical/practical reasons for things to go well for IPO firms. Secondary reasons are supplied by our own market experience and the results from a few related studies from the literature. Thus, we hypothesized that firms, at least relatively large firms if not all, would become more competitive after their IPOs. In this situation of a possible conflict, we needed to provide new, clear, and reliable evidence either for or against the seemingly prevailing claim. Istanbul Chamber of Industry's (ICI) publicly available yearly dataset came in to rescue, providing us with the actual ranks of industrial firms over the years.

The next part of this paper is a brief summary of the related literature on the effects of going public on operating performances and competitiveness of firms. Part three, first by describing the data, presents the methodology and results. The last part concludes by highlighting the main findings and possible future directions.

2. Literature Review

There are many studies on operating performance after IPO. However, only a few of them approach the issue from a competition perspective or use Turkish data. There is no study focusing on the competitiveness of Turkish large firms which have gone public in any year since 1993. Below is a brief review of the general IPO performance literature.

Jain and Kini (1994), by analyzing 682 IPOs performed during 1976-1988, find a significant decline in performance (market-to-book ratio, price/earnings ratio, and earnings per share) subsequent to the initial public offering. They also claim that there is a significant positive relation between post-IPO operating performance and equity retention by the original entrepreneurs. On the other hand, Cai and Wei (1997), relying on their regression results for 180 Japanese firms, state that managerial ownership structure is not a significant determinant of performance. Thus, for the new issue puzzle, they do favor 'window of opportunity' explanation against 'ownership'. Spiess and Pettway (1997) approach the problem from a different perspective and they claim that the only thing matters is the way the firms define an IPO. More specifically, the firms which have low corporate governance scores and see IPO as a single financing event not as a process to be planned, are more likely to be the underperformers. These papers are just some examples of studies which do not directly deal with sales growth or market share. Like the ones above, there are many studies which do not find convincing evidence of underperformance. Brav and Gompers (1997) is one good example for this. They argue that not IPO but size matters because crises, such as the one in mid-1980s, do affect smaller firms more. When controlled for size, they do not find a significant difference between the performances of IPO firms and other firms.

There is another group of papers which find some mixed evidence on underperformance in some financial ratios but improvement in sales growth performance. Thus, this is the most interesting group for the authors of this study. One of the earliest members of this group is Kim et al. (2004). They analyze, mainly, three different operating performance measures of 133 firms quoted at Thailand stock exchange during 1987-1993. Their key measures are; sales growth, profitability of assets, and turnover of assets. For the period beginning with IPO date (t) and ending at three years later (t+3), they do find declines in all measures but sales growth. However, instead of focusing on this questionable contradiction, they focus on explaining the causes of lower profits. Main cause they find is the level of managerial ownership. When the level is intermediate, the relationship with change in profitability is negative whereas the level is high or low enough, that relationship becomes positive. Thus, naturally, they discuss these findings under the light of 'entrenchment' and 'alignment-of-interest' hypotheses. Although the variable at the center of discussion is 'profitability' here and not 'competitiveness' or more specifically 'ranks based on sales', this study is still a good example since it differentiates between sales growth and other operating measures in terms of IPO. There are two very similar studies analyzing the IPOs at BIST some of which are the observations of our study as well. First of these two studies is Kurtaran and Er (2008) in which the sample consists of all firms which have gone

public at BIST between 1992 and 2000. The same sample of 205 firms is used in Bulut et al. (2009) but this latter study is written in Turkish. All of the three articles mentioned in this paragraph have something in common. The authors want to analyze the effects of managerial and ownership structure changes, not the IPO concept as a whole. Thus, they consider IPO event just as an opportunity since every IPO changes the structure to a degree. As another common point, they find that sales growth behavior is not like other operating measures' after IPO. This finding was promising at the beginning. However, it surely is not a direct proof of improved competitive power since none of these studies take the rivals, including also the firms which have not gone public, into account. In fact, the lack of this proof is one of the big motivations for our study. A more recent paper, Spiegel and Tookes (2015), is another study which aims to see 'competition' in the big IPO picture. Their main question is 'how one firm's decision to switch from being private to public impacts its rivals'. To answer this, they develop a continuous time model in which heterogeneous firms producing heterogeneous goods compete for consumers. Their general results imply that IPOs forecast future industry changes but do not cause them. This may seem to be in conflict with our findings. However, there are important differences in methodologies of these two studies. Firstly, their paper is more theoretical than empirical. Secondly, they focus on rivals' average profitability and market value, not the new IPO firm's rank based on sales. Finally and the most importantly, their sample includes mostly small firms with already small market shares whereas our sample consists of relatively large firms. On the other hand, Hsu et al. (2010) investigate the returns and operating performance of publicly traded competitors around the time of 134 large IPOs in their industries. They find that industry competitors experience negative stock price reactions around IPOs and a significant deterioration in their operating performance after these IPOs. They also claim that these large IPOs are responsible for this underperformance, since they see that publicly traded competitors respond positively to the withdrawal of an IPO in their industry. This finding is in line with our main finding. They say competitors become worse and we say newly public firms become better, relatively. However, there is one thing that might be important; they do not include non-public firms in the competitors group. Thus, the private rivals are missing in this picture. Chemmanur and He (2011) provide us with the missing part, since they develop a model to compare newly public firm against a non-public competitor in a set of different external conditions such as existence/inexistence of productivity shocks and IPO waves. Then they test this model empirically as well. This study has a lot to say on IPO waves but what is more interesting for us is one of their general findings; "Going public, though costly, not only allows a firm to raise external capital cheaply, but also enables it to grab market share from its private competitors". Tests of our data provide partial support for the general claim that new IPO firms grab market share from both private and public rivals. Support is partial, because our dataset includes only relatively large firms, whether they are new IPOs or private/public rivals.

To summarize this section, there is a very long literature on IPOs but the literature seems to have only recently turned its attention to the issue of competition effects of IPOs. Our study falls under this young category. Although our main question, methods, and datasets are somewhat different from these recent studies', as explained throughout the study, our main finding is not that different.

3. Data, Methodology, and Findings

We used the publicly available dataset of ICI which include, as the key variable, sales revenue figures of top 1,000 industrial firms in Turkey. ICI has been providing this yearly data since 1993 so that it was possible to create rank histories for all firms in those datasets, whether or not they are selected to be in the final sample of this study. Final sample consists of 60 IPO firms and the selection process is as follows: (1) Any of 111 industrial firms which performed an IPO at BIST (Formerly Istanbul Stock Exchange) after year 1993 is a candidate. (2) Each of these 111 firms has a "t" value representing its own IPO year. (3) The ones which have valid data for all of their own "t-1", "t", "t+1" periods are included in the final sample of 60 firms. During this process, 51 firms were eliminated because we do not have data about their performance in pre and/or post IPO periods. Absence of this data has two reasons. First, some firms do not let ICI to publish their names in some years, so we know their ranks but we do not know to which firms those ranks belong. For example, 55 of the top 1,000 firms in 2014 fall into this category. Including them was an option but we would need some assumptions in that case and we rejected to base our analyses on some questionable assumptions. Second and more important reason for the missing data is simply that some firms could not find a place for themselves in top 1,000 lists for some related periods. The reader may rightfully think that

eliminating these firms from the final sample may result in a survivorship bias and thus may provide an artificial and unjust support to the findings of this study. In fact, the opposite seems to be true, since there are only 4 firms which were in top 1,000 before their IPOs but were not in top 1,000 during or right after the IPO. On the other hand, there are 32 different examples for the reverse case, which makes one think that firms get better ranks after IPO event. As a consequence, by omitting all these firms and refusing to rely on any assumptions, we are actually purposefully reducing the probability of rejecting equal or less post-IPO performance when compared to pre-IPO performance.

Once the final sample is decided, the key variable of this study is calculated for the years around IPO by the following formula:

$$Comp_{i,t+\epsilon} = MeanRank_{si,t+\epsilon} - Rank_{i,t+\epsilon}$$
 (1)

where (i) represents the firm, (t) represents the IPO year of that firm, (c) is an integer between -3 and +3, and (si) represents the sector of that firm which includes itself and its competitors. 'Rank' variable is already available in ICI dataset. The dataset also provides sector codes for all firms assigned by ICI according to 'International Standard Industrial Classification of All Economic Activities, Rev.2' (ISIC Rev2).

'MeanRank' variable gives the sector average rank for the related year. From the top 1,000 list, all firms in the related sector, whether they are quoted at BIST or not, are included in the following formula.

$$MeanRank_{si,t+\epsilon} = \frac{\sum Rank_{j,t+\epsilon}}{n_{t+\epsilon}}$$
 (2)

where (j) stands for all firms in the related sector and (n) is the total number of these firms. As in formula (1), (t+c) represents the years around the IPO of firm (i). There may be at least three important issues to discuss here. Firstly, non-quoted firms' inclusion is necessary because we are interested in all rivals and 'not going public' may well be a wise decision at some circumstances. Secondly, 'median' could be utilized instead of 'mean' but the overall results do not change in our case. Finally, sector average/median may suddenly change from year to year, at least theoretically, since we have data for at most 1,000 firms for each year. To make things more clear, let's consider the following example. Suppose that there are only three firms in a sector in (t) moment. First firm's rank is 1, second firm's is 500, and the last firm's is 999 in the top 1,000 list. Let the second firm be an IPO firm and be in our final sample. In this case, the sector average rank is 500 and our IPO firm's performance is neither better nor worse when compared to its sector. One year later (t+1), suppose that both first and our IPO firm protected their positions at 1 and 500 respectively. However, the third firm is no longer at top 1,000 list since its rank is now more than 1,000 and we have no chance to know exactly what the new figure is. Now, the sector average is 250.5, much better than our IPO firm's rank. Applying formula 1, we should deduce that the IPO firm performed poorly and lost some of its competitiveness just after its going public. In fact, there is no such thing and our IPO firm is at least as competitive as it was one year ago. Thus, one can claim that our key variable calculation/interpretation process is clearly biased by design. Nevertheless, the important thing is that it is biased towards only one direction and this is intentional. What this design actually performs for us is to decrease the probability of failing to reject a false improvement signal for IPO firms. Fortunately, the opposite is not true since, in the actual dataset, there is no firm which was better than its sector average at a year and then was suddenly out of the list in the following year.

The idea experiment above is about only two or three firms within a sector, just to clarify something. In our real dataset, number of firms within any sector at any year is generally much more than three. Table 1 below may give a hint about this issue. As expected, the distribution is not uniform, some sectors are overrepresented, but since the motivation of this study is not comparing the sectors, this does not pose a significant problem for the time being and this issue is revisited at the findings part. However, another feature, the total number of different firms in the final dataset, is somewhat striking. 2,067 is a low figure when you compare it with a potential maximum value of 20,000 (think about a completely different firm list in each year since 1993). This means that turnover is low for top 1,000 lists, making our calculated figures more reliable for testing our hypotheses.

In fact, the total number of firms which appeared at least once in one of the top 1,000 lists is 2,371. The difference, a group of 304 firms, is missing because their sectors do not have any representatives in the final sample of 60 IPO

firms for this period. Trying to explain why these sectors seem to refrain from going public is beyond the scope of this study and it might be an interesting future work, especially for the policy makers.

Table 1. Sectoral Frequency Distribution of All Firms in ICI Top 1,000 lists

| Sector Code | Number of Firms | 0/0 |
|-------------|-----------------|------|
| 321 | 396 | 19.2 |
| 311 | 295 | 14.3 |
| 322 | 200 | 9.7 |
| 384 | 167 | 8.1 |
| 352 | 137 | 6.6 |
| 383 | 135 | 6.5 |
| 371 | 125 | 6 |
| 369 | 116 | 5.6 |
| 382 | 93 | 4.5 |
| 381 | 75 | 3.6 |
| 356 | 74 | 3.6 |
| 341 | 53 | 2.6 |
| 351 | 37 | 1.8 |
| 342 | 36 | 1.7 |
| 400 | 30 | 1.5 |
| 313 | 27 | 1.3 |
| 324 | 20 | 1 |
| 332 | 19 | 0.9 |
| 361 | 18 | 0.9 |
| 390 | 14 | 0.7 |
| Total | 2067 | 100 |

Returning back to our original path, we are now ready to discuss the most important variable which is 'Comp'. 'Comp' is a very good proxy of a firm's competitive power, since it shows the relative rank against rivals. Calculating it for five different moments, from (t-1) to (t+3), for each IPO firm, enables the direct comparison of pre and post IPO periods. Results for a broader version, from (t-3) to (t+3), are also available but in that case number of firms without missing data falls from 60 to 26. Nevertheless, as Figure 1&2 illustrates, results and interpretations below are quite similar for these two cases. To compare pre and post periods, nonparametric tests were preferred because Shapiro-Wilk test results rejected normality for 'Comp t+3' (p = .002). Besides this fact, the same quantitative variable is measured at different times from the same sample in this study, thus Friedman test is appropriate to check whether the distributions are the same or not. Figure 2 below shows the distributions of 'Comp' variable in each of the five important periods. Friedman test statistic (30.413, p=.000) clearly points out a significant change in distribution through the years. Furthermore, the change seems to be in only one direction.

Figure 1. Changes in Distributions of COMP, for 26 firms from t-3 to t+3

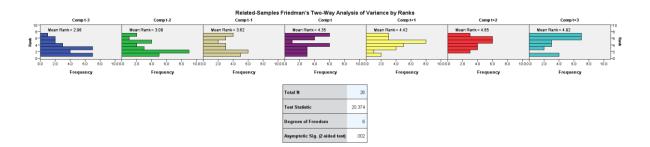
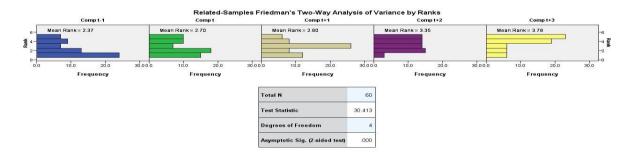


Figure 2. Changes in Distributions of COMP, for 60 firms from t-1 to t+3



Looking at these figures, especially Figure 1, readers may think that IPO firms do better than their competitors also before their IPO years. Besides, they may think that this is in line with Pagano et al. (1998) claims about growth and IPO decision and/or timing. That paper, analyzing IPOs in Italy, implies that firms are more likely to go public after large investments and abnormal growth and they might be seeing an IPO event just as a tool to raise the needed funds for additional growth. However, this is not a valid explanation in our case, for two reasons. Firstly, please remember the discussion on 36 IPO firms purposefully discarded from this study. 32 of them were not in the top 1000 list before their own IPOs, but they are successful enough to be in top 1000 list only after their IPOs. So, including these 36 firms would certainly lower the mean rank figures observed in pre-IPO periods. Secondly, IPO is not a single point event, but it is a process. The important thing is deciding to do IPO and getting ready for it and finally timing it. This process and its possible positive effects might have begun even before t-3. In other words, 'making the decision to do an IPO at a future time' might be preceding the growth as well. As Pagano et al. (1998) suggests and as the firms know, the probability of successfully going public increases according to firm size. Thus, IPO may be one of the major aims for a firm's life, not just an ordinary tool to raise fund. However, whether we see it as an important goal/aim or as a simple tool, our main finding is not affected. In the special case of large industrial Turkish firms, the competition-based results of complete IPO process seem to be favorable for IPO firms and not very good news for their (private or not) competitors.

Friedman post-hoc analysis results are presented in Table 2, for a better understanding of the aforementioned general difference in distributions. Pre-IPO (Comp_{t-1}) and post-IPO (Comp_{t+3}) values seem to be mostly responsible for that difference.

Table 2. Pairwise Comparisons of COMP, for 60 firms from t-1 to t+3

| | Test | Std. | Std. Test | | Adj. | |
|-----------------------------|-----------|-------|-----------|--------------|--------------|--|
| Pair | Statistic | Error | Statistic | Significance | Significance | |
| $Comp_{t-1}$ - $Comp_t$ | -0.333 | 0.289 | -1.155 | 0.248 | 1.000 | |
| $Comp_{t-1}$ - $Comp_{t+1}$ | -0.433 | 0.289 | -1.501 | 0.133 | 1.000 | |
| $Comp_{t-1}$ - $Comp_{t+2}$ | -0.983 | 0.289 | -3.406 | 0.001 | 0.007** | |

| $Comp_{t-1}$ - $Comp_{t+3}$ | -1.417 | 0.289 | -4.907 | 0.000 | 0.000** |
|-----------------------------|--------|-------|--------|-------|---------|
| $Comp_t$ - $Comp_{t+1}$ | -0.100 | 0.289 | -0.346 | 0.729 | 1.000 |
| $Comp_t$ - $Comp_{t+2}$ | -0.650 | 0.289 | -2.252 | 0.024 | 0.243 |
| $Comp_t$ - $Comp_{t+3}$ | -1.083 | 0.289 | -3.753 | 0.000 | 0.002** |
| $Comp_{t+1}$ - $Comp_{t+2}$ | -0.550 | 0.289 | -1.905 | 0.057 | 0.567 |
| $Comp_{t+1}$ - $Comp_{t+3}$ | -0.983 | 0.289 | -3.406 | 0.001 | 0.007** |
| $Comp_{t+2}$ - $Comp_{t+3}$ | -0.433 | 0.289 | -1.501 | 0.133 | 1.000 |

^{**:} Significant at 99% confidence level

In general, IPO firms seem to have improved their positions (ranks based on sales) within their sectors after their IPOs. However, we need to calculate the median of the differences to test this hypothesis. Hence, Wilcoxon signed rank test for related samples is proper here and Table 3 provides the detailed results for each meaningful term-pair.

Table 3. Wilcoxon Signed Rank Test Results for COMP, for 60 firms from t-1 to t+3

| year1 | year2 | no of positive differences | no of negative differences | Wilcoxon test score | p |
|-------|-------|-------------------------------|-------------------------------|------------------------|---------|
| t-1 | t | 39 | 21 | 3.188 | 0.010* |
| t-1 | t+1 | 33 | 27 | 2.282 | 0.022* |
| t-1 | t+2 | 40 | 20 | 3.754 | 0.000** |
| t-1 | t+3 | 46 | 14 | 4.262 | 0.000** |
| t | t+1 | 35 | 25 | 0.942 | 0.346 |
| t | t+2 | 39 | 21 | 2.356 | 0.018* |
| t | t+3 | 43 | 17 | 3.379 | 0.001** |
| t+1 | t+2 | 36 | 24 | 1.855 | 0.064 |
| t+1 | t+3 | 44 | 16 | 3.364 | 0.001** |
| t+2 | t+3 | 34 | 26 | 1.980 | 0.048* |

^{*:} Significant at 95% confidence level

As seen above, the difference of 'year2' and 'year1' figures is significantly higher than zero in most of the cases. Exceptional pairs are (t) and (t+1), (t+1) and (t+2). For those periods, the difference is still positive but not significant. On the other hand, the most obvious improvement is observed at pair (t-1) and (t+3), which are the beginning and the end of this study's time period. 46 out of 60 firms seem to be in better positions against their rivals three years after their IPOs when compared to their pre-IPO ranks within their sectors. Although the number of firms, which have improved their relative positions, changes in both ways from year to year, there are at least 20 firms which showed continuous improvement till the end, beginning with their IPOs. There are 7 examples for

^{**:} Significant at 99% confidence level

exactly the opposite case, but 4 of those firms are actually in better positions when compared to their pre-IPO years. 33 firms have experienced both up and downs in their post-IPO years, yet most of them enjoyed higher ranks than their pre-IPO ranks at least once. Given these facts, only 3 firms' market positions seem to have become totally worse after their IPOs. To present a general and more clear picture of these findings, we derive another variable which we call general success score (GSS). It is, as stated in formula 3, average post-IPO scores minus just before IPO scores.

$$GSS_{i} = \frac{\sum Comp_{i,t+p}}{3} - Comp_{i,t-1}$$
 (3)

where (i) represents the firm, (t) represents the IPO year of that firm, (p) is an integer between +1 and +3. Tables 4, 5, and 6, together, present detailed info on the GSS's distribution.

Table 4. Descriptive Statistics for GSS

| | | Statistic | Std. Error |
|------------------------|-------------|-----------|------------|
| Mean | | 95.43 | 20.73 |
| %95 Confidence | Lower Bound | 53.95 | |
| Interval for Mean | Upper Bound | 136.91 | |
| %5 Trimmed Mean | | 98.13 | |
| Median | | 116.99 | |
| Variance | | 25779.45 | |
| Std. Deviation | | 160.56 | |
| Minimum | | -272.64 | |
| Maximum | | 447.38 | |
| Range | | 720.02 | |
| Interquartile Range | | 241.60 | |
| Skewness | | -0.36 | 0.31 |
| Kurtosis | | -0.38 | 0.61 |
| N | | 60 | |

Table 5. One-Sample Wilcoxon Signed Rank Test Results for GSS

| Paira | Total | Test | Std. | Std. Test | Asymptotic |
|-------|-------|-----------|-------|-----------|--------------|
| ran" | N | Statistic | Error | Statistic | Significance |

Observed vs Hypothetical 60 1459.000 135.840 4.005 0.000**

Table 6. One-Sample t-test Results for GSS

| | | Statistic |
|----------------------------|-------------|-----------|
| Total N | | 60 |
| Mean Difference | | 95.43 |
| %95 Confidence Interval of | Lower Bound | 53.95 |
| the Difference | Upper Bound | 136.91 |
| Table 6 | (Cont'd) | |
| | | Statistic |
| t | | 4.60 |
| df | | 59 |
| Significance | | 0.000** |
| | | |

^{**:} Significant at 99% confidence level

As seen above, mean and median are both significantly higher than zero (p=.000) and thus the distribution is left skewed. This is the macro-level assessment. If we look at it at micro level, 44 firms out of 60 have got a positive score. In other words, more than 73% of IPO firms seem to have enjoyed some benefits of going public and as a result increased their market shares against the closest rivals. These figures may be somewhat surprising to some readers, especially when our aforementioned strict 'final sample selection process', which obviously favors the null hypothesis of equal performance, is considered. With a more flexible missing data handling procedure, the percentage figure above would easily be more than 79% (76/96). All findings up to now lead us to a one single direction which is simply 'going public is a good option if an industrial firm cares about improving its near future market share levels'. However, before jumping into that conclusion, we should elaborate on the issue a bit more.

Whether IPO decision is the most important reason for the up and downs or not, as expected, does not have a straightforward answer. A crystal clear answer requires a thorough elimination or importance ranking process of all other possible reasons. To make things even worse, this should also be done case by case for each firm, since firm-specific attributes may always alter the process. However, fortunately, the way we derive our key variable 'Comp' inherently prevents our results from being significantly biased by time-specific and sector-specific attributes/shocks at least. If 'Comp' were an absolute measure not a relative one and/or if t moments had represented the same calendar years for all firms, we should have utilized some extra control variables to eliminate the possible biases as much as we could. But, again, we still need to assume that the effects of these external shocks are perfectly or at least almost uniform across the firms within the same sectors. Firm-specific attributes mostly come into play at this stage. In a few circumstances, they may increase the chance of a violation of the uniformity assumption above but proving, if possible at all, that they are not a significant part of the equation requires extensive case studies with a much richer dataset. However, such an effort is needless for the time being, since this study's aim is neither a factor decomposition of relative success/failure nor identifying the ideal time and conditions for a firm to go public. The aim is providing some missing evidence from an emerging market, which should never be overlooked by any comprehensive approach to IPO field.

The summary of what we have learnt from the related IPO literature and the findings of this study is that an IPO, especially a relatively large one, is bad news for the rivals. Their performance ratios, profitability being at the top of them, and their market shares as well are very likely to be adversely affected. On the other hand, this is not totally true for that newly public firm since its market share is very likely to improve. There have been a few recent direct/indirect promising attempts to explain some parts of this situation. Hsu et al. (2010) discuss the issue through

a: Observed median= 116.99 and Hypothetical median= 0

^{**:} Significant at 99% confidence level

loosening of financial constraints, financial intermediary certification, and the presence of knowledge capital. Chemmanur and He (2011) deal with IPO waves and relate performance directly to timing. Going public; off the wave, during a wave, earlier in a wave, or later in a wave, does matter according to them. Each of these possibilities affects performance in a different way. Timing seems to be important also from a different perspective. Ruan and Qian (2014) results suggest that industry rivals' earnings news, during the book-building period of a first-time issuer firm, exert a competitive effect on that issuer. On the other hand, Spiegel and Tookes (2014) stress the profitability issue within the industry. They find that post IPO industry profits per unit of market share decline and customers become easier to steal. However, they see an IPO as a canary in the coal mine. In other words, IPOs do not cause danger but do just inform that something bad will happen. These attempts described in this paragraph are just some examples worth to explore further. These and alike should be tested, jointly whenever possible, in different settings. This would lead us through a sort of unified competition based theory which is required to fill a very important gap in broad IPO literature.

4. Conclusion

IPO literature is voluminous, however there are not many studies approaching the issue from a pure competition perspective. Furthermore, most of these already few studies deal with only rivals or the general changes in the competitive environments within sectors after IPOs. Thus, there is an important gap here. By directly focusing on the relative competitive powers of big IPO firms in an emerging country for twenty years, this study tries to fill this gap.

Main finding of the study is that going public seems to be a good option if an industrial firm cares much about improving its relative market share ranks. Thus, it also provides support to the idea that an IPO is generally bad news for the rivals. As discussed in the methodology part, any comprehensive IPO study should take this evidence seriously. However, before accepting it as a given and general fact, we all should see some similar results for other stock markets and different time periods. Trying a similar methodology in some different settings would be fruitful and the authors of this study sincerely believe that those new evidence would support this study's findings. After then, a natural continuation might be trying to form a sort of unified competition based theory, from the promising but not yet conclusive attempts aforementioned and may be a few new ones as well. Connecting it successfully to the broad IPO literature would finalize the issue. Without this solid connection, something will always be missing in this field.

References

- Baker, M. P. & Wurgler, J. (2000) The equity share in new issues and aggregate stock returns. *Journal of Finance*, 55, 2219–2257.
- Black, B. S. & Gilson, R. J. (1998) Venture capital and the structure of capital markets: Banks versus stock markets. *Journal of Financial Economics*, 47, 243–277.
- Brav, A. & Gompers, P. A. (1997) Myth or Reality? The Long-Run Underperformance of Initial Public Offerings: Evidence from Venture and Nonventure Capital-Backed Companies. *Journal of Finance*, 52 (5), 1791-1821.
- Bulut H.İ., Çankaya F. and Er B. (2009) Yönetici-Sahiplik Düzeyinin Düşük Fiyatlandırma ve Halka Arz Sonrası Faaliyet Performansına Etkisi: İMKB Örneği. *Gazi Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi*, 11, 101-120.
- Cai, J. & Wei, J. (1997) The Investment and Operating Performance of Japanese Initial Public Offerings. *Pacific-Basin Finance Journal*, 5, 389-417.
- Chemmanur, T. J. & Fulghieri, P. (1999) A theory of the going-public decision. Review of Financial Studies, 12, 249–279.
- Chemmanur, T. J. & He J. (2011) IPO Waves, Product Market Competition and the Going Public Decision: Theory and Evidence. *Journal of Financial Economics*, 101, 382-412.
- Hsu, H., Reed, A. V. & Rocholl, J. (2010) The New Game in Town: Competitive Effects of IPOs. *Journal of Finance*, 65, 495-528.
- Jain, B. & Kini, O. (1994) The Post-Issue Operating Performance of IPO Firms. *Journal of Finance*, 49 (5), 1699-1726. Kim, K. A., Kitsabunnarat, P. and Nofsinger, J. R. (2004) Ownership and Operating Performance in an Emerging Market, Evidence from Thai IPO Firms. *Journal of Corporate Finance*, 10, 355-381.

- Kurtaran, A. & Er, B. (2008) The Post-issue Operating Performance of IPO in an Emerging Market: Evidence from Istanbul Stock Exchange. *Investment Management and Financial Innovations Journal*, 5 (4), 54.
- Lucas, D. & McDonald, R. (1990) Equity issues and stock price Dynamics. Journal of Finance, 45, 1019–1043.
- Maksimovic, V. & Pichler, P. (2001) Technological innovation and initial public offerings. Review of Financial Studies, 14, 459–494.
- Pagano, M., Panetta, F. and Zingales, L. (1998) Why do companies go public? An empirical analysis. *Journal of Finance*, 53, 27-64.
- Ritter, J. R. & Welch, I. (2002) A Review of IPO Activity, Pricing, and Allocations. Journal of Finance, 57, 1795-1828.
- Ruan, T. & Qian, H. (2014) The Competitive Effect of Rivals' Earnings News on Initial Public Offerings. *Asian Finance Association (AsianFA) 2014 Conference Paper.* Available:
 - SSRN: http://ssrn.com/abstract=1508482 or http://dx.doi.org/10.2139/ssrn.1508482 [20th May 2016]
- Schultz, P. H. & Zaman, M. (2001) Do the individuals closest to Internet firms believe they are overvalued?. *Journal of Financial Economics*, 59, 347–381.
- Spiegel, M. I. & Tookes, H. (2015) An IPO's Impact on Rival Firms. Available:
 - SSRN: http://ssrn.com/abstract=2437027 or http://dx.doi.org/10.2139/ssrn.2437027 [20th May 2016]
- Spiess, D.K. & Pettway, R.H. (1997) The IPO and first seasoned equity sale: Issue proceeds, owner/manager wealth, and the underpricing signal. *Journal of Banking and Finance*, 21, 7, 967–988.
- Zingales, L. (1995) Insider ownership and the decision to go public. Review of Economic Studies, 62, 425-448.