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DECODING VENTURE CAPITAL EXIT PATTERNS: AN INDIAN PERSPECTIVE

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ABSTRACT

This study investigated the patterns adopted by VCs in their choice of exit routes The relationship between industry, transaction, and fund level variables with type of exit route chosen was also analyzed. Exit patterns were coded based on industry, type of exit and nature of fund. The relationship between industry, transaction, fund level variables and the type of exit route chosen was analyzed based on 221 transactions that occurred in India during the period from 2004 to 2017. High levels of similarity in the exit patterns of the service and manufacturing industries were observed. The myth that IPO from a service industry generates higher value does not seem to hold true. The choice of exit route depends on the type of exit viz. partial/complete exit. The probability of market exit increased by almost 2.8 times when the exit was partial. The fact that there is similarity in exit patterns of both foreign origin and Indian funds is beneficial for entrepreneurs paving way for strategy changes. Secondly the non-differential impact of industry on exit route choice provides further options for both the entrepreneurs and investors.

Contribution/ Originality: This study contributes to the existing scant literature on VC exits that specifically focuses on exits by early stage investors. This study provides the first evidence for the Indian VC market that the choice of exit route depends on the type of exit viz. partial/complete exit.

1. INTRODUCTION

Private Equity/Venture Capital (PE/VC) has been the focus for financing start-ups and entities seeking growth capital over the last decade, especially in India. Private equity / venture capital firms in India have recorded investments worth USD 10,700 million (mn), through 6300 investment transactions in 4350 firms[1]. Given the fact that the aim of these investments is to time their exit with limited obstacles and highest possible returns, the focus of the entrepreneurial process has shifted from creation of a new venture to ensuring timely and profitable exit at some point in future.

DeTienne (2010) states that the exit mechanism is an important aspect of the entrepreneurial process and significantly affects investors, firms, industry and the economy. From an investor's point of view, VC investment decisions are influenced by the availability of exit opportunities at the appropriate time. Thus, it allows investors to realize their share in the firm's created wealth (Covin, Daily, & Dalton, 2001) and also to recycle the funds for new

[1] Venture Intelligence database 2018.

investments (Cumming.. & Johan, 2008; Pearce & Barnes, 2006). Viewed from a firm's perspective, investment brings in additional resources, possibly new professional management, ability to raise more capital and the possibility for expanding to other product areas (Boeker & Wiltbank, 2005). For the investment seeking industry, exit opportunities are critically important as there is a higher valuation effect experienced by rival firms when a firm is acquired or when it goes public (Akhigbe, Borde, & Whyte, 2003). Exit opportunities also benefit the economy as an exit results in reinvestment of entrepreneurial knowledge and the realized wealth in new start-ups, development of local infrastructure, philanthropy and community activities (Mason. & Harrison, 2006). This study explored the VC's exit patterns in India, in terms of the exit routes adopted, the industry, type of exit transaction and type of VC fund.

The forms of exit for VC's can be broadly classified into six categories (1) taking the investee company public (IPO); (2) sale of the investee company's shares in a secondary market once the firm has gone public (open market transactions); (3) sale of shares to another company (strategic/trade sale); (4) sale of investee company's shares to another VC investor (secondary sale); (5) selling back the shares to the investee company (buyback); and (6) liquidation of the investee company (write-off) (Gladstone, 1988).

Literature indicates that IPOs are the most preferred choice of exit due to reasons such as: high return on investments for VC/PEs (Das, Jagannathan, & Sarin, 2003), reputation building mechanism for VC/PE (Gompers, 1996; Hibara, 2004) and implicit contract over future control for entrepreneurs (Bayar & Chemmanur, 2012; Gilson & Black, 1999). Gerasymenko and Arthurs (2014) argued that the perception of IPO exit's superiority is partially due to the availability of valuations in an IPO exit as compared to other forms. Exit through strategic sale is the next most preferred choice for investors on account of synergistic gains that can be partly captured by the investee firm through higher acquisition premium (Tseng & Kuo, 2018); but the negative side is that entrepreneurs lose control of the firm after acquisition (Gilson & Black, 1999).

IPOs and open market transactions that occur through stock exchanges are broadly termed as market transactions; while strategic sale, secondary sale and buyback transactions are classified as off-market transactions. The quantum of public information available in an IPO exit and open market transactions are higher, which has in turn led to a relatively larger volume of research in that direction. On the contrary, studies on strategic sale, secondary sale and buybacks are lesser given the data constraints (Schwienbacher., 2014); especially in the emerging markets (Wang & Sim, 2010). This study is a pioneering and unique effort, as it analyzed VC exits through different exit routes, viz. IPOs, strategic sale, secondary sale and buybacks. This exploratory study attempted to understand the existing exit patterns across various exit routes and its associations with industry, transaction, and fund level variables.

The subsequent sections of the paper are organized as follows. The Literature review and the hypotheses about VC exits in India have been developed in section 2; The data and methodology are described in section 3; the empirical findings are presented in section 4 in the following order: the hypotheses on industry type and exit route variables are tested followed by testing the transaction level and exit route variables. Finally, the nature of fund and exit route variables were tested. The necessary descriptive statistics on different variables of interest are also presented in section 4. In the last section, the conclusions and implications of this research are discussed.

2. HYPOTHESES DEVELOPMENT

Entrepreneurial exits have received woefully scant attention as compared to the relatively higher attention that researchers have bestowed on entrepreneurial start-ups (Mason. & Harrison, 2006). Studies pertaining to PE/VC exits can predominantly be categorized into three distinct groups, based on the type of exit, timing of exit and the returns on exit. Notably, the choice of exit route adopted and timing of exit, are the key factors in determining the returns generated at exit. According to Schwienbacher. (2014) selecting the exit route is a very important strategic decision that requires an analysis of internal and external factors conducive for a successful exit. The type of exit

route adopted is an important aspect of exit mechanism, and is decided on the basis of various factors relating to the VC firm (Hibara, 2004) market conditions (Neus & Walz, 2005) and country legal systems (Bruton & Ahlstrom, 2003).

While there are several studies on the impact of internal and external factors on the choice of exit route in the context of the US and European markets, studies in the Asia-Pacific context on the same factors are very scarce. Studying the US and European markets, Schwienbacher (2008) investigated the factors affecting the exit choice of VCs and its relationship with VC firm characteristics. The study observed that the choice of a firm going in for an IPO largely depends on the replacement of the entrepreneur by the VC firm during the enterprise growth; higher reporting requirements demanded by the VC firm and the VC firm's inclination towards stage financing.

Tian (2011) analyzed in detail the impact of VC stage financing on a firm going public, and argued that when the VC is located far away (in terms of physical distance) from the entrepreneurial firm, stage financing appeared to positively affect the firm's likelihood to go for an IPO, operating performance of the firm and its post IPO survival rate. This relationship is observed to be negative when the firm is closer to the investor (Shah, Anwar, & Hasnu, 2018) Secondly, a firm's choice of exit route between IPOs and acquisition depends on whether the entrepreneur makes the exit choice or if it is a joint choice made in consultation with the VC firm. The presence of a VC investor leads to more likelihood of an exit via IPO (Bayar & Chemmanur, 2011). The study also pointed out that various internal factors such as growth potential, size of the investment and higher private control, positively affect the likelihood of an IPO exit.

A well-developed stock market is also mandatory for the VCs to take the firm public and is the key for the existence of an active and successful VC market (Gilson & Black, 1999). A related study indicated that the probability of an IPO exit is positively correlated with the IPO volumes in the home country of cross–border investors (Bertoni & Groh, 2014). On the contrary, Cumming, Fleming, and Schwienbacher (2006) argued that the quality of a country's legal system is more directly connected to facilitating VC backed IPO exits than the size of that country's stock market. The study also investigated the impact of the legal environment quality on the choice between IPO and private exit routes such as acquisitions, secondary sales, buybacks and write-offs, across different countries in the Asia-Pacific region, and concluded that a high quality legal environment is a determinant for the choice of exit route.

Gompers (1996) investigated the relevance of the Grandstanding theory in the choice of exit route by examining whether young VC firms take the invested companies public earlier than older VCs. The study noted that companies backed by young VC firms are more under-priced and younger at the time of IPO than their older counterparts. In addition, young VC firms bring the invested companies to IPO sooner as part of reputation building, which can make the fund-raising for their next VC funds easier (Hibara, 2004). Apart from the experience of VC/PE firms, the choice of exit route is also influenced by the additional exit opportunities brought in by foreign VC investors. A study by Bertoni and Groh (2014) concluded that the probability of exiting via strategic sales is positively correlated to the additional set of strategic sales opportunities brought in by foreign investors (Yang, 2012). In addition the investment duration and the time left for VC fund to liquidate the fund and give the money back to investors also affect their choice of exit route (Dominic & Gopalaswamy, 2019).

Valuation is another important financial aspect that determines the choice of exit route. Higher valuation and larger amount of money realized at the exit leads to an exit either through IPO or strategic sale (Bayar & Chemmanur, 2012). Mason and Harrison (2002) studied the relationship between the type of investor and exit route adopted and found that business angels opted for strategic sale as the main exit route, and the sale to existing shareholders as the next best option.

Industry level features can also be determinants for the investors' choice of exit route. In industries characterized by greater benefits of private control, firms are more likely to go for an IPO. Firms with less tangible assets also are more likely to go for an IPO (Bayar & Chemmanur, 2012). High tech industries view IPO as the best

exit route (Wang & Sim, 2010). Firm valuation (Brahmana, Setiawan, & Hooy, 2019; Miloud, Aspelund, & Cabrol, 2012) as well as gains from VC backed investments also depend on the industry to which the firm belongs; hence, it is another determinant of exit route choice (Miloud et al., 2012). It is possible that the choice of exit route depends on the industry specific characteristics, as each industry has its own product-life-cycle, tangible/non-tangible assets dominance, and availability of buyers at exit etc. (Coleman & Robb, 2012). Though there are multiple attributes that determine the choice of exit route, there could well be an underlying pattern, based on the type of industry. The reason could be that VC/PE is clearly granulated in terms of their choice of industry, stage of investment etc. Therefore, it could emerge that a certain type of fund would possibly be meeting only the needs of a specific industry and can follow a specified exit route. There could be a broader choice of exit mechanism, in terms of market or off-market sale based on the industry i.e., service/manufacturing industry to which the investee firm belongs.

Hence, for this study, it was hypothesized that:

H_01: Choice of exit route is independent of the industry to which the investee firm belongs viz. manufacturing or service.

Transaction level features may also influence the exit route chosen by investors. There could be patterns in the choice of exit route, based on whether the exit is partial or complete.

The greater the information asymmetry between the VC and the buyer, the greater is the possibility that the VC will adopt a partial exit to signal quality and compensate for the information asymmetry. As partial exit mitigates information asymmetry, VCs exit partially in an IPO where the information asymmetry is high, as compared to other forms of exits. In short, the choice of an exit vehicle affects the extent of the exit explained by the information asymmetry in different exit mechanisms.

In a complete exit, the investor firm sells their complete holding, whereas in a partial exit, the entire equity is not offloaded. Different legal constraints such as contractual obligations disallowing complete exit for a specific time period in an IPO (Cumming et al., 2006), as well as the expected higher future valuations prompt firms not to exit completely (Espenlaub, Khurshed, & Mohamed, 2015) may also be aligned with the choice of partial or complete exit. Therefore, it can be argued that the choice of exit route depends on the type of exit. There may be different patterns in the choice of exit routes depending on the form of exit, viz., partial/complete.

This study investigated whether there existed an association between the form of exit and the exit route chosen, which has been hypothesized as:

H_02: Choice of exit route is independent of the type of exit transaction viz. partial or complete.

Fund level factors could be another major deciding factor in the choice of exit. There are two major types of fund in the Indian VC market - India-dedicated fund and foreign fund. India-dedicated funds are independent funds managed by an Indian VC firm or Foreign VC firm, solely for the purpose of making investments in ventures operating in India. It is a dedicated fund for Indian ventures. Foreign funds are those which are not dedicated to Indian ventures and may invest in ventures in other countries also. There could be patterns in the exit behavior based on the type of fund, viz., India-dedicated/foreign funds.

The rationale for this difference could be due to the varying degrees of focus and local market knowledge these funds possess (Yang, 2012). India-dedicated funds with their increased focus on the Indian VC industry, coupled with a relatively higher ability to identify a strategic buyer, should prefer a strategic sale as compared to other forms of exit. Foreign funds, on the contrary, given their reputation (Gompers, 1996) and experience (Hibara, 2004) should be able to bring more firms to the IPO market.

This research studied the association between the type of fund exiting and the choice exit route, which was hypothesized as:

H_03: Choice of exit route is independent of the type of VC fund viz. India-dedicated or foreign.

Studies on VC market exits in India are limited as most researchers have focused on the investment part of the PE/VC. One of the initial descriptive studies by Mitra (2000) describes the status of VC investments in India

during the 1990s, in terms of source, stages and methods of investment. Dossani and Kenney (2002) explored the efforts required in creating a VC industry in India with reference to the institutional and legal ecosystems. All the factors which led to the formation of the VC industry, the status of the VC industry in 2002, and the way forward are discussed by their study.

One of the initial empirical studies on VC market in the Indian context was carried out by Thillai and Kamat (2012). The study focused on the differences observed in the investment patterns between domestic and foreign VC firms, and found the dominance of foreign firms in the VC-PE industry in India and the focus of foreign VCs on technological and service sectors as compared to domestic VC firms' focusing on traditional sectors such as manufacturing. Raghupathy and Thillairajan (2015) compared the performances of VC-backed IPOs with that of non-VC backed IPOs, and concluded that VC-backed IPOs exhibited superior performance. Katti and Raithatha (2018) presented the evidences for value erosion when VCs exhibit the opportunistic behavior of exiting through the easy route of secondary market when the venture is expected to underperform. Their study focused on the returns generated at exit than on the exit routes adopted. As stated earlier, Indian studies have focused predominantly on the investment mechanism in the VC industry.

Studies, specifically focusing on exits carried out by early stage investors such as VCs are notably absent in literature. Similarly, there are no studies focusing on the relationship between industry level as well as transaction level variables and the exit route chosen, especially in the Indian context. The majority of studies on exit routes have focused on IPO exit or strategic sale, mainly due to the lack of availability of data about other exit routes (Schwienbacher., 2014). The availability of data pertaining to other important exit routes such as secondary sale and buybacks makes this study unique.

3. DATA AND METHODOLOGY

The data for addressing the stated hypotheses were obtained from Venture Intelligence. The variables used from the data set were in terms of rounds of investments, type of exit, exit valuations etc. The database included exit transactions carried out by various VC investors across different investee firms in India, for the period from January 2004 to March 2017.

There were a total of 632 transactions amounting to USD 8842 mn between January 2004 and March 2017. Though there were large sets of transactions, there were missing fields in many transactions, and after appropriately filtering them, 221 exit transactions which had complete data in terms of industry to which the firm belongs, type of exit transaction, type of VC fund and exit routes adopted were chosen.

The 221 exit transactions were spread across 201 companies amounting to USD 3883 mn. Of the 221 transactions, 53 were stock market transactions across 48 companies amounting to USD 1245 mn which include exits made through IPOs as well as open market transactions routes. There were 168 exit transactions across 153 companies through off-market route amounting to USD 2638 mn. These transactions were pertaining to strategic sale, secondary sale, and buybacks. Descriptive data pertaining to each variable is presented in the subsequent sections.

Hypothesis testing was carried out at a significance level of 5% for all the stated hypotheses. The Chi-square test of homogeneity and Chi-square test of independence were adopted to explore the connection between the industry type, transaction type, type of exiting fund and the exit routes chosen. The Chi-square test of homogeneity was used to determine if any difference existed between the proportions of exits through different exit routes for different dichotomous dependent variables such as market/off-market exit, partial/complete exit and exit by domestic/foreign fund. The Chi-square test of association was also carried out to test whether different categorical variables such as type of industry, type of exit transaction as well as type of exiting VC firm are associated with the exit route chosen. The test determined whether the categorical variables of interest were statistically independent.

To identify the partial contribution of each of the independent variables - industry type, transaction type and type of exiting fund - to the response variable - choice of exit route in the model and to determine the statistical significance for each of the independent variables, binomial logistic regression was carried out. Binomial logistic regression was used also to determine the probability of exiting through a market sale given the independent variables.

4. ANALYSIS AND DISCUSSION

Exit is an important aspect of VC activity though which General Partners (GP) realise the returns on the investments made in start-ups for onward distribution to Limited Partners (LP). In India, the popular exit routes that investors adopt were strategic sale, secondary sale, buyback by the entrepreneurs, IPOs and open market transactions. Out of these five generally adopted exit routes, the first three are off-market transactions and the last two are executed through a stock market. Figure 1 presents the classification of the exits with the help of a pie chart.

Of all the 221 exit transactions between 2004 and 2017 chosen for this study, 74 exits were through secondary sale (33.48%), and 66 exits were through strategic sale (29.86%). There were 28 buyback exits, which accounted for 12.67% of the total exit transactions. Only 10 exits were through the IPO route (4.52%), and 43 exits were open market transactions (19.46%). The last two mechanisms were stock market based exits, which together form 23.98% of total VC exits.

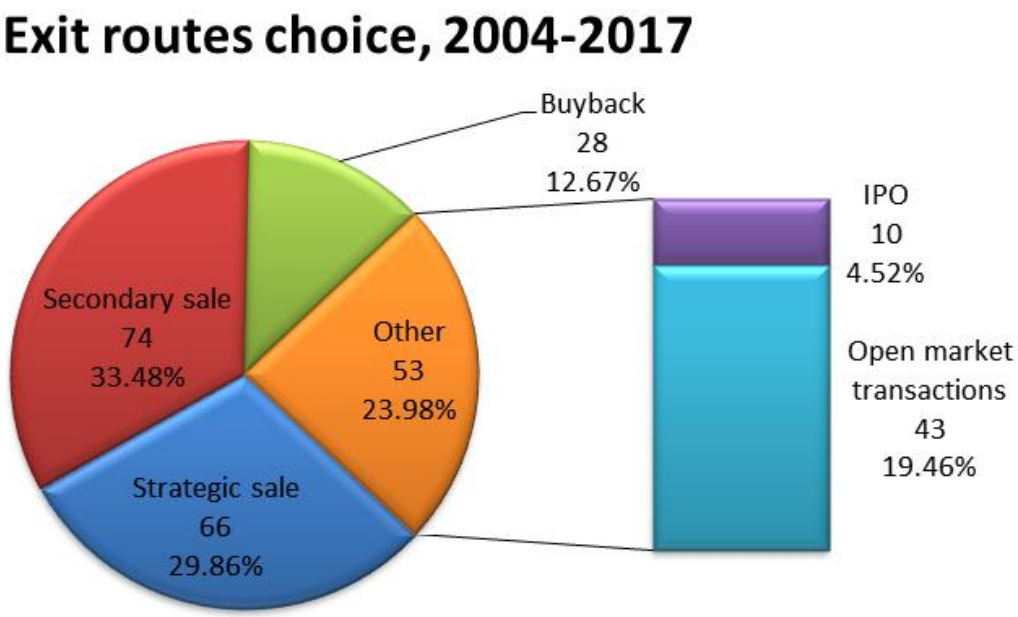

Figure-1. Different exit routes adopted by investors during the period 2004-17.
a. Source: Authors calculations from Venture Intelligence (2018).

4.1. Exit Route and the Industry

In this study the classification was restricted to the type of industry, viz., manufacturing and services only. Further classifications in each of the said categories were not carried out due to poor sample size. The classification was based on the nature of business carried out by the companies.

4.1.1. Exploring the Exit Patterns in Service and Manufacturing Industries

Table-1. Market/off-market exits from service and manufacturing industry during the period 2004-17.

Exit Route	Industry type		Total
	Service	Manufacturing	
Off-market sale	150_a (75.4%)	18_a (81.8%)	168 (76.0%)
Market sale	49_a (24.6%)	4_a (18.2%)	53 (24.0%)
Total	199 (100.0%)	22 (100.0%)	221 (100.0%)

Note: a. Each subscript letter denotes a subset of Fund Nature categories whose column proportions do not differ significantly from each other at the .05 level. 0 cells (0.0%) had expected count less than 5. The minimum expected count was 5.28. $\chi 2(1) = .451$(p = .502), Cramer's V = .045
b. Source: Authors calculations from Venture Intelligence (2018).

All the firms in the database were categorized into service or manufacturing based on their industry classifications and operations. An off-market sale is defined as an exit where the shares are not sold through a stock market; whereas, the market sale involves off-loading the holdings through a stock market. Strategic sales, secondary sales and buybacks were off-market sale; whereas IPOs and open market transactions were market sale. From Table 1 it can be noted that out of the 199 total exits in the service sector, 150 exits were off-market transactions and 49 exits were stock market exits accounting for 75.4% and 24.6% respectively of the total exits. Out of the 22 exits in manufacturing sector, 18 exits (81.8%) were through the off-market route and 4 exits (18.2%) were through the stock market.

The patterns in the preference for exit route seem to be homogeneous across the service and manufacturing sectors. To confirm this statistically, a Chi-square test for homogeneity was conducted among the service sector and manufacturing sector companies at a significance level of 5%. This test helped to statistically determine whether the proportions of exits through different exit routes are different for each industry group.

To explore further on the patterns, a Chi-square post hoc test was used to determine the differences between these groups. The Chi-square statistic obtained was 0.451 with a p-value of 0.502, which was not significant. The test indicated that there is homogeneity in exit patterns across the service and manufacturing industries. The results implied that the proportion of exits through different exit routes was the same across both the service and manufacturing industries. There appears to be no industry specific pattern in the choice of exit route, at least when the companies are broadly classified into service and manufacturing.

Table-2. Exits from service and manufacturing industry during the period 2004-17.

Exit Route	Industry type		Total
	Service	Manufacturing	
Strategic sale	59_a (29.6%)	7_a (31.8%)	66 (29.9%)
Secondary sale	68_a (34.2%)	6_a (27.3%)	74 (33.5%)
Buyback	23_a (11.6%)	5_a (22.7%)	28 (12.7%)
IPO	9_a (4.5%)	1_a (4.5%)	10 (4.5%)
Open Market transactions	40_a (20.1%)	3_a (13.6%)	43 (19.5%)
Total	199 (100.0%)	22 (100.0%)	221 (100.0%)

Note: a. Each subscript letter denotes a subset of Fund Nature categories whose column proportions do not differ significantly from each other at the .05 level. 3 cells (30.0%) had expected count less than 5. The minimum expected count was 1. $\chi 2(4) = 2.689$ (p= .611).
b. Source: Authors calculations from Venture Intelligence(2018).

To explore the micro patterns of exit through specific exit routes such as strategic sale, secondary sale, buybacks in off-market channel, IPOs and open market transactions in market channel, a Chi-square test of homogenity was carried out at a significance level of 5% for the service and manufacturing industries independently. This test purports to check whether the patterns in the choice of exit routes was the same for both the service and the manufacturing industries, with respect to the five different sub-exit routes listed.

In Table 2 the post-hoc pairwise comparisons of exits through different exit routes, based on industry, using multiple z-tests of two proportions with a Bonferroni correction is presented. It can be observed that all pairwise comparisons were not statistically significant. The results confirm that there was homogeneity in the choice of exit route across both the industries for all the five different exit routes. The difference in percentage of exits through strategic sale between the service and manufacturing sectors was 2.2%, which was not significant. Similarly, the difference of 6.9% in secondary sale, 11.1% in buybacks and 6.5% in open market were not significant with a Chi-square value of 2.689 and a p-value of 0.611. This analysis further reinforced the earlier finding that there was homogeneity in exit route choices across industries.

4.1.2. Exploring the Association between the Investee Firm Industry and the Chosen Exit Route

A Chi-square test of independence was carried out between the industry to which the firm belongs and the exit route chosen, in order to explore the relationship between the choice of exit route and industry. From Table 1 it can be inferred that all the expected cell frequencies were greater than 5. There was no statistically significant association between the type of industry and the exit method chosen: $\chi 2$ (1) = 0.451, p = 0.502. The association was insignificant, Cramer's V = 0.045.

Since there was no statistically significant association between the industry type and the exit route chosen, the null hypothesis that choice of exit route is independent of the industry to which the investee firm belongs, viz., manufacturing or service was not rejected. The result implied that the exit route chosen, either market sale or off-market sale, is not dependent on the industry to which the firm belongs. The result that exit route choices are independent of the industry is contrary to earlier studies on exit valuations that the service industry companies which are characterized by fewer tangible assets are likely to go for IPO, and manufacturing companies which are characterized by greater tangible assets are more likely to go for an off-market sale. This relationship was explained by the association between the nature of the industry a company belongs to and the equity valuations (Bayar & Chemmanur, 2012).

4.2. Exit Route and the Type of Exit Transaction

Partial exit refers to VC investors exiting the venture partially and retaining a smaller portion of their initial investments. Complete exit happens when the investor exits completely from their investments and no longer holds any shares in the respective invested company. Partial and complete exits may happen through any of the five different exit routes discussed earlier. In this section the patterns for partial or complete exits with the type of exit route chosen were identified.

4.2.1. Exploring the Exit Patterns with Respect to the Type of Exit Transaction Done

The descriptive statistics of all exits, viz., partial and complete exits, and the exit routes chosen are presented in Table 3. Of the 221 exits, 56 (25.3%) were partial exits, and 165 (74.7%) were complete exits. It can be observed that out of the 56 partial exits, 25 (44.6%) were through secondary sale and 13 (23.2%) were through open market transactions. A possible preference for these two exit routes could be due to the comparative higher liquidity they can provide. The third prominent exit route for partial exits was IPO, with 7 (12.5%) exits.

Table-3. Partial and complete exits during the period 2004-17.

Exit Route	Transaction type		Total
	Partial exits	Complete exits	
Strategic sale	6_a (10.7%)	60_b (36.4%)	66 (29.9%)
Secondary sale	25_a (44.6%)	49_b (29.7%)	74 (33.5%)
Buyback	5_a (8.9%)	23_a (13.9%)	28 (12.7%)
IPO	7_a (12.5%)	3_b (1.8%)	10 (4.5%)
Open Market transactions	13_a (23.2%)	30_a (18.2%)	43 (19.5%)
Total	56 (100.0%)	165 (100.0%)	221 (100.0%)

Note: a. Each subscript letter denotes a subset of Fund Nature categories whose column proportions do not differ significantly from each other at the .05 level. 1 cell (10.0%) has expected count less than 5. The minimum expected count was 2.53. $\chi 2(4) = 23.915 (p < .0005)$, Cramer's V = .329
b. Source: Authors calculations from Venture Intelligence (2018).

The reason for a higher percentage of partial exits in IPOs may be due to the legal restrictions on initial investors for exiting completely in an IPO. Another possible reason could be the investors' expectation of a higher future valuation for their holdings, based on the perception that only successful companies are able to succeed in an IPO. Partial exits though strategic sales and buybacks were the least at 10.7% and 8.9% respectively. One reason for this low preference for the acquirer could be that the acquiring company may not be able to gain complete control over the target company in a partial exit, as it would in a complete exit. Partial exits happen least in buybacks because these happen mostly when the company is not performing as per the expectations of investors. In buybacks, the initial investors may desperately want to exit the investment completely because they believe that the company is not going to provide enough risk adjusted return on their capital. Hence, they prefer to sell the complete holdings back to the company.

Table 3 shows that there were 165 complete exits during the study period, out of which 60 (26.4%) were through strategic sales. This observation is line with the earlier mentioned argument that strategic sale calls for a complete exit for gaining control. Secondary sales was the next popular exit route for a complete exit. Open market transaction accounted for 18.2% with 30 exits, which may also be attributed to the liquidity offered in this exit route. IPO as an exit route was chosen only by three complete exits. As discussed earlier, it may be attributed to the legal constraints as per the VC agreement, which prohibits the initial investors to sell-off their shareholdings completely at the time of IPO. It may also be due to the relatively lower confidence that VCs have in IPOs regarding the potential increase in the value of their investments after the IPO.

To further explore the pattern of choice of exit route, Chi-square test for homogeneity was carried out at a significance level of 5%. This test purports to check whether the patterns in the choice of exit routes is homogenous for partial and complete exits, for the various exit routes chosen in the study. The Chi-square statistic obtained was 23.915, with a p-value of <0.0005, which implied that there was a statistically significant difference in the patterns of exit routes chosen by partial and complete exits.

In other words, the exit patterns exhibited by partial and complete exits were not same, but significantly different. Chi-square post-hoc analysis was conducted to figure out exactly where the differences in the exit patterns lay. Statistical significance was checked at $p < 0.05$. There were statistically significant differences in the proportion of partial exits that happened through strategic sales than complete exits (n = 6, 10.7% versus n = 60, 36.4%), the proportion of partial exits through secondary sale than complete exits (n = 25, 44.6% versus n = 49, 29.7%), as well as the proportion of partial exits through IPOs than complete exits (n = 7, 12.5% versus n = 3, 1.8%) with a p value < 0.0125. There were no statistically significant differences in the proportion of partial exits through

buybacks than complete exits (n= 5, 8.9% versus n = 23, 13.9%) and the proportion of partial exits through open market transactions than complete exits (n = 13, 23.2% versus n = 30, 18.2%) with a p value > 0.05.

The results implied that the exit route chosen by a VC depends on the type of exit transaction made. When VCs want to exit completely, they predominantly exit through a strategic sale of the company. Their least adopted choice of exit route will be IPO, which may be attributed to the legal constraints and attempts to reduce information asymmetry (Cumming. & MacIntosh, 2003). When VCs are looking for a partial exit, secondary sale was the most preferred choice, which may be attributed to the higher comparative ease and the liquidity in that route, as well as the fact that there is less pressure from the buyer side for a complete sell-off due to information asymmetry. This finding supports the information asymmetry theory on secondary sale proposed by Cumming. and MacIntosh (2003). Thus, VCs exhibits different exit patterns depending upon the type exit transaction they are making.

The Chi-square test of independence was carried out to check whether there was any association between the VC making a partial or complete exit, and the exit route chosen. The test was conducted at a significance level of 5%. A statistically significant association was seen between the type of exit transaction and the exit route adopted, $\chi 2(4) = 23.915$, $p < .0005$. Therefore, the null hypothesis that exit route chosen by VCs is independent of the type of exit transaction, viz., partial/complete was rejected.

The association was moderately strong, Cramer's V = 0.329. The result implied that the exit route chosen depends on the types of exit transaction, viz., partial/complete. Secondary sales are mostly associated with partial exits followed by open market transactions, whereas complete exits are associated more with strategic sale. This may be due to the preference of strategic acquirers to have a controlling majority in the acquired company, which forces exiting investors to do a complete exit. Such requirements don't arise in a secondary sale or an open market transaction.

4.3. Exit Route and the Nature of the VC Fund

As indicated earlier VC funds that invest in the Indian VC market are broadly classified into India-dedicated fund and foreign fund. When investments are made by a VC firm, out of its fund dedicated for India, it is categorized as India-dedicated funds. Foreign funds are defined as funds not dedicated for India, but they invest into Indian ventures from a portion of their global fund.

4.3.1. Exploring the Exit Patterns with Respect to the Type of Exiting VC Fund

Table-4. Exits by India-dedicated and foreign funds during the period 2004-17.

Exit Route	Fund Nature		Total
	India-dedicated	Foreign	
Strategic sale	45_a (28.7%)	21_a (32.8%)	66 (29.9%)
Secondary sale	58_a (36.9%)	16_a (25.0%)	74 (33.5%)
Buyback	18_a (11.5%)	10_a (15.6%)	28 (12.7%)
IPO	5_a (3.2%)	5_a (7.8%)	10 (4.5%)
Open Market transactions	31_a (19.7%)	12_a (18.8%)	43 (19.5%)
Total	157 (100.0%)	64 (100.0%)	221 (100.0%)

Note: a. Each subscript letter denotes a subset of Fund Nature categories whose column proportions do not differ significantly from each other at the .05 level. 1 cell (10.0%) had expected count less than 5. The minimum expected count was 2.90. $\chi 2(4) = 4.995$(p = .288), Cramer's V = .15
b. Source: Authors calculations from Venture Intelligence (2018).

Table 4 lists all the exits made by India-dedicated as well as foreign funds through five chosen exit routes. Out of 221 exits between 2004 and 2017, 157 (71%) were by India-dedicated funds, and 64 (29%) by foreign funds. A majority of exits by India-dedicated funds were through secondary sales 58 (36.9%) and strategic sales 45 (28.6%). 31 exits (19.7%) were through open market transactions and 18 exits (11.5%) were through buybacks. The least chosen exit route by India dedicated funds was IPOs, with just five exits.

Similar to the pattern exhibited by India-dedicated funds, the two most popular exit routes by foreign funds were strategic sales 21 and secondary sale 25 (32.8% and 25% respectively). Twelve exits were through open market transactions and 10 exits through buybacks. IPOs again were the least preferred exit route with just five exits choosing this option. It may be attributed to the difficulty in exiting by going public, as compared to other exit options like secondary sales or strategic sales (Osiichuk, 2016).

Similar to earlier sections, in order to assess the patterns, a Chi-square test for homogeneity was done at a significance level of 5%. The Chi-square statistic obtained was 4.995, with a p-value of 0.288. The result indicated that there was no statistically significant difference between the proportions of India-dedicated funds and foreign funds in their choice of exit routes. The results implied that the exit patterns exhibited by India-dedicated funds and foreign funds were essentially the same. Chi-square post-hoc analysis was carried out involving pairwise comparisons of proportions using the z-test with a Bonferroni correction. None of the pairwise comparisons were statistically significant. The results confirm that the proportion of exits through different exit routes is the same, both for India-dedicated funds and foreign funds for every other exit route adopted. Exit route patterns were homogeneous across exits by India-dedicated as well as foreign funds.

To check the association between the nature of the fund and the exit routes chosen, a Chi-square test of independence was conducted at a significance level of 5%. There was no statistically significant association between the fund nature and the exit routes chosen, $\chi 2(4) = 4.995$, $p = 0.288$. The null hypothesis that there is no association between the exit route chosen and the nature of the fund, viz., India-dedicated/foreign was thus not rejected. The association was very small to be significant with a Cramer's V value of 0.15 only. The result implied that the exit route chosen is independent of the nature of the fund. This contradicts the earlier finding by Bertoni and Groh (2014) that the probability of exiting via trade sales is associated with the exiting firm being funded by foreign funds.

4.4. Exploring the Odds of a Market Exit

Table-5. Logistic regression model for market exits

Independent variables	Marginal effects	Sig.	Odds ratio
Fund nature	.129	.719	.867
Investment duration	23.328	.000*	1.031
Investment amount	2.909	.048*	1.013
Exit size	2.018	.021*	1.041
Constant	18.350	.000*	.029
Number of observations	221		
Nagelkerke R2	0.284		

Note:
a. Hosmer and Lemeshow test p-value=.936; All tests at .05 significance level.
b. Note1: Service/manufacturing is for service industry compared to manufacturing industry.
c. Note2: Exit status is for partial exits compared to complete exits.
d. Note3: Fund nature is for India-dedicated funds compared to foreign funds.
e. Source: Authors calculations from Venture Intelligence (2018).

To investigate the interplay of industry, transaction and fund nature characteristics with the exit route chosen, viz., market/off-market exit, binomial logistic regression was conducted at a significance level of 5%. This test is generally used to predict the probability that an observation falls into one of the two categories of a dichotomous dependent variable based on one or more independent variables that can be either continuous or categorical.

In addition, the study intended to find out the odds of adopting a specific exit route for different values of each significant independent variable. Table 5 reports the results of binomial logistic regression performed to ascertain the effects of the industry to which the exiting firm belongs, type of exit transaction and the type of the VC fund on the likelihood that exit may happen through market sale.

The duration of the investment, size of the investment and the amount realized at the exit were used as control variables in the regression. The logistic regression model was a good fit, as pointed out by the Hosmer and Lemeshow Test with a p-value of 0.936. The model explained 28.4% (Nagelkerke R^2) of the variance in market sale. Of the three predictor variables, only type of exit transaction was statistically significant. When jointly tested, industry type as well as the nature of the fund proved to be not significant in the exit route choice. The results also implied that the decision to exit partially or completely had a significant role in determining the choice of the exit route. The odds of an exit happening through the market route were 2.8 times greater when the exit is partial as compared to a full exit. Less probability through a market exit when the investors want to exit completely is possibly due to legal restrictions for a VC in a complete exit, especially when exiting through the market route.

5. CONCLUSION AND IMPLICATIONS

This study investigated the association between the exit routes adopted and the industry type of investee firm, type of exit transaction done and the type of VC firm making the investment. The study was based on 632 VC exit transactions in India spanning the period 2004-2017. The study found that exit patterns for service and manufacturing industries were predominantly same. There was no industry specific pattern in the exit mechanism for service or manufacturing industries. The percentage of exits through different exit routes was statistically similar for both service and manufacturing industries.

It was also observed that the exit routes adopted were not associated with the industry to which the investee firm belongs. This finding is important from a VC investor perspective as they are historically more inclined to investments in the service sector hoping for a higher probability of market exits such as an IPO. The entrepreneurs are also more inclined to starting ventures in the service industry as compared to manufacturing industry, which is exhibited by the high number of start-ups in service industry compared to manufacturing industry. VC investors and entrepreneurs have no reason to show such an inclination if the only motivation for that is higher probability of exit through a specific exit route. This research can be further extended by examining industries at sub-sector levels than the broad categorization into service and manufacturing sectors as in this study.

The findings related to the patterns in the choice of the exit route in relation to the type of exit transaction have managerial as well as policy implications. Patterns were significantly different across partial and complete exit transactions. The choice of exit route was associated with the type of exit transaction that the VCs want to make. In other words, the exit route chosen by the VCs depends on the type of exit transaction they want to make viz. partial/complete.

Complete exits predominantly happened through strategic sales with the partial exits through secondary sales. An IPO was the least possible route for a complete exit. The probability of a market exit increased by almost 2.8 times when the exit planned was a partial exit. This finding can provide more insights to VC investors to plan the exit from their investments in start-up firms, especially in India. This finding also has policy implications in terms of framing regulations related to VC exits through Secondary sales and Strategic sales, which are the most adopted routes for partial and complete exits respectively.

Exit patterns exhibited by India-dedicated funds and foreign funds were essentially the same. The exit route used did not depend on the nature of the fund, which implied that no specific type of fund has an extra edge for exiting through any specific exit route just because of its specific nature, viz., India-dedicated/foreign. Hence, VC fund investors showing preference towards a particular fund focusing only on the nature of fund should be more wary.

Further research shall focus on decoding the exit patterns exhibited by the co-investing domestic and foreign VC firms. In addition, studies can also focus on the nuances in exits through the liquidation route, which was not addressed in the study. Overall, the findings will be beneficial to VC investors, entrepreneurs and policy makers. Better investment and exit decisions may be made and policy frameworks may be developed by drawing on the this study.

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