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Two Heads are better than One: Multi-Founder firms and Quality Signals to Investors and Acquirers

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ABSTRACT: New venture firms in high tech industries face difficult founding conditions as they grapple to meet investment, technological and commercial needs of their firms. Multiple founders would typically bring in more human capital to manage the diverse needs of the firms but face numerous challenges related to strategic flexibility and controlling resources in uncertain conditions. This study analyzed the founder count effect on high technology firms from a developing economy in funding and acquisition performance. Challenges faced in this study were in collecting enough samples with new ventures having similar founding conditions and operating from the same geography. Methods used in this study are T-test and multiple regression analyses as robustness checks. We find strong relationships between number of founders involved in firms and (a) the amount of funding raised, (b) the number of funding rounds closed, (c) the number of investors involved and (d) the number of acquisitions closed. During the merger and acquisition stage, multi-founder firms were more successful in getting acquired. Our result suggests that multi-founder new venture firms produce quality signals to investors and acquirers as compared to firms founded by single founders. From a contribution perspective, this is the first of its kind study that demarcated the role of single founder and multi-founder firms in a developing economy and studied their effect on funding and acquisition performance of new venture firms. It provides value to single founder ventures by highlighting their lacunae and the need to augment their founding team to improve performances.

Keywords: Acquisitions, Entrepreneur, Funding, multi-founder, Signaling theory, startups**.**

Abbreviations: NVF, New Venture Firm.

I. INTRODUCTION

Different factors influence funding decisions of investors. Investors look for quality signals from new venture firms due to high information asymmetries and low traction during initial stages [1]. High technology business sectors are complex in nature due to varied technical and commercial demands. It is important to study a) how investors perceive whether one founding member is enough to cater to the various needs of new venture firm (NVF) and b) whether the founding team size mattered in later growth stages viz. acquisition.

The founding team is defined as a group of entrepreneurs who were involved in new venture's legal incorporation [2]. [3] defined multi-founder firms as firms that were founded by multiple individuals (with no family connections) who were still actively involved in the firm as directors and/or managers. Though there were studies examining the relationship between founder involvement and firm performance on family firms [4-6], Fortune 500 companies [7, 8], IPO firms [9], there are no studies of founder size effect on NVF performance. Existing literature have analyzed multiple signals from founding teams but have failed to analyze the impact of founding team size on performance of NVFs [1, 9, 10]. [11] incorporated founder counts but used it only as a control to study impact of teams. Comparing single founder teams with multi-founder teams, [12] found that single founder teams performed better. But the study was done for Kickstarter projects and not for NVFs. Further, the backers in Kickstarter projects are mostly individuals and not the typical venture capital investors seen in NVFs. Our study provides a unique advantage as it is one of the first studies that centers on founder count effect and focuses on investors and acquirers view on NVFs over a five-year period when startup activity was at its peak in the E-commerce Indian sector, thus highlighting distinctive funding and exit performances.

Multiple research gaps have been addressed in this study. First, though many studies have looked at human capital of founders as an effective signaling mechanism [10, 13] there are very few studies [12] that have compared the effect of single founder and multi-founder firms for funding performance. Second, existing research has examined funding performance by looking at amount of funding [11] but not considered other additional important aspects such as number of investors attracted and funding rounds closed which when included provide a more comprehensive assessment. Third, when ventures look for exit/acquisition, existing studies have analyzed role of external venture capital or founder power for exits [14, 15]. Extant studies have not compared whether acquirers viewed multi-founder firms more favorably over single founder firms leading to more acquisitions.

New venture firms face a myriad of challenges associated with raising funds, generating revenues and scaling their firms [16, 17]. The challenges posed by NVFs cannot be managed by a single founder and often need the expertise and experience of multiple founders

[18]. When many minds work together, there could be conflicts that could act as impediments. Unless there is agreeableness among all founders, achieving the goals set by the firm becomes a humongous task. Extant literature has not studied the investors view – whether they prefer multi-founder firms over single founder firms or vice-versa.

This study sets to find out answers for two research questions

1. How did investors receive signals from high technology NVFs in a developing economy? Do investors prefer firms with single founder or more than one founding team member?
2. How founder's team size played a role in performance of NVFs? What is its role in acquisition stage of NVFs?

In this paper, we have analysed impact of founding team size on funding performance and acquisitions in high technology NVFs from a developing economy. It is unique in two aspects and makes the following contributions. Firstly, based on our literature review, this is the first study that focuses on the effect of founder counts by comparing single founder firms with multi-founder firms on the funding and acquisition performance of NVFs. Secondly, there are limited studies that have analysed the signalling performance of firms in developing economies. The effect of human capital is greatly magnified in a developing economy [19]. Enterprises face multiple challenges in a developing country [20], due to which human capital plays a major role. Thirdly, the findings from this paper act as mirror view of investors outlook with respect to assessing pros and cons of multi founder NVFs and single founder NVFs.

II. LITERATURE REVIEW

A. Signaling theory and Human Capital

Raising funds for a new venture is a multifarious and gruelling process as investors look for high quality signals from NVFs [21]. Information asymmetries exist between NVFs and investors. NVFs attempt to reduce these asymmetries by signaling their latent potential to investors. It is important to study the role played by founders in high technology sectors due to the complex nature of the technical and commercial needs of the business. A single person cannot manage the various aspects of the business and at the same time drive superior performances. At the same time, multi-founder firms are fraught with multiple challenges related to management and coordination that lead to increased cost of execution [22]. However, more the number of the founders, the higher the human capital of the firm and better it would meet the risk profile of the investors as the risk is spread across multiple individuals. Multi-founder firms should be capable of raising more amount of total funding.

Founder's human capital is valuable to firms due to their innovative nature and firm-specific knowledge and experience. They must convince investors to provide financial support for their ideas [3, 23, 24]. Human capital theory primarily deals with the capabilities of founders of NVFs. But in their stages of development, NVFs have little to no traction with customers and revenues. One of the most important assets at this stage of the NVF is the human capital of the founders

Investors are cautious about risk. Investors will rely on the human capital signals of founders to assess the viability of the NVFs [25]. In a real world scenario, investors don't invest in single founder ventures, as single founder ventures don't have the capacity to face the challenges alone [26]. Team's composition of knowledge and experience is considered one of the main drivers for new venture success [18, 27]. More knowledge and experience comes from multi founder NVFs based on human capital theory and investors receive less risk signals in investing due to many shoulders sharing the responsibility and challenges of the venture. We therefore posit that multi-founder teams raise more amount of funding, attract more investors to invest and close more number of funding rounds.

We therefore hypothesize:

Hypothesis 1: Total funding will improve with number of founders

Funding rounds and Investors: Each round of funding further validates the prospect of the NVF and reduces the information asymmetries that exist between the NVF and the investors. As the NVF progresses through each funding round, other investors get attracted to the NVF in subsequent rounds. Each funding round is a colossal task; it takes valuable time away from core venture firm activities [11]. If an NVF has multiple founders, one founder could focus on fund raising activities while the other founders could focus on core firm activities. This leads to better performance of the NVF while at thesame time lead to better conversion of investors and closure of funding rounds. We therefore hypothesize:

Hypothesis 2: More number of investors invest in multi-founder new ventures

Hypothesis 3: Multi-founder new ventures close more number of funding rounds

Acquisition of new ventures: Acquisitions occur when a business buys a different business. It is a common exit strategy that is prevalent in the high tech sector and which is encouraged by both investors and founders of NVFs [28]. Pursuing acquisition as an exit strategy can lead to potentially higher valuations and better returns for the investors and founders of NVFs. But acquisition is not a dependable exit strategy as it solely relies on attracting buyers to the NVF. Acquirers look for certain signals such as superior products and services, better alignment with acquirer company, ownership structure and better human capital of founding team [29]. Single founder NVFs would not be favorably viewed by acquirers, as majority of the ownership will be solely owned by a single person and it will be difficult to acquire such NVFs [30]. Multi-founder firms greatly benefit from larger human capital due to multiple founders being present and will have a more distributed ownership structure [31]. From the NVF perspective, single founder NVFs may also prefer not to divest their firms as there might be stronger sense of ownership as compared to multi-founder NVFs, which may prefer a quicker exit [30].

Hypothesis 4: Chance of multi founder new ventures getting acquired is high.

III. MATERIALS AND METHODS

Crunchbase, one of the biggest and reliable database for new ventures [32], was used. We cross-checked details related to funding with multiple news articles and company websites. To ensure NVFs had similar founding and financing conditions, we selected NVFs from the E-commerce industry, with headquarters in India and founded between the year 2010 and 2015. 341 new ventures met these criteria. After removing missing values, the sample reduced to 227.

The following analyses were conducted in this study:

– Linear regression
– Poisson regression
– Binary logit regression
– Two-way independent T-test

IV. RESULTS AND DISCUSSION

All variables proved normality with Ryan-Joiner normality test. Linear regression as robustness check was completed to test hypotheses-1, 2 and 3. Poisson regression was used for hypothesis-4 and Binary logit regression as robustness check was completed.

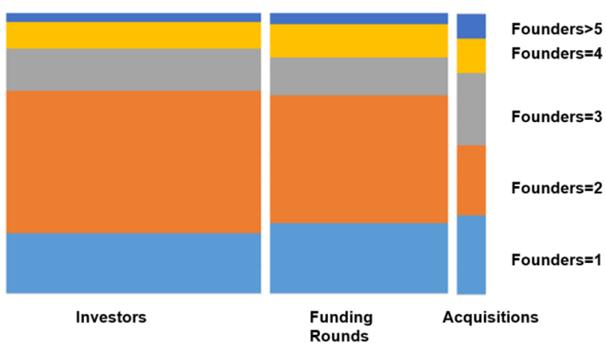

Fig. 1. Mosaic plot-showing relationship between Number of founders and new venture performance.

Table 1 demonstrates the results for the T-tests and the regressions that were completed. Hypothesis-1 is proved by both the T-test and regression thus confirming that more the number the founders, more the human capital and hence higher the amount of funding received by the NVFs. This is in agreement with [11], who found that NVFs with more human capital attracted more valuations and venture capital funding. Hypothesis-2 and Hypothesis-3 were also proved by the T-test and reconfirmed by the regression tests thus proving that NVFs having multiple founders are able to attract a larger number of investors. Since there are, multiple founders in the firm, founders can distribute their workloads, leaving more time for closure of funding rounds. This is a difficult task for single founder NVFs. In their study on NVFs, [25], established the influence of human capital in attracting more investors and closure of more funding rounds. We analyzed impact on revenue separately but we did not see any relationship. Acquirers view NVFs with multi-founders positively and consider these NVFs as better acquisition targets. This has been proved by T-tests and validated by the regression test. However, [12] found that single founder teams instead had more successes but their study was focused on crowd-funded Kickstarter projects which do not reflect NVFs. Our results agree with multiple studies on NVFs [9, 33] that display the positive influence of human capital for funding of NVFs. As highlighted by contributions made by this study, the results conclusively segregated single-founder firms from multi-founder firms in a developing economy and proved that multi-founder firms provided quality signals to both investors and acquirers. The study conclusively demonstrated two interesting effects of multi-founder NVFs. They produce quality signals to investors and acquirers leading to better performances as compared to NVFs founded by single founders.

Table 1: Summary of the findings.

S.No.	Hypotheses	T –test	Regression as Robustness check	Conclusion	Hypotheses proved?
1.	Total funding will improve with number of founders	T=2.53, p= 0.012	β=0.405, p= 0.012	T- stat result showed significant differences between two groups and Linear regression showed positive relationship between number of founders and Total funding	Yes
2.	More number of investors invest in multi founder new ventures	T=3.67, p=0.0001	β=0.083, p=0.004	T- stat result showed significant differences between two groups and Linear regression showed positive relationship between number of founders and number of investors	Yes
3.	Multi founder new ventures close more number of funding rounds	T=3.77, p= 0.0001	β=0.11, p=0.004	T- stat result showed significant differences between two groups and Linear regression showed positive relationship between number of founders and number of funding rounds	Yes
4.	Chance of multi founder new ventures getting acquired is high.	β=0.26, p=0.0001 (Poisson regression)	β=0.39, p=0.006, odds ratio=1.48 (Binary logit regression)	Poisson regression showed significant positive relation. Binary logit regression showed chance for multi founder new ventures getting acquired increases by 48%	Yes

Multi-founder firms raise more amount of funding, attract a larger pool of investors and are adept at closing more number of funding rounds. Investors are wary about risk and prefer multi-founder NVFs as the risk is distributed across multiple individuals. Though acquiring firms may look for synergies with acquired firms, they also look for quality signals emanated from NVFs that have multi founders. Coinciding with [3]; in having positive relations between number of founders and valuation of the firm this paper highlights the importance of additional founders added to the founding team. In conclusion, the study has implications for founders for NVFs. They should attempt to augment their founding team size in order to have better prospects at raising funds or if they are looking for an exit after a few years. Since majority of NVFs failures are attributed to the team [34], there is indirect implication with respect to survival of NVFs. From an overall perspective, NVFs need a variety of skills that is rarely found in a single individual. Multiple individuals can assemble a portfolio of both tangible and intangible resources as compared to a single founder [12]. They can accumulate funding, share core workloads, build inter-firm alliances which are all important to the success of NVF [35]. This paper reflects the findings made by these studies as multi-founder firms had better funding and exit performance outcomes. Multiple founders could create a synergistic and probably a multiplicative effect as compared to single founders. It is rare to find single founders who could be considered as the Lazerian imperative of 'jack-of-all trades' [36]. Our study observes that investors and acquirers don't prefer single founder NVFs and they don't invest nor acquire these respectively.

This is probably one of the first studies that has clearly demonstrated the impact created by multi-founder firms from both fund raising and acquisition perspectives. Our study motivates future research on multi founder NVFs performance with respect to survival and sales.

V. CONCLUSION

Investors look for quality signals from new venture firms as this reduces their investment risk and provides better avenues for exit. Human capital plays a major role during the acquisition stage of firms as acquiring firms look for certain signals in the acquirees that would enable easier integration of the firms. The research conclusively proved firms with multiple founders provided better quality signals to both investors and acquiring firms. These firms raised more amount of total funding and attracted a larger number of investors. Closure of each funding round is an exhaustive task and needs the efforts of multiple founders. Multi-founder firms have been more successful at closing multiple funding rounds as compared to single founder firms. Multi founder firms have a distributed ownership structure compared to single founder firms, which may not be interested in divesting their firms. Acquirers look for favorable signals from acquirees, which leads to more acquisitions of multi-founder firms. Overall, the paper demonstrated the positive impact of multi-founder firms on both investors and acquirers.

VI. FUTURE SCOPE

Future research should compare impacts of single founder ventures and multi-founder ventures across other performance parameters viz. survivability and growth. Future work should also distinguish between funding types viz. equity-based and debt-based funding of ventures. As the characteristics of these funding types vary investors' funding inclinations would vary as well. Additionally, it would be good to explore the effects on the types of investors as they fund based on the stage of development viz. angel, seed investors, and venture capital. The effects of Human capital could be influenced by the external ecosystem. This study can be extended to compare the effects of single founder and multi-founder firms in developed and developing countries.

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