

# Young Indian Entrepreneurs: A Multi-Criterion Decision Scenario

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## Abstract

Entrepreneurship ventures are not new to India. They have been instrumental in developing the socio-economic scenario in the country. Many leading business houses today in India were family enterprises in their days of beginning. The latest trend is that India is reaping dividend because of larger percentage of youth in its population, who are venturing into innovative startups. With startups coming up in large numbers, Indian employment scenario is changing very fast. An entrepreneur starts a venture with her own will and might, and thus there are many important factors in such drive. A budding entrepreneur can come from any walk of life. However, a trained technical and/or managerial person may make a difference. Encountered with a challenging situation, a budding entrepreneur often finds himself at cross roads in her journey of life. This paper explores entrepreneurial narratives and classifies them into multi-criterion decision scenario faced at an individual level by an entrepreneur. Following a qualitative-quantitative research (mixed) approach, the paper shows outcome across two stages. Using qualitative research methods (e.g. Focus Group Discussion), a list of factors affecting motivation of someone to start an enterprise (called “startup”) is obtained. Subsequently, an analytic hierarchy process (AHP) model has been used under quantitative paradigm. This approach used Decision Analysis Module for Excel (DAME) add-in on MS-Excel to analyze responses obtained on the aforesaid list of factors from subjects with entrepreneurial mindsets. It was found that the risk taking ability depends on situation a youth is facing. However, turbulence in socio-economic environment diminishes the risk appetite. Strategic option such as “Focus” which is one when barriers to entry are higher and very select competitors can get into the spectrum; and it is better coupled with low exit barrier for a fail-safe and fast-exit plan.

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## Keywords

Startup, Entrepreneurship, AHP, DAME

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### 1. Introduction

The Government of India (GOI) has initiated institutionalized mechanisms through its various Ministries and Departments [1] to foster growth of innovation and entrepreneurial eco-system in the country. Demographic dividend of India (Median age in India will be: 28, China & US: 37, Western Europe: 45, Japan: 49 by 2020) [2] is favorable and India has a large innovation potential [3]. Government is playing the role of a catalyst (13730 No. of startups recognized and 129 No. funded as on Nov 1, 2018) [4]. Startups are funded by providing access to loans, networks, markets and trainings [5]. Startup India, Make in India, Atal Innovation Mission (AIM), Atal Tinkering Labs (ATL), Atal Incubation Centres (AICs), Support to Training and Employment Programme for Women (STEP), Biotechnology Industry Research Assistance Council (BIRAC), Stand-Up India, Trade related Entrepreneurship Assistance and Development (TREAD), Pradhan Mantri Kaushal Vikas Yojana (PMKVY), National Skill Development Mission, Science for Equity Empowerment and Development (SEED) [6] etc. are some of the promising initiatives by the GOI. Six types of startups are prevalent in India at present e.g. Lifestyle Startup, Small family business, Scalable startups, Startups to be sold & flipped, Large company startups, and Social startups [7]. Given the kind of eco-system development initiatives undertaken by facilitators & regulators in India, it becomes an area of concern to explore entrepreneurial mindset of Indian youth and their reasons to participate in the drive. Various socio-psychological dimensions along with their personality traits like risk taking or risk aversion attitude need to be explored. Entrepreneurship can provide a major source of employment creation, innovation and social adjustment for a developing economy [8] like India. As there is much thrust given by the government of India to help youth exploit and unleash their potential in entrepreneurial ventures, a study which can assess the mindsets of the target groups of such schemes and programs becomes important. This study used a mixed research design and concluded with hierarchy of alternative scenarios as it would be preferred by the budding entrepreneurial young class in the summary.

### 2. Literature Review

“Entrepreneurship” is a well-studied phenomenon with a common appeal across various domain areas and hence, the available literature comes from various discipline such as psychology, strategy, business management, public policy etc. The body of knowledge in this area of study seems very much scattered. “Entrepreneurs” are people who habitually create and innovate to build something of recognized value around perceived opportunities [9]. Different researchers have

studied different dimensions of Entrepreneurship. Rohrbach [10] has studied initial funding and mentoring [11] [12] have focused on personality & inter-generational differences. Giorgi and Marsh [13] and Furnham [14] have studied vocational work ethic and internal locus of control; Winfield [15] and Chell [16] have studied inter actionist or contingent model. Fagenson [17] has studied gender differences, whereas Cassidy and Lynn [18] and Markman and Baron [19] have studied constructs like need for achievement, internal locus of control, tolerance of ambiguity, type A behavior etc. There are various theories and models proposed by various researchers. McClelland [20] [21] believes that specific distinctive competences exist in some developing countries. Koh [22] and Guroi and Atsan [8] have related innovativeness and entrepreneurship. Tajeddini & Mueller [23], Mueller [24], Liles [25], Hisrich and Brush, [26], Hatak *et al.* [27] and Fung *et al.* [28] debate over entrepreneurial character/traits as predictor to engage in entrepreneurship. Deakins & Freel [29], Mahadea [30], Entrialgo, Fernandez & Vazquez [31], McClelland [20], Cromie [32] and Littunen [33] believe that distinct individual personality attributes (e.g. traits, age, experience, self-confidence, emotional & psychological risks, and capacity) and entrepreneurial success are related. However, trait approaches have been criticized by Kristiansen & Indarti [34], Krueger, Reilley & Carsrud [35] and Keeley *et al.* [36]. Researchers like de Wit and van Winden [37], Taylor [38], Crant [39], Dolton and Makepeace [40], and Evans and Leighton [41] have propounded parental and family support models in entrepreneurship research. Gibb and Ritchie [42] have focused on social development model and Miller and Friesen [43] on contingent model. Social learning theory [44] bridges the behaviorists and the cognitivists focusing on imitation and learning through observation.

Startup or for that matter even family-run businesses are not new in Indian society. The high demographic dividend of India (youth comprising a higher percentage in population) in recent times is paying off and a rise of startup culture is noticed in India. The latest trend is that a graduate or even a school/college dropout wants to experiment entrepreneurship with her own idea of a business venture. Such inner drive in a youth (or millennial) brings in many individual personality factors into action e.g. motivation, need for achievement, leadership etc. Basing the previous researches and various dimensions studied so far, the present study mainly focuses on the learning through observation view in entrepreneurship and the intra-personal dimensions of decision making through personality and trait theory. This orientation of the current paper helps in identifying the inner strength of young entrepreneurial class in India with a subjective view amid changing socio-economic scenario, learning from positive cues in the environment and risk appetite as a part of personal attribute.

### 3. Research Methodology

This paper uses a mixed research approach combining both qualitative and quantitative paradigms. Following a qual-quant (mixed) research approach, the

paper gathers outcome across two stages:

1) By using qualitative research methods e.g. Focus Group Discussion (FGD) a list of factors affecting motivation of someone to start an enterprise (can be called “startup”) was generated and

2) By using an Analytic Hierarchy Process (AHP) model [45] based on responses on these factors drawn from subjects with entrepreneurial mindsets. The data gathered was then subject to DAME (Decision Analysis Module for Excel) add-in on MS-Excel [46] platform.

### 3.1. Stage-1: Analysis

Each of the two parts in the study has specific but related outcome. In the first study, a group of entrepreneurs drawn from different business domain (identities concealed upon request,  $n = 8$ ) were identified from close contacts and were approached for a Focus Group Discussion. The criteria of selection was that the participants:

- Should have started a venture/enterprise [47] in last two years of time, and that the venture must be operational without close down before the survey was conducted.
- The founder member/executive must be available to interact frequently with researcher for helping the researcher gather the right perspective.

The FGD was moderated by the researcher, and for anonymity, the list of participants is not furnished anywhere in the paper. The thematic codes & categories of the discussion transcripts gave rise to a comprehensive list of items variables as shown in **Appendix A** [48]. Method of thematic coding was followed.

After a thoughtful deliberation by the researcher, few domain experts & volunteering entrepreneurs, a questionnaire was prepared from the codes obtained from the transcript. An online survey ( $n = 290$ ) was conducted to gather responses from Indian youth on a 5-point Likert scale (where, 1 = Strongly Disagree, 5 = Strongly Agree) on affirmative statements. The responses were put into a Principal Component Analysis (PCA) method to reduce the items into broad factors and name them. In this Exploratory factor Analysis (EFA), correlation and sampling adequacy were checked. KMO Measure of Sampling Adequacy was found 0.947 ( $>0.700$ ), and multicollinearity among items checked through Bartlett’s Test of Sphericity (Approx. Chi-Square: 10305.758, df: 666, Sig.0.000) was found significant ( $p$ -value  $< 0.05$ , *i.e.* “H0: There is no multicollinearity” is rejected). This indicated that there is sufficient correlation to conduct factor analysis. In Anti-image Correlation matrix, no diagonal element value was found  $<0.6$  (all were found  $\geq 0.6$ ) indicating adequacy in sample size for each item. Items were reduced to fixed number of factors (seven) and the total cumulative variance of seven factors was found 75.62% ( $>60\%$ ). Although few items cross loaded across components, a cross loading of less than 0.02 was not considered as cross loading. Communalities of less than 0.3 and factor loading of less than 0.4 was ignored. The rotated component matrix table (Varimax rotation) is shown in **Appendix B** along with scale reliability (Cronbach’s alpha) meas-

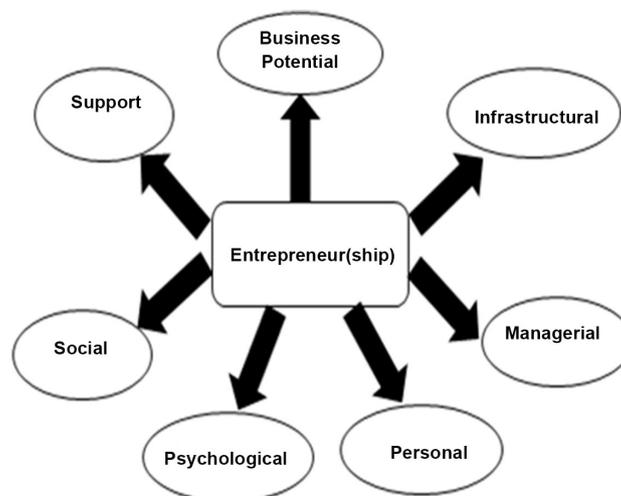
ures for each construct and decision taken based on deletion of item to improve reliability. Confirmatory factor Analysis (CFA) was not done. The components/factors identified above as conceived by Authors are represented as **Figure 1**.

### 3.2. Stage-2: Analysis

In second stage of the study, a group of seasoned entrepreneurs were approached for qualitative data reduction of seven components (thirty five items) so as to make it more pragmatic and avoid duplication. The purification of items was done qualitatively so that a practitioner's perspective and face validity can be assured. The iterative process reduced it to four actionable/measurable components (with nine items). These findings were again tested through Principal Component Analysis (PCA) by an online survey with  $n = 150$ . The items used in the survey instrument were prepared on a 5 point Likert scale. The Cronbach's alpha for internal consistency which was found above 0.7, and Bartlett's Test of Sphericity value suggested for factor analytic model. All the items having communalities of 0.3 and above were selected. The nine different variables (**Appendix C**) as identified above were loaded onto a four-factor (**Appendix D**) structure with a cumulative variance explained at 80.20% (>60%). The rotated component matrix grouped the variables into four factors. The factor loading threshold was taken as 0.6 and above. The lower loadings have been suppressed by the package SPSS 20.0. The details of finding are presented in **Appendix C** & **Appendix D**.

### 4. Multi-Criterion

With the items obtained from Exploratory Factor Analysis (via PCA) as in **Appendix C**, four different factor groups (called "Criteria") were found and named as following. The word "factor" & "criteria" are interchangeably used. Similarly words like "variable" and "item" are synonymously used.



**Figure 1.** Entrepreneurial factors.

- 1). Spark (Variable No. 1; 2);
- 2) Tradeoff (Variable No. 3; 8);
- 3). Flexibility (Variable No. 6; 7);
- 4) Drive (Variable No. 4; 5; 9).

The factor naming has lexical connotation derived from the variables/items under them. E.g. “Greater Amount of Capital” and “Cooperation among members” together are seen to be sufficient to create a “Spark” in young mind to venture into entrepreneurship. Similarly, “Ease of Doing Business” and “Level of Liability & Risk” are seen to be something like risk-return “Tradeoff”. “Degree of exit barriers” and “Interpersonal Dimensions” are combined to be seen as “Flexibility”, which ensures the easy-going attitude of the young entrepreneur about the exit norms and the peer group cooperation. Likewise, “Governmental Support”, “Degree of entry barriers” and “Internal Motivational drive to start” can be together named as “Drive”.

### Alternatives

Any business entrepreneur looks for opportunity in a space which is less crowded and is less competitive. An easy withdrawal should ideally be possible in case of turbulence in such venture. Strategically every sunrise industry or business domain is not always conducive. Thus, high entry barrier creates filter for only strong and selective firms to enter and remain in the competition. This helps competition remain healthier and stronger. A low exit barrier many a time depends upon politico-legal environment and the economy at large. From antecedents of an entrepreneurial career, four options can be segregated out for a budding entrepreneur to articulate before undertaking a venture. Modeling the strategic choices (called alternatives) across a  $2 \times 2$  matrix (Table 1), *i.e.* across low and high range of entry and exit barriers—an entrepreneur can assess potential of his idea. For the suggested Analytics Hierarchy process (AHP) based Multi-criteria decision making model (MDSS) these options are considered as alternatives/variants.

The theoretical model with AHP (Figure 2) having Scenario = 1, Criteria = 4, Alternatives/Variants = 4, is shown.

### 5. AHP Output (Excel Screen)

The multi criteria decision making (MCDM) is called Analytic Hierarchy Process (AHP) in short and is a tool used for Decision Support System. The determination of criteria and alternatives (Table 2) are very subjective as found above.

### 6. Criterion Comparison

Comparative values were entered only in the upper triangle for pairwise comparison. Lower triangle values are reciprocal to corresponding values in upper triangle. If one more important than the other values from 2 to 9 entered; and if

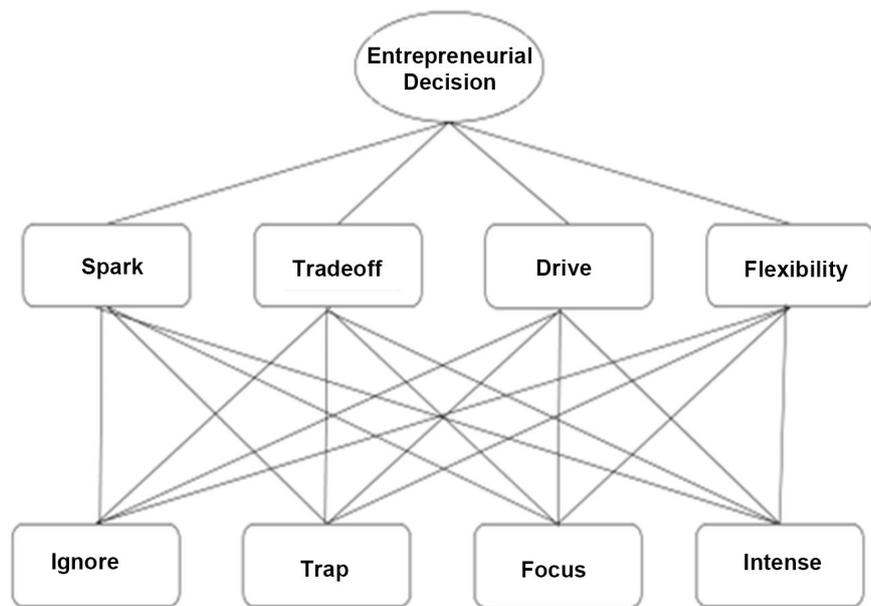
**Table 1.** 2 × 2 Design of alternatives (4 No.).

Variants: Barriers (2 × 2)		Entry	
		Low	High
Exit	Low	L; L	H; L
	High	L; H	H; H

The researchers have coded the four above strategic alternatives as: L, L: Ignore; L, H: Trap; H, L: Focus; H, H: Intense.

**Table 2.** MCDM model (Defining Criteria-Alternatives).

Decision Analysis Module for Excel			
Number of scenarios = 1, Number of criteria = 4, Number of variants = 4			
<b>Names of Scenarios</b>			
Scenario 1			
<b>Names of Criteria</b>			
SPARK	TRADEOFF	DRIVE	FLEX
<b>Names of Variants</b>			
IGNORE	TRAP	FOCUS	INTENSE



**Figure 2.** Theoretical AHP model.

less values from 1/2 to 1/9. For equality, either no value is entered or value entered is 1. Inconsistency index should be < 0.1, and if greater, the comparison is revised by re-approaching the respondent. Another output table shows calculated weights of each criterion or variant based on a geometric mean method. Total evaluation of variants or alternatives is the final outcome of this analysis. In this paper, authors have done pair wise comparison. The four criteria (Spark; Tradeoff; Drive; Flex) were subject to pair wise comparison only in the upper

triangle, as the values in the lower triangle are reciprocal. In a  $4 \times 4$  reciprocal matrix of paired comparison we sum each column of the matrix, then divide each element with sum of the respective column to find normalized weight. Column total becomes 1. The averaging across rows gives normalized principal eigen vector. Criteria Weights ( $W_i$ ) is representative of Priority vector or normalized principal eigen vector and gives relative weights among criteria and their ranking (See: **Table 3**). The consistency of the response in scenario-1 can be checked by finding principal eigen value. This is found by:

Consistency Index ( $CI$ ) [49] as per Prof. Saaty [50] is a deviation or degree of consistency found by: ( $n$  = size of comparison matrix)

$$CI = (\sum -n) / (n - 1)$$

Thus in this case,  $CI = (4.243797869 - 4) / 3 = 0.081265956$ .

The above output shows (scenario = 1, i.e. one user respondent scenario) comparison of individual criterion using pairwise comparison matrix with elements saying how much more important is criterion in the row than the criterion in the column. The inconsistency index is 0.0813 (<0.1), and hence the pairwise comparisons are consistent. In extreme right column calculated weights & ranks of individual criteria is shown.

Prof. Saaty [50] has calculated appropriate consistency index, called Random Consistency Index ( $RI$ ) [49], which is 0.9 for  $n = 4$ .

Consistency Ratio ( $CR$ ) =  $CI / RI = 0.090295507 = 9\%$  (<10%).

$CR$  assesses if the subjective evaluation is consistent. In this case it is consistent.

Thus, preference wise, TRADEOFF > FLEX > SPARK > DRIVE.

### 7. Alternative-Comparison: Criterion-1

Evaluation of variants (or alternatives) is done according to individual criteria one by one on pair-wise comparison method. This is because the criteria are relative and not continuous data. AHP process can thus continue for paired comparison of alternatives on each of the criterion. Evaluation of variants on SPARK is given in **Table 4**.

**Table 3.** Comparison for criterions.

	SPARK	TRADEOFF	DRIVE	FLEX	Criteria Weights ( $W_i$ )	Rank
SPARK	1	0.50	3	0.25	0.163212	3
TRADEOFF	2.00	1	6	2	0.433566	1
DRIVE	0.33333	0.166667	1	0.25	0.066309	4
FLEX	4	0.5	4	1	0.336913	2
SUM	7.33333	2.166667	14	3.5	1	

$$\Sigma(\text{each element of eigen vector}) \times (\text{Sum of columns of reciprocal matrix}) = (7.33333 \times 0.163212) + (2.166667 \times 0.433566) + (14 \times 0.066309) + (3.5 \times 0.336913) = 4.243797869.$$

**Table 4.** Evaluation of variants according to SPARK.

SPARK	IGNORE	TRAP	FOCUS	INTENSE	Variants Weights	Rank
IGNORE	1	2.00	0.25	0.333333	0.126337	3
TRAP	0.50	1	0.2	0.333333	0.081551	4
FOCUS	4	5	1	4	0.554813	1
INTENSE	3	3	0.25	1	0.237299	2
SUM	8.5	11	1.7	5.666667	1	

$\Sigma = 4.258801248$ ;  $CI = 0.086267083$  ( $<0.1$ );  $RI = 0.9$ ;  $CR = 0.095852314$  ( $<10\%$ ); Based on **Spark** (Greater Amount of Capital; Cooperation among members), the preferred alternatives are: FOCUS > INTENSE > IGNORE > TRAP.

The ignition system of an entrepreneur is mainly kick started by a highly supportive close network, both in terms of financial capital and cooperative capital.

### 7.1. Alternative-Comparison: Criterion-2

From **Table 5** showing evaluation of variants on TRADEOFF, it can be seen that if the incumbent believes that the risk and liability or the cost-benefit scenario is manageable within controllable contours, one can even stay ready for an intense competition.

### 7.2. Alternative-Comparison: Criterion-3

**Table 6** showing evaluation of variants on DRIVE indicates that an irrational inner drive of an entrepreneur just by looking at lucrative offer and support system, ease of entry and emotional attachment to a business idea may land up her in trouble. Thus a focus seems a better option.

### 7.3. Alternative-Comparison: Criterion-4

In **Table 7** from evaluation of variants on FLEXIBILITY, it can be interpreted that if there is a peer support and mutual cooperation existing in the system it helps one build upon an idea quickly or ignore it at first instance if there is none.

#### Criterion Weights:

From Priority Vector (criterion-comparison matrix) obtained from Section 6, the criterion weights are shown in **Table 8**.

Based on the aggregate weight of three criteria (after ignoring that of “Drive”), the Adjusted weight for all three criteria were found as given below. The priority vector of each alternative or variant, called “variant weight” is listed under its corresponding criterion. The composite weight of each alternative is summation of products of the variant weight & corresponding adjusted weight of each criterion. Basing this calculation a final ranking of alternative choices is drawn.

In the matrix given in **Table 9** for Composite Weights & Rank of variants, weights of all variants (rows) according to four individual criteria (columns) are calculated.

All the pairwise comparison matrices on four criteria e.g. Spark, Tradeoff,

**Table 5.** Evaluation of variants according to TRADEOFF.

TRADEOFF	IGNORE	TRAP	FOCUS	INTENSE	Variants Weights	Rank
IGNORE	1	2.00	0.333333	0.333333	0.137325	3
TRAP	0.50	1	0.166667	0.333333	0.076015	4
FOCUS	3	6	1	4	0.544328	1
INTENSE	3	3	0.25	1	0.242332	2
SUM	7.5	12	1.75	5.666667	1	

$\Sigma = 4.267909664$ ;  $CI = 0.089303221$  (<0.1);  $RI = 0.9$ ;  $CR = 0.099225801$  (<10%); Based on **Tradeoff** (Ease of Doing Business; Level of Liability & Risk), the preferred alternatives are: FOCUS > INTENSE > IGNORE > TRAP.

**Table 6.** Evaluation of variants according to DRIVE.

DRIVE	IGNORE	TRAP	FOCUS	INTENSE	Variants Weights	Rank
IGNORE	1	0.13	0.2	0.333333	0.052526	4
TRAP	8.00	1	3	6	0.572385	1
FOCUS	5	0.333333	1	4	0.269227	2
INTENSE	3	0.166667	0.25	1	0.105862	3
SUM	17	1.625	4.45	11.33333	1	

$\Sigma = 4.220893107$ ;  $CI = 0.073631036$  (<0.1);  $RI = 0.9$ ;  $CR = 0.081812262$  (<10%); Based on **Drive** (Governmental Support; Degree of entry barriers; Internal Motivational drive to start), the preferred alternatives are: TRAP > FOCUS > INTENSE > IGNORE.

**Table 7.** Evaluation of variants according to FLEXIBILITY.

FLEX	IGNORE	TRAP	FOCUS	INTENSE	Variants Weights	Rank
IGNORE	1	3.00	0.333333	2	0.212046	2
TRAP	0.33	1	0.142857	0.25	0.062791	4
FOCUS	3	7	1	5	0.572502	1
INTENSE	0.5	4	0.2	1	0.152661	3
SUM	4.83333	15	1.67619	8.25	1	

$\Sigma = 4.185826997$ ;  $CI = 0.061942332$  (<0.1);  $RI = 0.9$ ;  $CR = 0.068824814$  (<10%); Based on **Flexibility** (Degree of exit barriers; Interpersonal Dimensions), the preferred alternatives are: FOCUS > IGNORE > INTENSE > TRAP.

**Table 8.** Criterion weights.

Criterion	Criteria Weights (Wi)	%
SPARK	0.163212	16.32
TRADEOFF	0.433566	43.36
DRIVE*	0.066309	6.63
FLEX	0.336913	33.69
*Ignored	Aggregate	93.37

Drive & Flexibility are found consistent (all their inconsistency indices are found to be <10% or 0.1).

**Table 9.** Composite weights & Rank of variants.

Criterion->	SPARK	TRADEOFF	DRIVE	FLEX	Composite Wt.	Overall Rank
Adj. Weight	0.174803	0.4643571	0.071018	0.36084		
IGNORE	12.63	13.73	5.25	21.20	16.61	3
TRAP	8.16	7.60	57.24	6.28	11.29	4
FOCUS	55.48	54.43	26.92	57.25	57.54	1
INTENSE	23.73	24.23	10.59	15.27	21.66	2

A synthesis of it can be observed in total evaluation of variants in the last output table is shown below in the chart in **Figure 3**.

## 8. Conclusion

It can be concluded that the best variant is Focus with weight 0.5754 followed by Intense (0.2166), Ignore (0.1661) & finally, Trap (0.1129) *i.e.* FOCUS (H/L) > INTENSE (H/H) > IGNORE (L/L) > TRAP (L/H). The above ranking is done based on one scenario where an expert respondent's subjective evaluation of criteria and variants has been used. However, multiple scenarios with more respondents taken can improve the findings and final ranking.

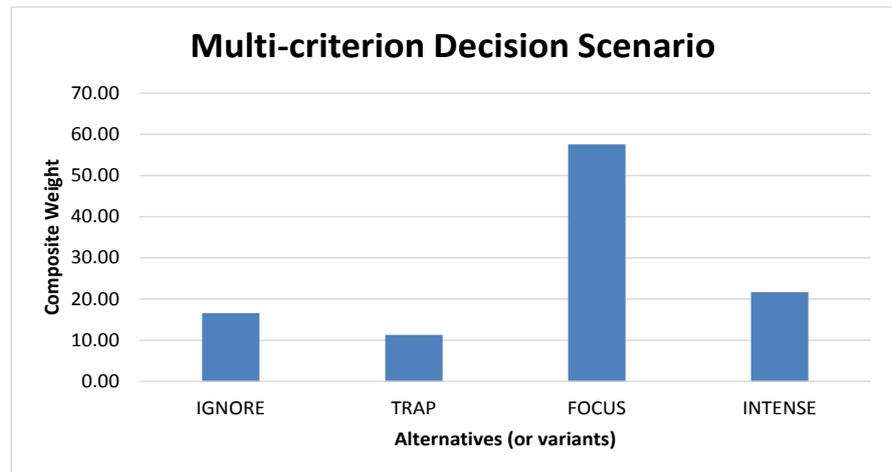
## 9. Managerial Implication

The findings suggest that entrepreneurs look for much focused business opportunities where only serious competitors take interest and can overcome entry barriers to get into the business spectrum. However, at the same time they look for safe exit in case of turbulence. As in case of turbulence it may turn out to be a difficult exit which may create a very intense situation in the business. Given these findings, entrepreneurs may prefer to ignore opportunities which don't provide optimal entry and exit conditions. It shows that young millennial Indian entrepreneurs are not risk averse. They are very well risk takers and experimental in seeking opportunities amid healthy and high competition. They don't want to get trapped in a scenario where they get into a business so lucrative at the first instance but difficult to liquidate or wind up.

In case of a budding entrepreneur, the risk taking ability depends on situation she is facing. But many a time, due to turbulence in the socio-economic environment the appetite decreases and finally diminishes to perish. The findings from the above analysis suggest that Focus is a strategic option when the barriers to entry are higher and very select competitors can get into the spectrum. This advocates for resource constraints and core competencies within an individual/firm. This is better coupled with a low exit barrier where there happens to exist a fail-safe and fast exit plan.

## 10. Limitations

The confirmatory factor analysis (CFA), validity checks (Convergent & Discriminant), and model fit indices have not being checked after the items were



**Figure 3.** Comparative chart of variants.

reduced to seven and the four factors. This is a limitation of the current study and is future scope of research. The above four-factor multi-criterion model was checked only using one scenario (*i.e.* one decision maker) through Analytic Hierarchy Process (AHP) enabled through DAME add-in in MS-Excel package. The same can be done with multiple decision makers to remove possible bias.

### Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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## Abbreviations

AHP: Analytic Hierarchy Process  
AICs: Atal Incubation Centres  
AIM: Atal Innovation Mission  
ATL: Atal Tinkering Labs  
BIRAC: Biotechnology Industry Research Assistance Council  
CFA: Confirmatory Factor Analysis  
DAME: Decision Analysis Module for Excel  
EFA: Exploratory Factor Analysis  
FGD: Focus Group Discussion  
GOI: Government of India  
MCDM: The Multi Criteria Decision Making  
MDSS: Multi-Criteria Decision Making Model  
PCA: Principal Component Analysis  
PMKVY: Pradhan Mantri Kaushal Vikas Yojana  
SEED: Science for Equity Empowerment and Development  
STEP: Support to Training and Employment Programme for Women  
TREAD: Trade Related Entrepreneurship Assistance and Development

## Appendix

### Appendix A. Comprehensive list of codes & categories (n = 8).

Theme/Code from FGD	Factor/Category (SPSS Code)	Remark/Description
<ul style="list-style-type: none"> <li>• Competition</li> <li>• Societal Issues &amp; Opportunity</li> <li>• Challenges/barriers/risk</li> <li>• Failure/shutdown possibilities</li> <li>• Consumer psyche/mindset</li> <li>• Trader mindset</li> <li>• Market acceptance</li> </ul>	Business Potential (BP1-BP7)	The overall viewpoint on supporting or otherwise entrepreneurial environment & ecosystem in the country is termed as business potential.
<ul style="list-style-type: none"> <li>• Resources (Capital)</li> <li>• Ecosystem</li> <li>• Early guidance</li> <li>• Active government support</li> <li>• Startup climate</li> </ul>	Infrastructural (IF1-IF5)	The support system as initiated by government & non-government agencies is majorly towards hard and soft "Infrastructure".
<ul style="list-style-type: none"> <li>• Ideation</li> <li>• Luck/chance event</li> <li>• Innovation</li> <li>• Operations</li> <li>• Overcoming barriers</li> <li>• Management/planning</li> </ul>	Managerial (MN1-MN6)	Business venture in the pursuit of management brings in many Managerial issues and concerns time to time.
<ul style="list-style-type: none"> <li>• Entrepreneur-defined (knowledge)</li> <li>• Entrepreneurship-explained (knowledge)</li> <li>• Career plans</li> <li>• Goal/ambition</li> <li>• Initiation/spark/ignition</li> <li>• Short term gain focus</li> </ul>	Personal (PR1-PR6)	Sufficient inner drive is the pre-requisite for someone to plunge into entrepreneurship which to a large extent determined by personal factors.
<ul style="list-style-type: none"> <li>• Attitude</li> <li>• Personality/traits</li> <li>• Conviction/persuasion</li> <li>• Motivation</li> <li>• Success stories (learning)</li> </ul>	Psychological (PS1-PS5)	At a sub-conscious level various psychological determinants propel an individual toward entrepreneurship.
<ul style="list-style-type: none"> <li>• National culture</li> <li>• Changing Indian society</li> <li>• Business community</li> <li>• Social acceptance</li> </ul>	Social (SO1-SO4)	Positive societal change process, given a rise in demographic dividend forms impactful Social factors
<ul style="list-style-type: none"> <li>• Support</li> <li>• Collaboration</li> <li>• Family background</li> <li>• Family support</li> </ul>	Support (SP1-SP4)	Although family background is not a pre-requisite, a moral and/or financial support from family plays a pivotal role.

**Appendix B.** Rotated component matrix & scale reliability (n = 290).

Component	Items	Loadings	Cronbach's Alpha	Cronbach's Alpha if Item Deleted	Decision to drop item
1	BP4	0.861	0.960	no improvement	nil
	BP3	0.859			
	BP5	0.831			
	BP6	0.822			
	BP7	0.802			
	BP2	0.755			
	BP1	0.731			
2	SO1	0.829	0.932	no improvement	nil
	SO3	0.812			
	SO4	0.797			
	SO2	0.793			
	IF4	0.785			
3	IF5	0.751	0.875	no improvement	nil
	IF3	0.750			
	IF2	0.718			
	IF1	0.704			
4	MN4	0.762	0.879	00.879 (if MN3 deleted)	nil
	MN5	0.729			
	MN6	0.655			
	MN3	0.578			
	MN2	0.548			
	MN1	0.524			
5	PS3	0.786	0.931	00.951 (if PS5 deleted)	PS5 (Family Background)
	PS2	0.784			
	PS1	0.771			
	PS4	0.732			
	PS5	0.454			
6	SP2	0.798	0.896	00.900 (if SP3 deleted)	SP3 (Success Stories-learning)
	SP1	0.790			
	SP4	0.688			
	SP3	0.565			
7	PR2	0.747	0.900	no improvement	nil
	PR3	0.707			
	PR6	0.508			
	PR4	0.503			
	PR1	0.459			
	PR5	0.427			

**Appendix C.** Practitioners' perspectives.

1	Greater Amount of Capital
2	Cooperation among members
3	Ease of doing business
4	Governmental Support
5	Degree of entry barriers
6	Degree of exit barriers
7	Interpersonal dimensions
8	Level of liability & risk
9	Internal motivational drive to start

**Appendix D.** Grouping of items into components.

Component	Item	Loading
1	Greater amount of capital	0.919
	Cooperation among members	0.914
2	Ease of doing business	0.997
	Level of liability & risk	0.997
3	Degree of exit barriers	0.937
	Interpersonal dimensions	0.938
4	Internal motivational drive to start	0.847
	Governmental support	0.897
	Degree of entry barriers	0.679

**Other Website Reference**

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