

THE INFLUENCE OF VERTICAL AND TEAM LEADERSHIP ON STARTUP PERFORMANCE

^aIVANA LJUDVIGOVÁ

University of Economics in Bratislava, Department of Management, Dolnozemska cesta 1/b, 852 35 Bratislava, Slovak Republic
email: *ivana.ljudvigova@euba.sk*

Abstract: One of the most common causes of extinction of startups is the inability of the founder to create a functional startup team. Startups are therefore considered the ideal context for studying both vertical and team leadership. Within the framework of vertical leadership, it is necessary to examine the quality of the startup founder's ability to formulate an original and attractive vision, to inspire co-workers to achieve it, to encourage them in crisis situations and also to develop their competence. The essence of team leadership is the creation of a cohesive team, whose members support each other, have divided roles, responsibilities and authorities. Based on a research sample of 76 Slovak startups, there was investigated the founder's tasks in the startup and the quality of teamwork in the startup team.

Keywords: startup, vertical leadership, team, team leadership

1 Introduction

Purpose of leadership is to unite heterogeneous group in concern of achieving common goal, therefore startup must work as a team. Team work is one of conditions for leadership and leadership is one of conditions for team work. Startup without a leader who creates and communicates vision, inspires and trains employees, exists on a market without an aim (Zäch, Baldegger, 2017). Despite this, there exist very few empirical researches explaining leadership in startups. Most of the knowledge about this issue has a hypothetical nature. Most of authors state that in startups there exist vertical leadership based on ideas and decisions of single person (leader) and team leadership, which involves members of their team into decision making.

2. 1 Vertical leadership in startup

Vertical leadership is based on nominated leader. Person on a higher level of hierarchy is formally appointed to influence actions of people on lower levels (Ensley, Hmieleski, Pearce, 2006). This type of leadership allows to clearly distinguish the role of a leader from role of followers (Pearce, 2004). This concept dominates in literature of leadership. According to Klotz et al. (2014) researches usually concentrate on role of founder (leader) in development of new business. Baum, Locke and Kirkpatrick (1998) found out that „inspiration and vision of founder are driving force of any startup“. Similarly, in accordance with Timmons and Spinelli (2008) it is fundamental for success of startup that founder is a strong leader.

Vertical leadership is perceptible in startups especially in early phases of life cycle. It is usually an individual with leading or visionary abilities who identifies business opportunities and establishes a new business. Even though startups are usually established by team of people, there is appointed a single formal leader amongst members of the team (Ensley, Hmieleski, Pearce, 2006). Demonstration of perseverance and steadiness, reliability and honesty (Timmons, Spinelli, 2008) are most significant attributes of beginning business appreciated by investors. Baum, Locke and Kirkpatrick (1998) state that „the role of a leader as founder of startup is to create a vision of new business and influence others (investors, employees, partners and customers) to buy his dreams“. According to Bryant (2004) „leaders in starting business must interest their employees in a way that startup could succeed in realisation of innovative and unexplored business objective and subsequently compete with running competitive business“. Zäch and Baldegger (2014) claim that startups have often very flat organisational structure with low number of hierarchy levels and have mostly just one level of leadership, which is occupied by founder and leader in one person. Similarly, Vendetti (2010) contributes, that startups have very simple organisational structure with powers centralised at the top of hierarchy. According to Timmons and Spinelli (2008) in successful starting businesses, democracy and groundless

equality in division of design making power do not work and thus it is more appropriate to clearly determine a leader, who possesses top powers and responsibilities.

In startup almost all strategic and tactical decisions are made by founder and are mostly based on their intuition (Vendetti, 2010). Behaviour of leaders (founders) has bigger, more direct impact on performance of startup in comparison with bigger and running businesses. This is confirmed by KetsDeVries and Miller (1986), who believe that „individual characteristics and behaviour of leaders influence development and long term sustainability of startup“. Equally, according to Hambrick and Mason (1984) „startups are often perceived as image of its top management“. Timmons and Spinelli (2008) actually claim, that „even in startups with big potential of growth, leaders are more important than technology“.

2.2 Team leadership in startup

According to Timmons and Spinelli (2008) success of startup is influenced not only by strong leadership of founder but it is also important to build a team whose members have skills, talents and ability to work as a team that complement each other. Klotz et al. (2014) state that most of new businesses are established and led by teams, not individuals. Pearce (2004) defines team leadership as „current, lasting and mutual influencing of people and processes within a team, which is characteristic for its serial formation of official and unofficial leaders“. In practical application of common leadership, every member of a team is competent to influence actions of other team members and thus it cannot be clearly distinguished who is a leader and who is follower (Pearce, 2004). Gronn (2002) describes this approach as „distributed“ leadership, Pearce, Conger and Locke (2008) talk about „common“ leadership, Senge and Covey about „distributed“ leadership, Koccolowski (2010) contributes with term „collective“ leadership. In literature, the most commonly appearing term is team leadership. Timmons and Spinelli (2008) state that startups with high growth potential are mostly built and led by a team, moreover successful startups with high growth potential are more often founded by team of founders than unsuccessful startups with high growth potential which are often founded by individuals. Manz and Sims (1993) warn, that „teams that are highly efficient do not have structure of formal leadership.“ According to Koccolowski (2010) power of decision making also responsibility in conditions of team leadership are evenly distributed on all team members. Team responsibility is thus based on cooperation of collective. Pearce and Sims (2002) found out that „application of team leadership allows businesses to achieve better results in comparison with vertical leadership“.

With growth of startup it is not possible for one leader to cover all functions and to carry all responsibility, no matter how capable he is. Founder of startup should learn to delegate tasks and competences. Borza (2015) states that many good ideas will not turn into successful products, because the startup founder is not capable and willing to share an idea, delegate competences and create a team. Practise has showed so far, that startup projects with more people participating on them have bigger chance to succeed on a market, compare to those who start to establish business on their own (Dupař, Porubanová, Richnák, 2017).

Researches identify inability of founder to create quality team and work within the team as one of the most common causes of startup failure (CB Insider). Professionals agree that „vertical leadership is very effective in managing dramatic changes“, which was also confirmed by researches (Dunphy, Stace, 1993). Real leadership involves aspects of vertical as well as team leadership. Both types of leadership are considered an important condition of successful startup and also startups are considered an ideal context for their studies.

Leader and team are considered an important condition for startup existence, but dynamics of their development is not known in small and quickly changing startup and impact on its performance, which would be confirmed by quantitative evidence. Equally, common functioning of leader and team on business performance is not known, which could deepen knowledge of their synergic impacts.

3 Aim, research sample and work methodology

Based on literature studies it is possible to assume that key condition of viable and successful startup is effective team. Objects of research are startup teams and its structure in cycle of business idea. The aim of the paper is to find out how it develops, what is the content of vertical and team leadership in individual phases of business idea development. The hypothesis is that quality (developed, visionary, creative and hardworking) team is fundamental and central assumption for success of startup. Hypothesis would be confirmed by existence and tightness of relationship between vertical and team leadership and efficiency of startup.

Phases of startup development are recorded on *scale of business idea development (business cycle)*: 1 - idea/concept/research 2 - product development, 3 - product prototype/testing, 4 - first incomes, 5 - growing incomes. Quality of a leader, team work and quality of relationships in a team are measured on a following scale: 1 - *minimal*, 2 - *low* 3 - *sufficient (however it could be better)*, 4 - *satisfying (but there are still some reserves)*, 5 - *brilliant*. Performance of startup is measured in number of users, number of customers (paying users) and incomes.

Quality of vertical leadership is assessed via four variables which are quality of leader such as creator of an original vision, their ability to inspire, encourage and develop competencies of their co-workers. Quality of team leadership and relationships within the team is examined using seven criterion, which are coherence, mutual support and trust of team members, division of roles within the team, division of labour, cooperation, creativity of team members, personal initiative and contribution of team members to final result.

Research took place on a sample of 76 startups. Sample was assembled based on consultations with investors and representatives of coworking centres, incubators and accelerators. Every startup was examined by a single member of a research team who in proper interview led by leading person/founder personally noted answers to closed and opened questions into questionnaire. Another source of knowledge were interviews with team members and publicly available information about researched startups from their websites. Statistical analysis of researched sample lies in descriptive and inductive statistics. Researched variables are expressed as average values, multiplicity and share. Causal coherence was examined on bases of multiple linear regression, which measures impact of leaders and teams on selected coefficient of startup efficiency. There is comparison of influence of independent variables with an aim to differentiate variables with considerable impact on researched dependant variable. Model is gradually modified in order for it to have such structure which can explain researched variable in a best way. For this reason, there were removed variables with lowest and statistically nonsignificant impact and concurrently condition for growth of determinant coefficient must have been met. Expressing power of model in case of one explanatory variable was assessed by means of coefficient of determinant and in case of several variables by means of modified coefficient of determinant. For statistically significant is considered level $p < 0,05$.

4 Results of research

4.1 Structure of startup leadership in development cycle of business idea

Vertical leadership is clear especially in early phases of development of business idea (tab. 1). In early stages of business idea the driving force of startup is enthusiasm of founder, inspiration and motivation of other coworkers. This effect of leader in other phases of startup decreases. Research confirmed decreasing importance of vertical leadership in relation to startup development with an exception of final phase, where the importance of vertical leadership increases again. Even in final phase, the level of leadership is higher than in early stages of development of business idea. Vertical leadership is expressed by four variables (tab. 2). Startup establishments expressed themselves as outstanding visionaries, but they devote less effort to development of competencies of their coworkers in form of education, coaching or mentoring.

	Phase of business idea development				
	1.	2.	3.	4.	5.
Vertical leadership	-	4,05	3,87	3,49	4,38
Number of start-ups	0	8	27	22	19
Share of startups (%)	0	10,53	35,53	28,94	25,00

Tab. 1: Vertical leadership and business idea development

Variables of vertical leadership	Phase of business idea development				
	1.	2.	3.	4.	5.
Creation of vision	-	4,60	3,78	4,00	4,62
Inspiration of fellow workers	-	4,20	3,67	3,93	4,46
Encouragement of fellow workers	-	4,20	3,39	3,87	4,46
Competency development of fellow workers	-	3,20	3,11	3,67	4,00

Tab. 2: Variables of vertical leadership and phases of business idea development

The leader's quality (tab. 2) in the reviewed startups is satisfactory (but there are some imperfections) or suitable (but could be better). Leaders identify with their role and have a very high level of judgment. The differences between the leadership parameters are very slight, but they still indicate that in some properties the leaders are better or more pronounced and lacking in some other way. Leaders are able to create above average original and attractive, but not absolute, top vision. They can inspire at the similar level their closest surroundings so that fellows can follow the prescribed vision and objectives.

The importance of the founder as the creator of the vision, which is the driving force behind the start-up, confirms the words of the founder of the startup who created the navigation for the operating systems: "I am an executive type. I do not enjoy sitting and dreaming, on the contrary, getting into it and getting things moving. When you start doing things I think you are just beginning to dream about how to do it or how to do it differently." The leader has to know how to captivate people for his vision. It is also confirmed by the startup founder who focuses on pay per click sales of advertisement on the Internet. Although, he initially engaged in a job-mediation business, he managed to wow the original business team for the new business making too. He told his colleagues that the original business ended, explained to them a new vision and offered to continue with it. Although more than one year he did not pay wages, team of ten people still stayed and workers gained minority shares in the company.

Leaders encourage other team members when startup gets into trouble, complications, and suffers from failure. Their agitation in difficult situations only lags slightly behind the level of vision

and acceptance of vision by other members of the team. The relatively weakest aspect of leadership is the development of co-workers' competence. The founders of startups now pay the least attention to the development of their co-workers' competence. This is due to the fact that most of the investigated startups are still in their early stage of development (the average duration of the startups in the study sample is 1,93 years), where leadership addresses issues of existential character (establishing a startup, developing a business idea, creating a startup team, global expansion). Although currently leaders do not pay enough attention to the development of human potential, it is likely to change with the further development of business.

On contrary to vertical leadership importance of team leadership with development of startup grows (tab. 3). If startup progresses, it is extremely difficult for leader to manage all tasks and carry all responsibilities, and hence it increases importance of team leadership. Quality of team leadership is described by seven criterion (tab. 4). Research showed that quality of relationships in startup team is given especially by coherence, mutual support and trust of team members. These aspects of team work were assessed as highest amongst criterions of team leadership. Formal and informal division of labour and roles, on contrary, got the lowest assessment.

	Phase of business idea development				
	1.	2.	3.	4.	5.
Team leadership	-	3,86	4,11	4,29	4,57
Number of start-ups	0	8	27	22	19
Share of startups (%)	0	10,53	35,53	28,94	25,0

Tab. 3: Team leadership and business idea development

Variables of team leadership	Phase of business idea development				
	1.	2.	3.	4.	5.
Cohesion	-	3,33	3,92	4,19	5,00
Mutual support	-	3,33	3,88	4,38	5,00
Division of roles	-	3,50	3,58	4,00	3,50
Division of labour	-	3,33	3,69	4,06	3,00
Cooperation	-	3,00	3,96	4,00	4,50
Creativity	-	3,50	4,00	3,88	4,50
Individual initiative	-	3,17	3,96	4,25	4,50

Tab. 4: Variables of team leadership and phases of business idea development

The quality of the team is high, but there are differences that indicate that teams are acting better in borderline, unpleasant and crisis situations, and team members are willing to cooperate, but teams are resulting a little weaker if the quality of individual members is evaluated, e. g. their personal initiative and individual work contribution, formal division of labour in the team, and informal division of roles. Overall, compact quality of the team is slightly higher than that of its individual members.

Mutual support of team members in unpredictable and crises situations have appeared in startup which provides services of electronic mail. All five members of startup team were having fun at work party playing bowling, when around midnight the leader received a phone call announcing that main server stopped working and hence the application was completely dysfunctional. The whole team returned back to work and all worked till early morning hours to fix the outage. Startup leader stated that he did not have to persuade or force anyone, everybody realised seriousness of the situation and proved their responsible approach to work and that they support each other.

4.2 Impact of leadership on startup performance

Vertical and team leadership makes sense when it positively influences business performance of startup which is measured by number of users, number of customers and revenues. In-between researched parameters of vertical and team leadership positively influencing performance of startup are mutual support and trust

of team members in uncomfortable, unpredictable and crises situations, but research also showed that negative impact of formal division of labour on startup performance which was expressed by number of paying startup users (tab. 5).

Uncomfortable, unpredictable and crises situations represent especially lack of money in early stages of startup, payment of symbolic wages to members of team, because they invest into further development of business, extraordinary work effort, frequent departures and exchanges of team. Example is startup which develops software, web solutions and provides consultations in IT. Overtimes in early stages of business could not be counted by team members. Sometimes they worked 12 hours a day and also during weekends. Behaviour of people during crises situations is however, the best predictor of their future behaviour and performance.

	Variable	Users		Paying users/customers		Revenues	
Leadership	Vision	-0,64 (0,38)	-0,51 (0,34)	-0,05 (0,35)		-0,22 (0,36)	
	Inspiration	0,21 (0,33)		0,39 (0,31)		-0,05 (0,31)	
	Encouragement	0,02 (0,36)		-0,08 (0,33)		0,23 (0,34)	
	Competency development	0,36 (0,31)	0,47** (0,27)	-0,13 (0,29)		0,00 (0,29)	
	Mutual support	0,47 (0,43)		0,76° (0,40)	0,85* (0,27)	0,59 (0,41)	
	Division of roles	-0,12 (0,24)		0,04 (0,22)		0,19 (0,22)	
	Division of labour	-0,06 (0,26)		-0,63* (0,24)	-0,55* (0,20)	-0,30 (0,24)	
	Cooperation	-0,45 (0,39)		0,14 (0,36)		0,43 (0,37)	
	Creativity	-0,33 (0,31)	-0,42 (0,29)	-0,01 (0,29)		0,11 (0,30)	
	Individual initiative	0,48 (0,37)	0,52** (0,28)	0,07 (0,34)		-0,52 (0,35)	
	R ² modified	0,05	0,12*	0,06	0,18**	0,00	

*Level of significance °0,1 *0,05 **0,01
In brackets there is quoted a standard error.*

Tab. 5: Impact of leadership and team on performance of startup

Formal division of labour (responsibilities) and roles within a startup team achieved not only lowest average point assessment among parameters of team leadership (tab. 2), but it was also proven that formal division of labour has negative impact on startup performance, especially on number of paying customers (tab. 5). Startup teams consist mainly of very universal individuals. Startup founders do not seek their coworkers in common workplaces, but they choose freelancers (independent professionals without permanent employment) with previous experience of dealing with startup projects. Universal people are an advantage for startup, because they can cover number of jobs for the same salary. Moreover, in first months of its functioning, startup team assemble changes a lot, therefore startups need universal people who can take over responsibilities and tasks for a member who left. Formal division of work has significantly negative impact on performance, and thus it is possible to conclude that for startup, formal division of labour is not suitable. Formalisation may bring more transparency into startup and at the same time decrease its performance. Leadership itself (vertical) has only minor impact on performance, relevant is inspirational impact of leader on number of users.

5 Discussion

Vertical leadership in startups is evident mainly in early stages of business idea development. Startup founders have proven themselves as expressive visionaries, but less effort is devoted to development of competences of their coworkers. Contrary to vertical leadership meaning of team leadership with development of startup grows. Amongst researched parameters of vertical and

team leadership positively impact on business performance of startup especially mutual support and trust of team members in uncomfortable, unpredictable and crises situations. Formal division of labour (responsibilities) and informal division of labour in startup team achieved not only lowest point in assessment out of all parameters of team leadership, but concurrently proved that formal division of labour has negative impact on startup performance, mainly on number of paying users. Strict determination of responsibilities and duties brings more negatives than positives, weakens creativity and innovativeness. Founders and leading people in startups are more leaders than managers. They are able to inspire and ignite enthusiasm in their surrounding, but with progress of startup, enthusiasm starts to disappear and it is not substituted by quality managerial work. Founders do not devote sufficient time to professional development of their coworkers, formal division of work is counterproductive and importance of team leadership grows, which can work without a leader. In the end of startup development role of vertical leadership grows, because it is getting to "final", but it still cannot divert slowing down of business model development. Startup as imperfect business probably prefers more informal management.

6 Conclusion

Startups are an attractive topic for research because they are a relatively new and very dynamic business form (Slávik, Zagoršek, 2017). They carry out original business ideas, provide space for self-realization for independent personalities, bring extra earnings, but most of them fail. The aim of the research was to examine whether the vertical leadership and team leadership are a condition of the survival and later potential startup success. In-between researched parameters of vertical and team leadership positively influencing performance of startup are mutual support and trust of team members in uncomfortable, unpredictable and crises situations, but research also showed that negative impact of formal division of labour on startup performance which was expressed by number of paying startup users. Mutual solidarity in team is attribute to overcome obstacles and difficult times, which can lead to team breaking up. In rapid development of business formal division of work is expressed negatively on performance indicators. Formal division or roles may restrict creativity and flexibility. Formal division of labour negatively impact friendly atmosphere and enthusiasm, which are stronger motive to higher performance than vision of future incomes.

Evaluation of a startup reality is strongly recommended from a positive point of view than a normative point of view, since to outline the ideal picture of startup and the way how to build it does not make a sense. The purpose of the research is to know the real personal background of the startup, to explain it and to transfer new knowledge into practice. The startup need to be exposed a mirror, while leaving them unrestricted and free development, otherwise it is threatened the most valuable what they possess and that is enthusiasm, unconventionality, creativity. On the other hand, they can be offered help and support, but according to their needs, will and possibilities.

Research performed identified impact of several factors on startup performance. Results of present research might be further deepen and their causality verified, ideally with help of experiments.

Literature

1. Baum, J. R., Locke, E. A., Kirkpatrick, S. A.: *A longitudinal study of the relation of vision and vision communication to venture growth in entrepreneurial firms*. Journal of Applied Psychology, 1998, 83, 43-54.
2. Borza, M.: *Prečo zlyhávajú startupy? TOP 11 najčastejších chýb a príčin*. Výskumná správa. Bratislava: SBA (Slovak Business Agency).
3. Bryant, T. A.: *Entrepreneurship*, in: G. R. Goethals, G. J. Sorenson, and J. M. Burns, editors, *Encyclopedia of leadership*, Thousand Oaks, CA: Sage, 2004, Vol. 1. ISBN 9780761925972.

4. CB Insights. *The Top 20 Reasons Start-ups fail*. CB Insights, 2016. Dostupné na: <https://www.cbinsights.com/research-reports/The-20-Reasons-Startups-Fail.pdf>
5. Dunphy, D., Stace, D.: *The strategic management of corporate change*. Human Relations, 1993, 46, p. 905-920.
6. Dupal, A., Porubánová, K., Richnák, P.: *Innovation Centres and Their Significance in a Competitive Environment*. AD ALTA : journal of interdisciplinary research, Hradec Králové : MAGNANIMITAS, 2017. ISSN 2464-6733, 2017, vol. 7, no. 2, p. 170-176.
7. Ensley, M., Hmieleski, K., Pearce, C.: *The importance of vertical and shared leadership within new venture top management teams: implications for the performance of start-ups*. The Leadership Quarterly, 2006, 17, p. 217-231.
8. Gronn, P.: *Distributed leadership as a unit of analysis*. Leadership Quarterly, 2002, 13, p. 423-451.
9. Hambrick, D. C., Mason, P. A.: *Upper echelons: The organization as a reflection of its top managers*. Academy of Management Review, 1984, 9, p. 193-206.
10. Kets de Vries, M. R., Miller, D.: *Personality, culture, and organization*. Academy of Management Review, 1986, 11, p. 266-269.
11. Klotz, A. C. et al.: *New Venture Teams: A Review of the Literature and Roadmap for Future Research*. Journal of Management, 2014, (1)40, p. 226-255.
12. Koculowski, M. D.: *Shared leadership: Is it time for a change?* Emerging Leadership Journeys, 2010, 3, 577-591.
13. Manz, C. C., Sims, H. P.: *Businesses without Bosses: How Self-Managing Teams Are Building High Performance Companies*. New York: Wiley, 1993, 256 p. ISBN 978-0-471-12725-3.
14. Pearce, C. L.: *The future of leadership: Combining vertical and shared leadership to transform knowledge work*. Academy of Management Executive, 2004, 18, p. 47-57.
15. Pearce, C. L., Conger, J. A. and Locke, E. A.: *Shared leadership theory*. Leadership Quarterly, 2008, 19, p. 622-628.
16. Pearce, C. L., Sims, H. P.: *Vertical versus shared leadership as predictors of the effectiveness of change management teams: An examination of aversive, directive, transactional, transformational and empowering leader behaviours*. Group Dynamics: Theory, Research, and Practice, 2002, 6, p. 172-197.
17. Slávik, Š., Zagoršek, B.: *How can strategy influence the internal nature of business model?* Journal of applied economic sciences, Craiova : Spiru Haret University, 2017, 12, p.1080-1090.
18. Timmons, J. A., Spinelli, S.: *New Venture Creation: Entrepreneurship for the 21st Century*. 8. ed. London: McGraw-Hill, 2008, 704 p. ISBN 978-0-0733-8155-8.
19. Vendetti, D.: *Company Evolution – The Organizational Life Cycle: working paper*. Seattle: Product Arts, 2010.
20. Zäch, S., Baldegger, U.: *Leadership in start-ups*. International Small Business Journal: Researching Entrepreneurship, 2017, 35, p. 157-177.

Primary Paper Section: A

Secondary Paper Section: AH