

Working Paper 2022.2.5.08 - Vol 2, No 5

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Tóm tắt

Qua hình thức tổng quan tài liệu một cách có hệ thống, nhóm tác giả đã tổng hợp các định nghĩa và thước đo về lãnh đạo chia sẻ xuất hiện trong hai thập kỷ qua. Bài viết đưa ra những nhận định về xu hướng chung của các tác giả và nghiên cứu trước đây về chủ đề lãnh đạo chia sẻ. Điểm mới của bài báo là mô hình đo lường đề xuất của tác giả trong bối cảnh các nhóm ảo đổi mới, bao gồm bảy thang đo: Mật độ nhóm, Sự tập trung các quan hệ trong nhóm, Chiến lược chống đối, Chiến lược chỉ đạo, Chiến lược trao đổi, Chiến lược chuyển đổi và Chiến lược trao quyền. Các thang đo này được tổng hợp từ hai cách tiếp cận chính: cách tiếp cận tổng hợp (Chan, 1998) và cách tiếp cận mạng lưới xã hội (Carson và cộng sự, 2007; Mayo, Meindl, & Pastor, 2003; Mehra và cộng sự, 2006; White, Currie, & Lockett, 2016). Từ đó, bài viết cũng cung cấp hệ thống các định nghĩa, thang đo và câu hỏi mẫu được tìm kiếm từ các nghiên cứu trước để đóng góp cho đề tài nghiên cứu.

Từ khóa: Định nghĩa lãnh đạo chia sẻ, cách đo lãnh đạo chia sẻ, vai trò của lãnh đạo chia sẻ, nhóm đổi mới ảo, đánh giá hệ thống.

A SYSTEMATIC REVIEW OF SHARED LEADERSHIP IN INNOVATIVE VIRTUAL TEAMS

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Abstract

Using a systematic review, the authors have compiled a summary of the definitions and measures of shared leadership in the last two decades. The article gives statements on the general trend of the authors and previous articles on the research topic of Shared leadership. The novelty of the paper is in the proposed measurement model for Shared leadership in the context of innovative virtual teams, including seven scales: Team density, Team network centralization, Aversive strategy, Directive strategy, Transactional strategy, Transformational strategy, and Empowering strategy. These scales are synthesized from two major approaches: the aggregation approach (Chan, 1998) and the social network approach (Carson et al., 2007; Mayo, Meindl, & Pastor, 2003; Mehra et al., 2006; White, Currie, & Lockett, 2016). The author provides a scale system with definitions and sample questions that were looked up from previous studies to contribute to the research topic.

Keywords: Shared leadership definition, shared leadership measures, share leadership role, innovative virtual team, systematic review.

1. Introduction

In recent years, innovative virtual teams have been considered as an essential form of the team in modern life due to the capability of responding to the demands of the new environments characterized by globalization coupled with the rapid technological explosion. Many projects commence with only a vague idea, and the popularity of virtual teams in the modern world has strongly impacted the way in which these projects are conducted.

Innovative virtual teams offer a number of competitive advantages, though these team-based structures are also connected with a lot of inherent challenges resulting from a lack of colocated interaction. Thus, it is not surprising that these challenges have had a strong effect on team performance, and a key factor to adjust this problem is team leadership. While, initially there were some researches that advocated the important role of vertical leadership on virtual teams (Kayworth & Leidner, 2002; Hambley, O'Neill, & Kline, 2007), due to geographically dispersed elements, shared leadership characterized by the sharing and rotating of leadership influence among team members have been discussed as an emergent factor, which impacts on virtual team performance (Carte, Chidambaram, & Becker, 2006).

As a study field, the empirical research of shared leadership continues to be studied in a variety of contexts including team level, yet still has not any previous study that systematically summarizes shared leadership in the context of innovative virtual teams. On this basis, based on a systematic literature review, this paper examines existing empirical research on shared leadership in innovative virtual teams. The aim is to contribute knowledge to this emergent leadership due to pointing out the key findings of shared leadership in innovative virtual teams and simultaneously discussing the limitations of previous research.

2. Material and methodology

In order to acquire the most suitable methodology for analyzing shared leadership in innovative virtual teams, previous research materials must be examined carefully. In this analysis, two different research materials have been chosen for examination. Firstly, in Marianne Döös and Lena Wilhelmson's review of shared leadership as an empirical field, the authors have conducted their analysis based on 55 years of research and 67 scientific journal

papers on this topic, which is highly valuable for the purpose of obtaining the best methodology (Döös & Wilhelmson, 2021). Secondly, this analysis will also cover "Shared leadership: A state-of-the-art review and future research agenda" (Zhu, et al., 2016) as its critique of current research regarding shared leadership and its particular distinction of what constitutes shared leadership will be beneficial to our purpose. It is also important to point out that both of these research articles examine materials that employ meta-analysis and theoretical papers.

For a small sample, the approaches to analyzing these theoretical papers include the aggregation approach and the social network, which is more effective in analyzing the vertical structure of shared leadership and the density of leadership network structure at the group level respectively (Zhu et al., 2016). Since there inconsistency in the field's search terms or even definitions will cause difficulties, for larger samples, an approach of creating two matrices that take into account methodological information in comparison to structural characteristics will be more fitting (Döös, Wilhelmson, 2021). Even though this approach still leaves difficulties in filling out the matrices, it shows a definitive list of attributes to find.

However, there are more difficulties regarding definitive consistency. As Zhu, Liao, Yam, and Johnson noted, the definitions of the term shared leadership itself can vary depending on the research paper, and there are many similar leadership terms. Furthermore, the interchanging of the word 'leader' and 'manager' also shows a lack of consistency for that these terms are closely linked but not the same (Learmonth and Morrell, 2017). Therefore, there must exist a consistent definition of a leader, in which three main characteristics should be considered: source of leadership influence, unit of analysis (leadership at the collective level), and distribution of leadership influence (Zhu et al., 2016).

3. Results

3.1. Authors characteristics

The most high-cited author among our selected papers based on WOS core analysis was summarized in the table below (Table 1):

Table 1. Most highly-cited authors based on WOS core analysis (n = 76)

Rank	Authors	Affiliations	Document Type	Times Cited
1	Morgeson	U.of Michigan	Review	574
2	De Jong	VU.Amsterdam	Article	241
3	Carte	U.of Oklahoma System	Article	139
4	Breuer	U.of Munster	Article	125
5	Pearce	Claremont College	Proceedings Paper	108
6	MarlowJ	Rice University	Article	99
7	Cortellazzo	U.Ca Foscari Venezia	Review	87
8	Balthazard	Arizona State University	Article	79
9	Hoch	California State University	Article	75
10	Morrison- Smith	SUSF	Review	59
11	Muethel	WHU	Review	58
12	Kozlowski	Michigan State University	Review; Book Chapter	48
13	Acton	Virginia Polytechnic Institute & State University	Article	45
14	Sweeney	SETU	Review	43
15	Larson	Northwestern University	Review	40
16	Muethel	WHU	Article	38
17	Robert	U. of Michigan System	Article	36
18	Eisenberg	Pace University	Article	31
19	Siewiorek	U.of Helsinki	Article	31
20	Hoegl	U.of Munich	Article	26

Source: Authors

Table 2. The number of publications of each author about studies associated Shared leadership in virtual teams

Author	or Number of publications Author		Number of publications
Han	3	Fuller	1
Muethel	3	Ghawi 1	
Carte	2	Hamons	1
Eisenberg	2	Hanna	1
Grossman	2	Herbert	1
Hoch	2	Hoegl	1
Abdulmuhsin	1	Horila	1
Acai	1	Iorio	1
Acton	1	Kauffeld	1
Al-Ani	1	Kordsmeyer	1
Antoni	1	Kozlowski	1
Angelo	1	Lacoste	1
Aquino	1	Larson	1
Ayalew	1	Lim	1
Balthazard	1	Marlow	1
Baum	1	Martin	1
Bonet	1	Miloslavic	1
Breuer	1	Moe	1
Castellano	1	Morgeson	1
Cortellazzo	1	Morrison-Smith	1
Coun	1	Muller	1
Cox	1	Nordback	1
Czarnecka	1	Pearce	1
Chamakiotis	1	Purvanova	1
Cho	1	Robert	1
Darban	1	Roodt	1
de Jong	1	Sarker	1
De Jong	1	Schaubroeck	1
Drescher	1	Schmidt	1
Efimov	1	Siewiorek	1

Author	Number of publications	Author	Number of publications
Eseryel	1	Srivastava	1
Eubanks	1	Stendal	1
Feitosa	1	Sweeney	1
Ferretti	1	van Zyl	1

Source: Authors

In terms of the number of publications (Table 2), it is remarkable that most authors have the same frequency of publications, with only one publication. Among the authors examined, Han and Muethel both have three publications and of course, they are the first authors of the selected article. Although the topic related shared leadership in virtual teams was studied in the early period of the 21st century, the authors with ≥ 2 publications are evidence that this is still a potential topic that enables academics to research thoroughly.

3.2. Article characteristics

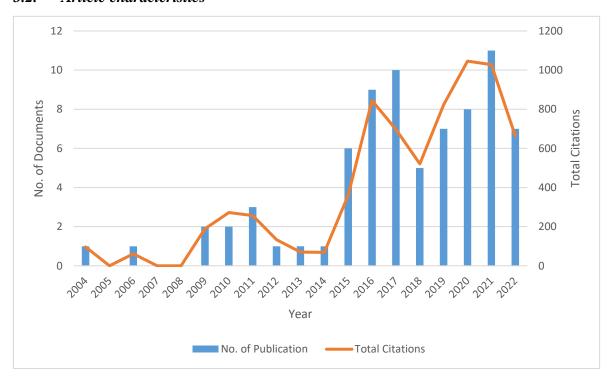


Chart 1. The volume and document citation by the time of distributed Shared leadership research from 2004 to 2022

Source: Authors

The authors conducted a reading of 76 previous studies on shared leadership and shared leadership in virtual teams. While these are not all research on this topic in 2004 - 2022, it does give the authors insight into the research trends of the articles.

The chart shows that shared leadership has received a lot of research attention from 2015 to the present. In 76 reviewed studies, the number of studies on the topic increased from a paper in 2004 to 11 papers in 2021.

The Total Citations index indicates the reliability and influence of studies for other research. The index reached the highest level in the 2020 studies. In addition, the studies from 2015 - 2022 also had higher reliability and ideas, so this index was higher than the previous period.

3.3. Research topic

3.3.1. The History of Shared leadership:

The first research on shared leadership began when Gibb (1954) proposed initially two forms of leadership: distributed and focused leadership. While focused leadership happens when leadership remains within a single person, distributed leadership occurs when there is shared leadership among individuals.

Historically, for many decades, researchers of leadership tended to conceptualize leadership as the process of vertical decentralization, from an individual to the team members and that individual (the formal leader) also has significant influences on followers in the team (Pearce & Conger, 2003; Bass & Bass, 2009; Bolden, 2011). These studies consider leaders as prominent features in the field of leadership and do not mention the role of team members.

Since the 1990s, this conventional notion has been a possible alternative to the emergence of other arguments that leadership can also be shared among group members (Carson et al., 2007; Pearce & Sims, 2002). This can help maximize the skills and knowledge of a specific area of the team members, improving the team's overall performance. They can lead in their specific aspect and act as followers in another (Manz, Skaggs, Pearce, & Wassenaar, 2015; Meuser et al., 2016).

3.3.2. Definitions and Measures of Shared leadership:

After Gibb first mentioned the definition of shared leadership, subsequent studies developed the concept of shared leadership based on style and behavior. Building upon Gibbs' original idea, shared leadership is defined as distributed influence from within the team, and lateral influence among peers (Pearce and Sims, 2002). Shared leadership can be conceptualized as the collective influence of members in a team on each other (Sivasubramanium et al, 2002) or the interactive influence process among individuals in groups (Pearce and Conger, 2003). Chiu, Owens, and Tesluk (2016) defined shared leadership as "a group-level phenomenon generated from reciprocal reliance and shared influence among team members so as to achieve team goals." Representative concepts are shown in more detail in Table 3. In research in recent years, shared leadership tends to be placed in volatile contexts (such as global virtual teams, and Covid-19) (Nordback et al., 2019; Castellano et al., 2021). The relationship between shared leadership and other factors (emotional intelligence, humanity...) is also focused (Cho et al., 2022; Ayalew et al., 2022). These trends will still be developed in future research because the global economy and society are constantly changing.

Although in most of these studies, shared leadership is measured on a behavioral scale, and related to team performance, the extent of these relationships could vary.

In terms of measurement, the previous studies have a great common point is that they often used: Team Multifactor Leadership Questionnaire (TMLQ - Form 5X) aggregated to the team level or Ratings (aggregated to the team level) on behavioral scales for five leadership strategies including aversive, directive, transactional, transformational, and empowering.

Table 3. Representative definitions and measures of Shared leadership

Year	Author	Study	Definition	Measure
2002	Pearce and Sims	Vertical versus shared leadership as predictors of the effectiveness of change management teams: An examination of aversive, directive, transactional, transformational, and empowering leader behaviors.	Distributed influence from within the team. (p. 172) Lateral influence among peers. (p. 176)	five leadership strategies: aversive, directive,
2002	Sivasubramaniam et al.	A longitudinal model of the effects of team leadership and group potency on group performance.	Collective influence of members in a team on each other. (p. 68)	Team Multifactor Leadership Questionnaire (TMLQ - Form 5X) aggregated to the team level.
2002	Erez et al.	leadership and peer evaluation on the	whereby team members share (albeit not at once) in responsibilities involved in the leadership role by clarifying who is to perform specific	member satisfaction (based on LePine and Van Dyne's (1998) 5- item, 7-point faces scale), workload sharing, voice, and
2003	Conger (the most	All those years ago. In C. L. Pearce, & J. A. Conger (Eds.), Shared leadership: Reframing the hows and whys of leadership (pp. 1–18).	groups for which the	Not applicable

2004 Pearce et al.	A reciprocal and longitudinal investigation of the innovation process. The central role of shared vision in product and process innovation teams.	ongoing, mutual influence process within a team that is characterized by "serial emergence"	behavioral scales for four leadership strategies: directive, transactional,
2006 Ensley et al.	The importance of vertical and shared leadership within new venture top management teams: Implications for the performance of startups.	where leadership is carried out by the team as a whole,	four leadership strategies: directive,
2006 Mehra et al.	Distributed leadership in teams: The network of leadership perceptions and team performance.	which there can be several (formally	Qualitative coding based on visual analysis of leadership network diagrams
2006 Hiller et al.	of leadership roles and	formal leader but the interaction of team	Collective leadership, Collectivism (six ecological items from Dorfman & Howell's (1988), Power distance.
2007 Carson et al.		from the distribution of leadership	total amount of leadership displayed by team members as
Avolio, 2009 Walumbwa, a Weber	Leadership: Current and theories, research, and future directions.	where team	Not applicable

2010 Pearce et al.	New forms of management: Shared and distributed leadership in organizations.	shift the role of leader to one another as	
2011 Gupta, Huang, and Yayla	Social capital, collective transformational leadership, and performance: A resource-based view of self-managed teams.	leadership behaviors; leadership as a	
2014 M. A. Drescher et al.	shared leadership:	property of a group where leadership functions are	function, the information used in the problem-solving
2014 Nicolaides et al.	The shared leadership of teams: A meta- analysis of proximal, distal, and moderating relationships.	are voluntarily shared among	The leadership functions framework laid out by Morgeson et al. (2010).

2014 D. Wang et al.	Shared leadership and team performance: The moderating effects of demographic faultlines.	responsibility	Using the density of the team's leadership network.
2016 D'Innocenzo et al.		whereby leadership	Density and centralization.
2016 Meuser et al.	A network analysis of leadership theory: The infancy of integration.	participating	Not applicable
2016 Chiu et al.	Initiating and utilizing shared leadership in teams: The role of leader humility, team proactive personality, and team performance capability.	generated from reciprocal reliance and shared influence among team	Using the network density of the leadership network.
2017 Lord et al.	Leadership in applied psychology: Three waves of theory and research.	different individuals	Not applicable
2018 Zhu et al.	Shared leadership: A state-of-the-art review and future research	•	approach (with 4

	agenda.	influence among peers, (b) shared leadership is an emergent team phenomenon, and (c) leadership roles and influence are dispersed	transformational leadership, Shared transactional leadership, Shared visionary leadership, Shared leadership in different leadership functions) and The social network approach (with 2 indexes: Density and Decentralization)
2019 Nordback et al.	Effective coordination of shared leadership in global virtual teams.	-	Using leadership centralization.
2020 Horila et al.		Teams may share leadership during stable periods of time, but, in crisis situations, an appointed leader may take charge (D'Innocenzo & Mathieu, 2014), or leader and follower roles may be continuously renegotiated in extreme and rapidly changing contexts (Eberly et al., 2013). (p.5)	Not applicable
2021 Castellano et al.	leadership and shared	interactive influencing process	Leadership Questionnaire

effective in complex environments (Wang, Waldman, & Zhang, 2014). (p.579)

2022 Cho et al.

Changing digital age in Shared leadership Be measured with the wake of covid-19: refers to the mutual items adapted from how does humility influence and shared Carson (2005) and impact on virtual responsibility Carson et al. (2007): leaderless teams? among all members Using density.

of a team, whereby members lead each other dynamically, interactively, internally and informally toward goal achievement. (p.3)

2022 Ayalew et al.

Do paradoxical virtual A shared leadership Not applicable leadership and style can be defined emotional intelligence as mutual have relationships? In influence embedded particular from the interactions technology among dependence, members (Carson et geographical al., 2007). It is a dispersion, and human dynamic, interactive capital tensions. influence process among individuals

Source: Authors

3.3.3. Shared leadership in innovative virtual teams and Proposed measurement scale of Shared leadership:

in groups. (p.7)

Hertel, Geister, & Konradt (2005) argue that empowerment and delegation are the keys to effective virtual team management. This is also one of the two main characteristics of shared leadership.

Previous studies have demonstrated the impact of shared leadership on productivity (Erkutlu, 2012), problem-solving, and team performance (Manz et al., 2013). As a form of participative leadership, shared leadership is a valuable predictor of team performance (Singh et al., 2019) through diverse, highly skilled, and knowledgeable individuals (Hoch, 2013) to complete complex tasks (Wang et al., 2014). Shared leadership is more effective in contexts of change and competitive environments (Manz et al., 2013), such as virtual teams. Manz et al (2013) suggest that shared leadership is more effective in the context of changing and competitive environments, such as virtual teams. The better performance of virtual teams can be derived from team members focusing on results and sharing a common vision and goals

(Wang et al., 2014). In particular, the recent empirical study of Castellano et al. (2021) synthesized and demonstrated the roles of shared leadership in virtual groups.

Based on the measurement of shared leadership in previous studies, the authors propose measures in this study, including 7 main factors: Team density, Team network centralization, Aversive strategy, Directive strategy, Transactional strategy, Transformational strategy and Empowering strategy. These scales are detailed in the following Table 2. This scale is synthesized from two major approaches: the aggregation approach, also known as the referent-shift approach (Chan, 1998) and the social network approach (Carson et al., 2007; Mayo, Meindl, & Pastor, 2003; Mehra et al., 2006; White, Currie, & Lockett, 2016). In the first approach, share leadership has been conceptualized as formal team leader factors (aversive leadership, transformational leadership, transactional leadership, directive leadership, and servant leadership (Avolio et al., 2003; Ensley et al., 2006) while the second approach measures shared leadership with team characteristics: team density, team network centralization and other factors (Carson et al., 2007; Mayo, Meindl, & Pastor, 2003; Mehra et al., 2006; White, Currie, & Lockett, 2016). The proposed measure can not only be used in defining shared leadership in virtual teams but also in general teams.

Table 4. Proposed measure scales of Shared leadership.

Scale	Definition	Sample questions	Sources
Team density	A measure of the total amount of leadership displayed by team members as perceived by others on a team (Carson et al., 2007).	your team rely on this individual for	Mayo et al. (2003); Carson et al. (2007); Chiu et al. (2016).
Team network centralization	provides researchers with a measure demonstrating the degree to which perceived leadership was distributed	individual network together, we can increase	Mayo et al. (2003); Gockel & Werth (2010)
Aversive strategy	The aversive leadership behavioral type describes leadership that primarily relies on coercive power and is rooted in punishment research. Representative behaviors of aversive leadership include (a) engaging in intimidation and (b) dispensing reprimands (Pearce & Sims, 2002).	 My team leader can be quite intimidating. When my work is not up to par, my team leader points it out to me. 	Pearce and Sims (2002); Pearce, Yoo, and Alavi (2004); Ensley, Hmieleski, and Pearce

Directive strategy	The directive leadership behavioral type describes leadership that primarily relies on position power, which at times has been referred to as legitimate power (French & Raven, 1959). Representative behaviors of the directive leadership type include (a) issuing instructions and commands and (b) assigning goals (Pearce & Sims, 2002).	 My team leader sets the goals for my performance. My team leader works with me to develop my performance goals. 	(2006); Carson et al. (2007)
Transactional strategy	The transactional leadership behavioral type is generally consistent with the components of the transactional paradigm of leadership. Representative behaviors of transactional leadership include (a) providing personal rewards, (b) providing material rewards, (c) managing by exception (active), and (d) managing by exception (passive) (Pearce & Sims, 2002).	My team leader gives me special recognition when my work performance is especially good.	
6. Transformational strategy	The transformational leadership behaviors contained in Bass's (1998) model include (a) charismatic leadership (or idealized influence), (b) inspirational motivation, (c) intellectual stimulation, and (d) individualized consideration. Thus, these three theoretical traditions form the bases of transformational leadership. Representative behaviors of this type include (a) providing vision, (b) expressing idealism, (c) using inspirational communication, (d) having high-performance expectations, (e) challenging	My team leader provides a clear vision of where our team is going.	

the	status	quo,	and	(f)
prov	iding	i	ntellec	tual
stim	ulation			

7. Empowering Empowering strategy emphasizes t

leadership My emphasizes the development of follower self-management for self-leadership skills. Representative behaviors of this type include independent encouraging encouraging action, (b) thinking, opportunity encouraging teamwork, (d) encouraging selfdevelopment, (e) using participative goal setting, and (f) encouraging self-reward (Pearce & Sims, 2002).

My team leader encourages me to search for solutions without supervision.

Source: Authors

4. Discussion

4.1. Implications

According to Hertel, Geister, and Konradt (2005), delegation and empowerment are essential components of successful virtual team management. This is also one of the two primary criteria of shared leadership. As a result, in order to develop performance in general and innovation in particular, virtual teams, especially virtual team leaders, should leverage delegation and empowerment inside the group.

An important implication for practice is the evidence that indicates effective delegation as integral for virtual team success. Therefore, virtual team leaders should carefully evaluate a team's competence before delegating tasks, especially before delegating important tasks (Zhang et al., 2009). Weekly one-on-one calls should be scheduled by leaders to discuss delegated tasks, issues, or queries. It's critical to keep in mind that every member of your team contributes significantly to the successful completion of projects, activities, and initiatives. The key to effective delegation is selecting the best individual or tool for the job requiring good shared leadership.

At the individual level of analysis, empowerment has been positively linked to managerial performance, innovation, job satisfaction (Spreitzer, 1995; Spreitzer et al., 1997), and organizational commitment (Liden et al., 2000), and negatively linked to turnover intentions (Koberg et al., 1999). Therefore, if leaders wish to enhance creative virtual teams, they should create and adopt an empowering culture inside their teams. Moreover, psychological empowerment promotes the intrinsic motivation levels and autonomy of the team members. Psychologically empowered members become more satisfied with team activities; thus they work for the team, typically to help each other or to share information (Hahm, 2017). For virtual teams, having regular online meetings is crucial since they serve as a guide and a tool for leaders to empower their teams. While working remotely, face-to-face connection and the maintenance

of social ties are made possible via apps like Zoom, Microsoft Teams, and Google Meet. Shared leaders need to take advantage of these endless resources to promote empowerment, through meetings, happy hour sessions, short bonding... to improve team morale.

Every type of organization or team relies on leadership for success or failure, and the current economic scenario makes leadership far more difficult. As a result, organizations and teams must clearly define their type of organization involved, with a view to benefiting the ability to lead, manage, and ultimately create innovation and improve performance. Furthermore, teams should build a working environment with a common goal in order to boost the team's strengths and promote shared leadership. A work culture in which employees feel free to express their feelings, thoughts, ideas, opinions, and emotions without fear of being judged is essential. A positive environment boosts team members happiness, decreases turnover, increases loyalty, and promotes greater job performance.

According to TinyPulse research published in Forbes magazine, transparency has a 93% correlation with employee happiness associated with shared leadership. As a result, creating a transparent environment in the team is also crucial for the team's effective functioning. To do this, for leaders, they should find members who share the same goals and spirit of transparency. Transparency is also reflected in the assignment of tasks to members, common documents, and work plans that need to be done transparently. Email and chat software like Slack, as well as repositories like OneDrive and Google Drive, are strong solutions for information exchange and transparency enhancement.

4.2. Limitation

Considering the definition of shared leadership, there are many various studies related to this concept, but there is still no consistent definition. In addition, each study uses a different set of scales and research methodologies to quantify shared leadership. As a result, evaluating the impact of shared leadership on innovative virtual teams is more complicated. Therefore, the impact of shared leadership in innovative virtual teams may not be accurately determined. Additionally, the scope of this review was limited to shared leadership models and innovative virtual teams when evaluating its effects.

On the other hand, although this study provided the overall impact, an overview of the impact of shared leadership in innovative virtual teams. However, the design of a qualitative study cannot have a big sample size due to time and financial constraints, and the findings of qualitative research are quite subjective. Therefore, in the future, there is a need for studies to quantify that relationship through quantitative methods to assess the strength and weaknesses, hypothesis sign, coefficient of expectation...

5. Conclusion

Therefore, by a systematic review, the authors have provided a summary of the definitions and measures of shared leadership in the last two decades. The article's new point is synthesizing and commenting on previous studies and authors and proposes a measurement model for Shared leadership as well, including seven scales: Team density, Team network centralization, Aversive strategy, Directive strategy, Transactional strategy, Transformational strategy, Empowering strategy. These scales are synthesized from two major approaches: the aggregation approach (Chan, 1998) and the social network approach (Carson et al., 2007; Mayo, Meindl, & Pastor, 2003; Mehra et al., 2006; White, Currie, & Lockett, 2016). The author

provides their definitions and sample questions that are looked up from previous studies. In future studies, these variables can be analyzed and evaluated more thoroughly to contribute to the research topic about shared leadership and for users of research results such as government, business
Defense

- Avolio, B. J., Walumbwa, F. O., & Weber, T. J. (2009). "Leadership: Current Theories, Research, and Future Directions". *Annual Review of Psychology*, Vol. 60 No. 1, pp. 421–449.
- Ayalew, M., & Ayenew, Z. (2022). "Do Paradoxical Virtual Leadership and Emotional Intelligence have Relationships? In Particular from Technology Dependence, Geographical Dispersion, and Human Capital Tensions". *International Journal of Organizational Leadership*, Vol. 11 No. 1, pp. 1–25.
- Bass, B. M., & Bass, R. (2009). The Bass Handbook of Leadership: Theory, Research, and Managerial Applications. In Google Books. Simon and Schuster.
- Bolden, R. (2011). "Distributed Leadership in Organizations: A Review of Theory and Research". *International Journal of Management Reviews*, Vol. 13 No. 3, pp. 251–269.
- Carson, J. B., Tesluk, P. E., & Marrone, J. A. (2007). "Shared Leadership in Teams: An Investigation of Antecedent Conditions and Performance". *Academy of Management Journal*, Vol. 50 No. 5, pp. 1217–1234.
- Carson, R. T., & Groves, T. (2007). Incentive and informational properties of preference questions. *Environmental and Resource Economics*, Vol. 37 No. 1, pp. 181–210.
- Carte, T. A., Chidambaram, L., & Becker, A. (2006). "Emergent Leadership in Self-Managed Virtual Teams". *Group Decision and Negotiation*, Vol. 15 No. 4, pp. 323–343.
- Castellano, S., Chandavimol, K., Khelladi, I., & Orhan, M. A. (2021). "Impact of self-leadership and shared leadership on the performance of virtual R&D teams". *Journal of Business Research*, Vol. 128, pp. 578-586.
- Chan, D. (1998). "Functional relations among constructs in the same content domain at different levels of analysis: A typology of composition models". *Journal of Applied Psychology*, Vol. 83 No. 2, pp. 234–246.
- Chiu, C.-Y. (Chad), Owens, B. P., & Tesluk, P. E. (2016). "Initiating and utilizing shared leadership in teams: The role of leader humility, team proactive personality, and team performance capability". *Journal of Applied Psychology*, Vol. 101 No. 12, pp. 1705–1720.
- Cho, V., Roll, L. C., Wu, C. H., & Tang, V. (2022). "Changing Digital Age in the Wake of COVID-19". *Journal of Global Information Management*, Vol. 30 No. 4, pp. 1–23.
- D'Innocenzo, L., Mathieu, J. E., & Kukenberger, M. R. (2016). "A Meta-Analysis of Different Forms of Shared Leadership–Team Performance Relations". *Journal of Management*, Vol. 42 No. 7, pp. 1964–1991.
- Debter, L. (n.d.). "Meet The Unknown Immigrant Billionaire Betting Her Fortune To Take On Musk In Space". *Forbes*.
- Denis, J.-L., Langley, A., & Sergi, V. (2012). "Leadership in the Plural. *Academy of Management Annals*", Vol. 6 No. 1, pp. 211–283.
- Drescher, M. A., Korsgaard, M. A., Welpe, I. M., Picot, A., & Wigand, R. T. (2014). "The dynamics of shared leadership: Building trust and enhancing performance". *Journal of Applied Psychology*, Vol. 99 No. 5, pp. 771–783.

- Ensley, M. D., Hmieleski, K. M., & Pearce, C. L. (2006). "The importance of vertical and shared leadership within new venture top management teams: Implications for the performance of startups". *The Leadership Quarterly*, Vol. 17 No. 3, pp. 217–231.
- EREZ, A., LEPINE, J. A., & ELMS, H. (2002). "EFFECTS OF ROTATED LEADERSHIP AND PEER EVALUATION ON THE FUNCTIONING AND EFFECTIVENESS OF SELF-MANAGED TEAMS: A QUASI-EXPERIMENT". *Personnel Psychology*, Vol. 55 No. 4, pp. 929–948.
- Erkutlu, H. (2012). « The impact of organizational culture on the relationship between shared leadership and team proactivity". *Team Performance Management: An International Journal*, Vol. 18 No. 1/2, pp. 102–119.
- Gibb, C. A. (1954). Leadership. *Handbook of social psychology*, Vol. 2, pp. 887-917.
- Gupta, V. K., Huang, R., & Yayla, A. A. (2011). "Social Capital, Collective Transformational Leadership, and Performance: A Resource-Based View of Self-Managed Teams". *Journal of Managerial Issues*, Vol. 23 No. 1, pp. 31–45.
- Hahm, S. (2017). "Information Sharing and Creativity in a Virtual Team: Roles of Authentic Leadership, Sharing Team Climate and Psychological Empowerment". *KSII Transactions on Internet and Information Systems*, Vol. 11 No. 8.
- Hambley, L. A., O'Neill, T. A., & Kline, T. J. B. (2007). "Virtual team leadership: The effects of leadership style and communication medium on team interaction styles and outcomes". *Organizational Behavior and Human Decision Processes*, Vol. 103 No. 1, pp. 1–20.
- Hernandez, M., Eberly, M. B., Avolio, B. J., & Johnson, M. D. (2011). "The loci and mechanisms of leadership: Exploring a more comprehensive view of leadership theory". *The Leadership Quarterly*, Vol. 22 No. 6, pp. 1165–1185.
- Hertel, G., Geister, S., & Konradt, U. (2005). "Managing virtual teams: A review of current empirical research". *Human Resource Management Review*, Vol. 15 No. 1, pp. 69–95.
- Hiller, N. J., Day, D. V., & Vance, R. J. (2006). "Collective enactment of leadership roles and team effectiveness: A field study". *The Leadership Quarterly*, Vol. 17 No. 4, pp. 387–397.
- Horila, T., & Siitonen, M. (2020). "A Time to Lead: Changes in Relational Team Leadership Processes over Time". *Management Communication Quarterly*.
- Kayworth, T. R., & Leidner, D. E. (2002). "Leadership Effectiveness in Global Virtual Teams". Journal of Management Information Systems, Vol. 18 No. 3, pp. 7–40.
- Kirkman, B. L., Rosen, B., Tesluk, P. E., & Gibson, C. B. (2004). "The Impact of Team Empowerment on Virtual Team Performance: The Moderating Role of Face-to-Face Interaction". *Academy of Management Journal*, Vol. 47 No. 2, pp. 175–192.
- Lord, R. G., Day, D. V., Zaccaro, S. J., Avolio, B. J., & Eagly, A. H. (2017). "Leadership in applied psychology: Three waves of theory and research". *Journal of Applied Psychology*, Vol. 102 No. 3, pp. 434–451.

- Manz, C. C., Pearce, C. L., Mott, J. W., Henson, Z., & Sims, H. P. (2013). "Don't take the lead...share the lead". *Organizational Dynamics*, Vol. 42 No. 1, pp. 54–60.
- Manz, C. C., Skaggs, B. C., Pearce, C. L., & Wassenaar, C. L. (2015). "Serving one another: Are shared and self-leadership the keys to service sustainability?", *Journal of Organizational Behavior*, Vol. 36 No. 4, pp. 607–612.
- Mayo, M., Meindl, J. R., & Pastor, J. C. (2003). "Shared leadership in work teams: A social network approach". In C. L. Pearce, & J. A. Conger (Eds.), *Shared leadership:* Reframing the hows and whys of leadership (pp. 193–214). Thousand Oaks, CA: Sage.
- Mehra, A., Smith, B. R., Dixon, A. L., & Robertson, B. (2006). "Distributed leadership in teams: The network of leadership perceptions and team performance". *The Leadership Quarterly*, Vol. 17 No. 3, pp. 232–245.
- Meuser, J. D., Gardner, W. L., Dinh, J. E., Hu, J., Liden, R. C., & Lord, R. G. (2016). "A Network Analysis of Leadership Theory". *Journal of Management*, Vol. 42 No. 5, pp. 1374–1403.
- Nicolaides, V. C., LaPort, K. A., Chen, T. R., Tomassetti, A. J., Weis, E. J., Zaccaro, S. J., & Cortina, J. M. (2014). "The shared leadership of teams: A meta-analysis of proximal, distal, and moderating relationships". *The Leadership Quarterly*, Vol. 25 No. 5, pp. 923–942.
- Nordbäck, E. S., & Espinosa, J. A. (2019). "Effective Coordination of Shared Leadership in Global Virtual Teams". *Journal of Management Information Systems*, Vol. 36 No. 1, pp. 321–350.
- Pearce, C. L., & Conger, J. A. (2003). "All those years ago". In C. L. Pearce, & J. A. Conger (Eds.), *Shared leadership: Reframing the hows and whys of leadership* (pp. 1–18). Thousand Oaks, CA: Sage.
- Pearce, C. L., & Ensley, M. D. (2004). "A reciprocal and longitudinal investigation of the innovation process: the central role of shared vision in product and process innovation teams (PPITs)". *Journal of Organizational Behavior*, Vol. 25 No. 2, pp. 259–278.
- Pearce, C. L., & Sims, H. P. (2002). "Vertical versus shared leadership as predictors of the effectiveness of change management teams: An examination of aversive, directive, transactional, transformational, and empowering leader behaviors". *Group Dynamics: Theory, Research, and Practice*, Vol. 6 No. 2, pp. 172–197.
- Pearce, C. L., Hoch, J. E., Jeppesen, H. J., & Wegge, J. (2009). "New Forms of Management: Shared and Distributed Leadership in Organizations" A Special Issue of Journal of Personnel Psychology. *European Journal of Psychological Assessment*, Vol. 25 No. 4, pp. 285-286.
- Ramthun, A. (2013). Shared Leadership in Dangerous Environments: Testing a Model Shared Leadership in Dangerous Environments: Testing a Model for Military Teams Using Mixed Methods Research for Military Teams Using Mixed Methods Research.
- Sivasubramaniam, N., Murry, W. D., Avolio, B. J., & Jung, D. I. (2002). "A Longitudinal Model of the Effects of Team Leadership and Group Potency on Group Performance". *Group & Organization Management*, Vol. 27 No. 1, pp. 66–96.

- Wang, D., Waldman, D. A., & Zhang, Z. (2014). "A meta-analysis of shared leadership and team effectiveness". *Journal of Applied Psychology*, Vol. 99 No. 2, pp. 181–198.
- White, L., Currie, G., & Lockett, A. (2016). "Pluralized leadership in complex organizations: Exploring the cross-network effects between formal and informal leadership relations". *The Leadership Quarterly*, Vol. 27 No. 2, pp. 280–297.
- Zhang, S., Tremaine, M., Egan, R., Milewski, A., O'Sullivan, P., & Fjermestad, J. (2009). "Occurrence and Effects of Leader Delegation in Virtual Software Teams". *International Journal of E-Collaboration*, Vol. 5 No. 1, pp. 47–68.
- Zhu, J., Liao, Z., Yam, K. C., & Johnson, R. E. (2018). Shared leadership: A state-of-the-art review and future research agenda. *Journal of Organizational Behavior*, Vol. 39 No. 7, pp. 834–852.