

Entrepreneurial Orientation in Transport and Logistics Sector in the Last Decade: A Systematic Review

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ABSTRACT: This study provides a systematic quantitative assessment technique (SQAT) of entrepreneurial orientation (EO) research conducted between 2012 and 2021, focusing on the transport and logistics sector. This review aims to map and evaluate global Entrepreneurial Orientation (EO) research trends within the transport and logistics sector published between 2012 and 2021. A total of 100 EO-related publications from 34 countries were reviewed, with the majority published in 2019, by European scholars. Among all contributing nations, the United States recorded the highest number of EO publications. Most of the reviewed studies employed empirical approaches, while a smaller proportion were conceptual in nature. Four primary data collection methods were identified (surveys, secondary data, interviews, and observations), with surveys emerging as the most dominant technique. The review further revealed three major thematic areas: EO magnitude, EO consequences, and EO mechanisms, with the magnitude dimension receiving the greatest scholarly attention. The authors highlight the need for increased EO research in underrepresented regions such as South America and Australasia and advocate for more conceptual contributions to balance the dominance of empirical works. They also recommend the adoption of qualitative and mixed-method approaches to generate deeper insights, the use of qualitative and mixed-method approaches is recommended because they provide deeper insights and a more comprehensive understanding of the research problem. These methods combine numerical data with participants' experiences and perspectives, ensuring richer, more reliable, and contextually meaningful findings. particularly within studies focusing on EO consequences and mechanisms.

Keywords: Entrepreneurial Orientation, Systematic Review, Transport and Logistics, Innovation Management.



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INTRODUCTION

Entrepreneurial Orientation (EO) is a fundamental concept in management and organizational studies that significantly shapes a firm's strategic decision-making and overall direction (Jebna & Baharudin, 2015). This is the foundational spirit of innovation and calculated venturing necessary for an organization to actively seek out and develop opportunities into new sources of value (W. J. Wales et al., 2023). This aligns with Rauch et al. (2009) and Wiklund and Shepherd (2005), who describe EO as a firm's capacity to innovate, assume risks, and proactively pursue market opportunities. Rauch et al. (2009) further emphasize that EO represents the policies and practices that form the foundation for entrepreneurial decisions and actions. In practical terms, EO is particularly critical in sectors such as transport and logistics, where firms constantly design and implement strategies to explore new technologies, optimize operations, and identify market opportunities that competitors may overlook. Within this context, EO is reflected in the processes, practices, and decision-making styles that drive innovation in areas such as fleet management, supply chain optimization, smart mobility, and digital logistics systems (Glais & Bukar, 2019).

A common thread across various conceptualizations of EO is the inclusion of innovativeness, proactiveness, risk-taking, autonomy, and competitive aggressiveness as its defining dimensions (Anderson & Eshima, 2017). Research on EO, therefore, often explores its core concepts, dimensions, entrepreneurial behavior, and relationship with organizational performance (Corbetta & Salvato, 2017). EO focuses on how firms pursue entrepreneurial initiatives rather than who carries them out (Hans & Mike, 2015). In the transport and logistics industry, these dimensions manifest through innovation in logistics technologies, proactive adaptation to digital trends, and calculated risk-taking in adopting new business models such as green logistics, last-mile delivery innovations, and automation in supply chain processes (Bujan, 2020).

Despite the clear theoretical link and practical necessity, EO research has primarily focused on contexts such as sports ventures, SMEs, healthcare, and high-technology firms, validating the positive relationship between EO and firm performance across diverse settings (Amankwah-Amoah et al., 2018; Hernández-Perlines et al., 2019). However, a significant gap remains: limited research has systematically examined EO specifically within the transport and logistics industry, a sector where entrepreneurial innovation plays a crucial and growing role in advancing efficiency, digital transformation, and sustainability (Hansen et al., 2012). This lack of focused study means the unique challenges and opportunities for entrepreneurial practice within the logistics ecosystem are largely underexplored.

EO encapsulates a leadership mindset characterized by accountability, initiative, and adaptability, essential traits in dynamic and uncertain environments (Bruining & Wright, 2016). A consistent insight from EO research is that it represents a strategic organizational resource that enhances competitiveness, enables firms to outperform rivals, and secures long-term sustainability in the marketplace (Bruining & Wright, 2016). In transport and logistics, EO can help firms enhance service reliability, adopt digital solutions such as IoT-enabled tracking systems, and pursue innovative

approaches to sustainable transport operations—ultimately improving customer satisfaction and operational efficiency. The intellectual roots of EO can be traced to the 1960s, particularly to the Aston Group in the United Kingdom, whose studies published in the *Administrative Science Quarterly* (ASQ) examined organizational performance and employee satisfaction. These foundational studies suggested that firms characterized by innovation, proactiveness, competitiveness, and risk-taking tend to achieve superior market performance (Al-Jinini et al., 2018). In the context of transport and logistics, EO serves as a strategic response mechanism, allowing organizations to remain agile and resilient amid technological disruptions, environmental regulations, and shifts in global supply chain dynamics.

To remain competitive, transport and logistics firms must adopt entrepreneurial strategies that leverage technological innovation to meet evolving customer expectations (Al-Swidi & Mahmood, 2012). For instance, the integration of automation, artificial intelligence (AI), and data analytics in logistics systems reflects EO-driven decision-making that enhances performance and sustainability. Given the increasing complexity of global trade, firms that embrace EO principles are better equipped to navigate uncertainty, reduce operational inefficiencies, and respond quickly to market fluctuations. From an individual perspective, Jinpei (2009) defines EO as an individual's predisposition toward engaging in entrepreneurial activities—whether within an existing organization or through the creation of a new venture. Numerous empirical studies across diverse contexts have validated the positive relationship between EO and firm performance, including in sectors such as sports ventures (Al-Jinini et al., 2018), small and medium-sized enterprises (Amankwah-Amoah et al., 2018), healthcare (Singla et al., 2018), private enterprises (Zhuang et al., 2019), family-owned businesses (Hernández-Perlines et al., 2019), and high-technology firms (Liu et al., 2014). However, limited research has examined EO within the transport and logistics industry, despite its potential to foster innovation, improve service delivery, and enhance competitiveness through technological adaptation and sustainable practices.

Over the past decade, scholarly attention to EO has increased substantially. A Google Scholar search identified approximately 4,880 journal articles with EO in their titles between 2012 and 2021, underscoring its prominence as one of the most extensively studied constructs in entrepreneurship research (William et al., 2021). The present study systematically reviews EO literature over this ten-year period to analyze publication trends, geographical distribution, article typologies (conceptual versus empirical), data collection methods, and key thematic areas. The paper also identifies existing gaps and emphasizes the need for deeper EO research in transport and logistics, where entrepreneurial innovation plays a crucial role in advancing efficiency, digital transformation, and sustainability.

Therefore, the present study systematically reviews the global EO literature published between 2012 and 2021 to analyze publication trends, geographical distribution, article typologies (conceptual versus empirical), and key thematic areas. This research aims to map and evaluate global EO research trends in the transport and logistics sector to provide a deeper understanding of how entrepreneurial practices can drive innovation, competitiveness, and operational efficiency within these industries, while explicitly identifying existing gaps to guide future research. It concludes with recommendations for

future research aimed at bridging these gaps and promoting EO as a driver of transformation within the global logistics ecosystem.

METHOD

This study reviews scholarly articles on Entrepreneurial Orientation (EO) published between 2012 and 2021, employing the Systematic Quantitative Assessment Technique (SQAT) proposed by Pickering and Byrne (2014). The SQAT provides a structured framework for determining the inclusion or exclusion of peer-reviewed, English-language journal publications, thereby allowing researchers to systematically analyze existing studies and generate an organized synthesis of a specific research domain (Pickering & Byrne, 2014). Using this approach, the study examined publication patterns, geographical distribution, research designs, data collection techniques, and article classifications within the EO literature.

To ensure the review's focus remained strictly on Entrepreneurial Orientation (EO) research in the transport and logistics sector from 2012–2021, a comprehensive three-stage screening process was applied to the initial set of articles to achieve transparency and replicability. The initial search yielded 4,880 articles. In Stage 1, title screening and duplicate removal resulted in the exclusion of articles that were irrelevant to EO or outside the specified date range. In Stage 2, abstracts were read to confirm the presence of both EO as a core construct and a direct application to transport and logistics contexts. Finally, Stage 3 involved full-text screening against specific inclusion criteria (e.g., peer-reviewed journal status, specific definitions) to validate the final set of articles. This systematic, step-wise application of criteria was essential for maximizing the validity of the final data set by ensuring only highly relevant literature was included for synthesis, thereby providing a focused and accurate map of the field.

Furthermore, the methodological rigor was reinforced by utilizing two independent reviewers during the critical abstract and full-text screening stages. This crucial measure was taken to enhance the reliability and objectivity of the selection process by mitigating the risk of individual bias in the interpretation of the criteria. To quantify the agreement between the reviewers, a measure of inter-rater reliability, such as Cohen's Kappa (κ), was calculated. A high Kappa value provides statistical confidence in the consistency of the selection. Any discrepancies between the reviewers were resolved through thorough discussion until a consensus was reached, thereby ensuring the integrity of the final article selection for analysis.

The SQAT provides a structured, step-by-step approach to pinpoint essential themes, research gaps, and determine crucial variables, thereby setting a clear course for future studies. Each article was classified according to the primary industry of the sample population it studied (e.g., studies using data from banks, hospitals, or logistics firms were classified as Service; studies using data from automotive parts suppliers or textile mills were classified as Manufacturing). This ensured that the sectoral classification was based on the empirical focus of the research, providing a clear map of research

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attention across industries. The SAQT outlines five essential steps for conducting an effective systematic review, as summarized in Table 1.

Table 1. Description and application

S/N	Dimensions	Application in the current study
1	Define topic	Entrepreneurial Orientation (EO) journal articles published between 2012 and 2021
2	Develop research questions	Five research questions that guided the review: 1. In which countries were these articles written? 2. In which continent were these articles written? 3. What type of EO articles were published? (Conceptual vs. Empirical) 4. What are the methods used for data collection? 5. What are the specific themes these papers explored, and what were the major findings of those themes?
3	Identify Keywords	Entrepreneurial Orientation
4	The database identified and searched	1. Elsevier, Emerald, Sage, Springer, Taylor and Francis, and Wiley 2. Search criteria: "All in the title" search using the phrase "entrepreneurial orientation" on Google scholar advanced search.
5	Read and assess publications	1. Abstract of only original peer-reviewed English journal publications found to be dealing with "entrepreneurial orientation" were read. 2. Literature reviews book chapters and conference proceedings were not included; only peer-reviewed conceptual and empirical papers were assessed.

Source: Authors' Review.

The researcher analyzed 100 peer-reviewed English-language journal articles on Entrepreneurial Orientation (EO) that satisfied the established inclusion criteria, retrieved from six reputable academic databases. The distribution of these EO publications across different publishers is presented in Table II.

Table 2. EO summary of reviewed literature (2012-2021)

Publisher	Number of EO articles
Sage	30
Springer	29
Elsevier	24
Emerald	7
Taylor and Francis	6
Wiley	4
Total	100

Source: Authors' Review.

RESULT AND DISCUSSION

Time-Based Analysis of Entrepreneurial Orientation (EO)

Figure I illustrates the time-based distribution of 100 peer-reviewed English-language journal articles on Entrepreneurial Orientation (EO) published from 2012 to 2021.

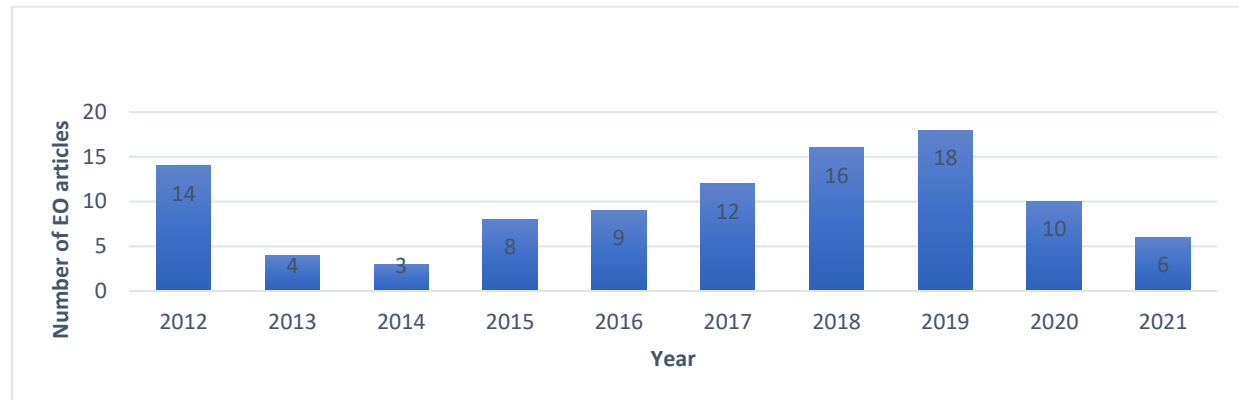


Figure 1. Time distribution of EO articles

Source: Authors' Review

The systematic review conducted on Entrepreneurial Orientation (EO) literature over a ten-year period revealed a consistent publication trend. The analysis identified 2019 as the most prolific year, with a total of 18 articles published, indicating a peak in scholarly interest and research output in EO during that year. Conversely, 2014 was the least productive year, with only 3 articles published, suggesting a relative decline in research activity or publication during that period.

It is crucial to highlight that the researcher sourced articles within a specific timeframe, from January 1, 2012, to November 13, 2021. This timeframe selection ensures that the review encompasses a comprehensive range of studies pertinent to the field of EO, thereby providing a robust basis for analyzing publication trends and research productivity over the designated period.

Geographical distribution of EO articles

In the period covered, a total of one hundred EO journal articles were published from thirty-four countries. Figure II shows the top three countries in terms of EO articles publications between 2012 and 2021.

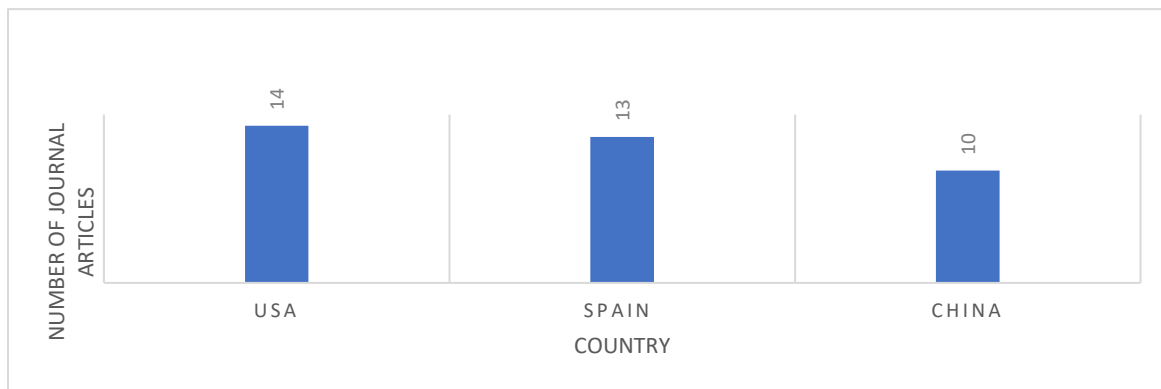


Figure 2. Countries with the maximum EO articles

Source: Authors' Review

The United States has the highest number of 14 articles, making it the top-ranked country. Spain follows with a total of 13 articles, while China has only 10 articles on entrepreneurial orientation (EO) (W. Wales et al., 2019). The majority of EO research has been produced in European countries, indicating that European countries lead in EO research over the past decade. This review encourages broader global participation in EO research, as only 34 out of 196 countries have contributed. The remaining 34 countries and their numbers of EO articles are presented in Table III. To provide further insight into the geographical distribution of EO articles in the last ten years, Figure III presents the distribution on a continental basis. The review shows that the majority of EO articles are concentrated in Europe (45 articles), with minimal representation in South America (1 article) and Australasia (1 article). Asia follows Europe with 33 articles, North America with 15, and Africa with 6. Additionally, it was observed that one article conducted its study in two countries and two continents (Llanos-Contreras et al., 2019) Chile & Australia).

Europe's prominence in the volume of Entrepreneurial Orientation (EO) research stems largely from its institutional and policy focus on stimulating entrepreneurship for economic growth, particularly following economic shifts and crises throughout the 2010s. The European Union and its member states have consistently implemented strategies, such as the *Entrepreneurship 2020 Action Plan*, which have prioritized and funded research into entrepreneurial behaviors to drive innovation and competitiveness. This policy environment fosters a robust academic ecosystem, often linking university research directly to private sector innovation needs, resulting in a higher volume of foundational EO studies, particularly within the broad service sector as our analysis shows with 66 articles, which aligns with Europe's diversified, highly developed service-based economies.

The relative scarcity of focused EO studies in the transport and logistics sector is primarily explained by two factors: industry maturity and academic classification. The logistics industry has historically been viewed through the lens of operational efficiency and Supply Chain Management (SCM), prioritizing optimization, coordination, and cost reduction metrics often seen as contrary to the disruptive and risk-taking nature of EO. Academics and practitioners often classify logistics providers

as an 'organizational function' or 'system' rather than as a primary, stand-alone entrepreneurial sector. This perception creates a theoretical inertia where the natural synergy between EO (boldness, innovation) and SCM (stability, control) is either perceived as incompatible or simply remains underexplored, despite the industry's critical need for entrepreneurial strategy to navigate digital transformation, market volatility, and sustainability demands.

Table 3. The remaining 30 countries and number of EO articles

S/N	Country	No. of Articles
1	Malaysia	6
2	India	5
3	Netherlands	4
4	Portugal	4
5	Sweden	4
6	Italy	3
7	Germany	3
8	Switzerland	2
9	Turkey	2
10	Finland	2
11	Pakistan	2
12	United Kingdom	2
13	South Africa	2
14	Tanzania	2
15	France	2
16	Canada	1
17	Hungary	1
18	UAE	1
19	Austria	1
20	Egypt	1
21	Taiwan	1
22	Indonesia	1
23	Iran	1
24	Australia	1
25	Chile	1
26	Croatia	1
27	Bangladesh	1
28	Poland	1
29	Jordan	1
30	Ghana	1

Source: Authors' Review

Entrepreneurial orientation (EO) is conceptualized as a tactical decision-making procedure that guides firms in adopting specific dimensions to enhance their entrepreneurial activities (Jebna & Baharudin, 2015). It is a critical concept for executives when formulating strategies aimed at innovation and seizing unique opportunities that other organizations may overlook. EO encompasses the processes,

practices, and decision-making styles that characterize entrepreneurial behaviour within organizations (Glais & Bukar, 2019).

Commonly, EO is defined by five core dimensions: innovativeness, proactiveness, risk-taking, autonomy, and competitive aggressiveness (Anderson & Eshima, 2017). These dimensions collectively shape the entrepreneurial posture of a firm, and it continues to exert significant influence, particularly in the transport and logistics sector. Future research should particularly focus on exploring EO in underrepresented regions such as South America and Australasia, as well as other continents that currently lack substantial representation in EO studies in respect to the transport and logistics sector. This geographical emphasis could provide a more comprehensive understanding of EO's global applicability and impact.

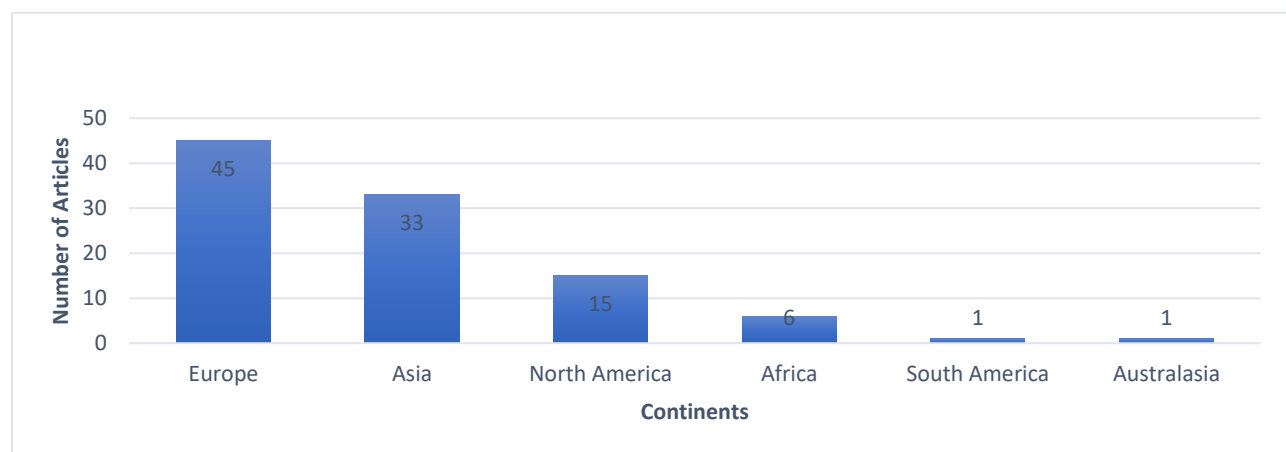


Figure 3. EO Articles by continent

Source: Authors' Review

South America and Australia have the fewest empirical investigations in this context, highlighting a significant geographical gap in EO research. South America, in particular, is noted for its high poverty levels (Bikefe et al., 2020). The region requires substantial growth and development. Productivity must increase steadily to ensure sustained improvements in employee well-being. Reducing inequality is essential by closing the productivity gap between advanced companies and those with low productivity (Tinoco & Bárcena, 2012).

In Australasia, academic book publishing faces challenges, with academics under pressure to secure grant funding and publish journal articles. The shift by Australasian governments from quantity to quality means that grants are awarded to universities based on the quality of their journal publications (Mrva-Montoya & Edward Luca, 2021). Implementing EO programs in South American and Australian companies could significantly enhance the economic and environmental conditions of their continents. Therefore, future research should focus on addressing this geographical gap in EO studies.

Article Type

In Figure IV, it was noted that out of 100 peer-reviewed papers on Entrepreneurial Orientation, 93 were empirical articles and 7 of the reviewed works were conceptual in nature. Empirical research, by contrast, entails the systematic collection of data aimed at testing or confirming established theoretical frameworks (Soomro & Shah, 2019).

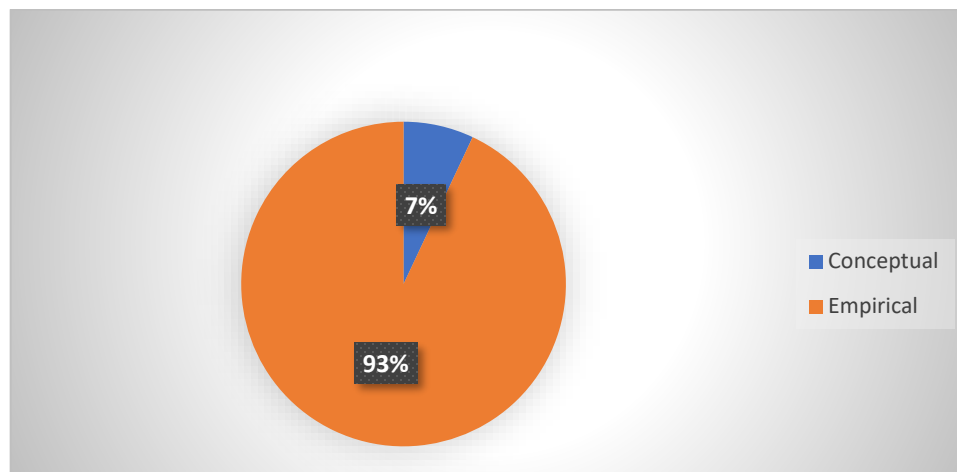


Figure 4. EO Articles Type

Source: Authors' Review

EO Data collection methods

In this section, we highlight among the 93 empirical publications reviewed, four distinct data collection approaches were utilized: survey questionnaires, secondary data sources, interviews, and observation. Entrepreneurial Orientation (EO) papers reviewed, as presented in Figure V. Conceptual papers are excluded as they do not involve data collection.

The survey method was the most prevalent, utilized by 86 out of the 93 empirical EO papers (Pérez-Luño et al., 2011) Todorovic et al., 2012; (Tajeddini et al., 2013) (W. J. Wales, 2016) (Guo et al., 2020). The interview method was employed by 28 papers (Engelen et al., 2014; Gupta et al., 2016; X. Jiang et al., 2018; Li et al., 2017; Sirén et al., 2017). Secondary data was used in 15 papers (Arunachalam et al., 2018, 2018; Diáñez-González & Camelo-Ordaz, 2016; F. Jiang et al., 2018; Kraus et al., 2012; Liu et al., 2014), while 11 papers utilized observation (e.g., Mahrouz & Gendy, 2017; (Al Mamun & Fazal, 2018) (Arzubiaga et al., 2019) Brigham et al., 2019; (Ofem et al., 2020).

Additionally, 31 of the EO papers employed more than one data collection method (Hernández-Perlines et al., 2019; Lanchimba et al., 2017; Llanos-Contreras et al., 2019; Migliori et al., 2017; Zhuang et al., 2019). This observation suggests a trend towards using mixed methods in EO research. Consequently, future studies are encouraged to adopt either a combination of methods or mixed methods approaches to enhance the robustness and comprehensiveness of EO research.

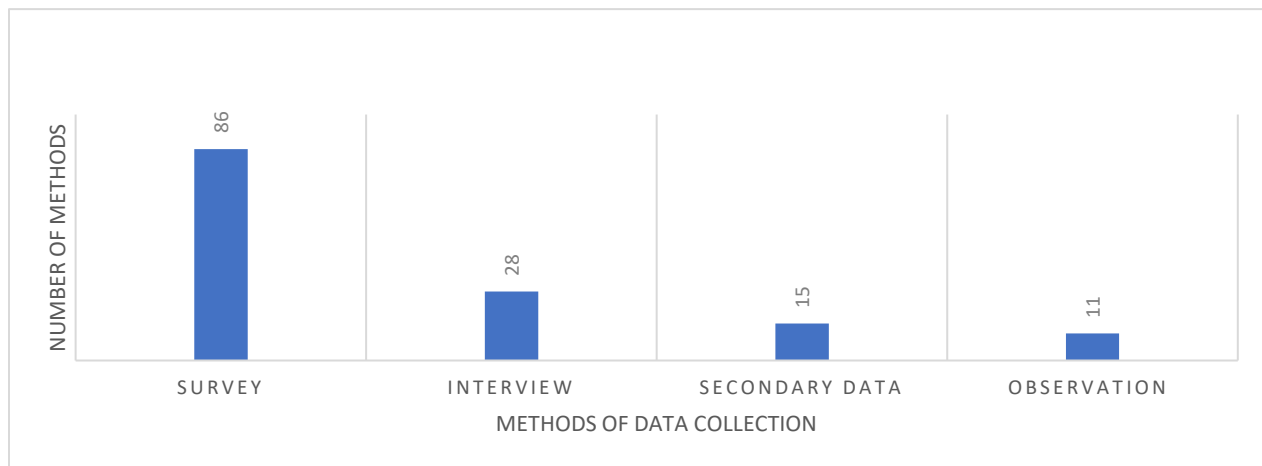


Figure 5. EO Data Collection Methods

Source: Authors' Review

EO Themes

Figure VI illustrates the thematic classification of the 100 Entrepreneurial Orientation (EO) articles analyzed in the systematic review. The findings reveal that the studies addressed three major thematic areas. A substantial proportion of the publications (71 out of 100) concentrated on the magnitude of EO, particularly its association with variables such as employee satisfaction, organizational commitment, customer orientation, and market orientation (Kwak et al., 2013). These 71 studies were further categorized into two primary sectors, that is the “service and manufacturing”, with the service sector receiving the highest research attention which emerged as the most researched sector, with 66 articles, while the manufacturing industry was the least researched, with only 5 articles.

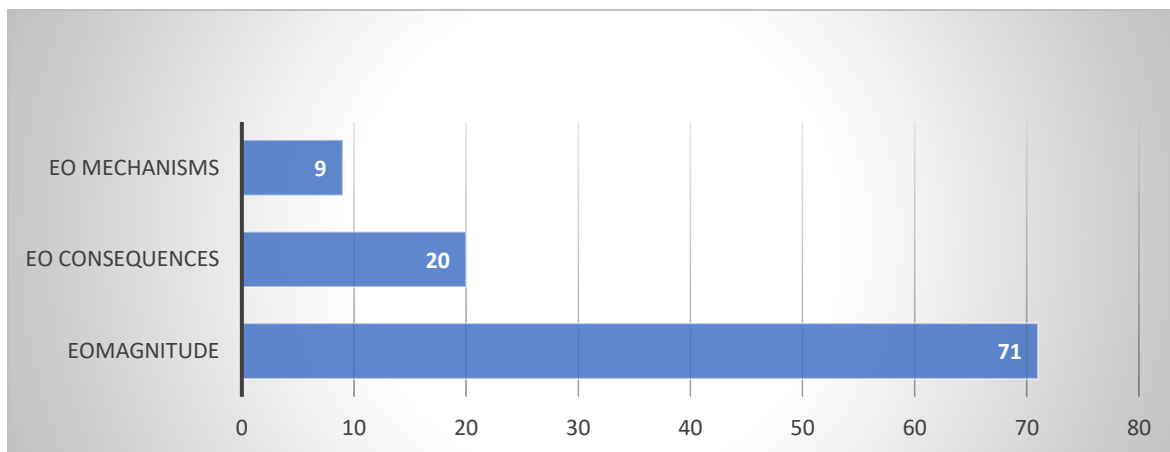


Figure 6: EO Themes

Source: Authors' Review

In the service industry, finance Arshade et al., 2012; ; (Arshad et al., 2014, 2014; Cuevas-Vargas et al., 2019; Dai et al., 2014; Engelen et al., 2014, 2014, 2014; Hu et al., 2018; Huang & Wang, 2011; Hughes

et al., 2018; Jin et al., 2017; Kallmuenzer et al., 2018; Khan et al., 2021; Kurtulmuş & Warner, 2015, 2015; Mason et al., 2015; Pérez-Luño et al., 2011), Hospitality (e.g., Hernández-Perlines et al., 2016, 2020; Ilmudeen, 2020; Kiyabo & Isaga, 2020; Kosa et al., 2018; Kwiatkowski et al., 2021; Lee et al., 2019; Li et al., 2017; Lurtz & Kreutzer, 2017; Messersmith & Wales, 2013; Morgan et al., 2015; Okangi, 2019; Wincent et al., 2014) and Healthcare (Gupta & Batra, 2016, 2016; Lages et al., 2017; Liu et al., 2014, 2014; Marques et al., 2013; Pratono & Mahmood, 2015; Reijonen et al., 2015; Sahaym et al., 2021; Tajeddini et al., 2013, 2013; W. J. Wales, 2016, 2016, 2016) are the most researched articles with 14 respectively. The sport industry has 10 articles (Abd Latif et al., 2016, 2016; Cao et al., 2015; Criado-Gomis et al., 2018; Etemad, 2015; Genc et al., 2019; Hernández-Perlines et al., 2019; Ismail et al., 2015; Palmer et al., 2019; Pittino et al., 2017; Zehir et al., 2016). Education industry has 11 articles (Covin & Wales, 2019; Bolton & Lane, 2012; Criado-Gomis et al., 2020; Mahrous & Genedy, 2019; Rezaei & Ortt, 2018; Watson et al., 2019). Sports, ICT (Ahmadian & Abdolmaleki, 2018; Asemokha et al., 2019; Dada & Watson, 2013; Gupta et al., 2014; Lechner & Gudmundsson, 2014; Martins, 2016; Pradhan & Nath, 2012) have 3 articles each. On the other hand, the manufacturing sector (Rodrigo-Alarcón et al., 2018; Sahoo & Panda, 2019; Song et al., 2019) accounted for only five articles in the review. The findings align with Qaisar and Muhamad's (2021) observation that service-oriented organizations tend to exhibit a greater awareness and application of Entrepreneurial Orientation (EO), employing it more effectively to cultivate supportive and innovative environments (W. Wales et al., 2015). In contrast, manufacturing firms are often associated with more rigid and less adaptive operational frameworks.

The second most explored theme identified in the review is the consequences of EO, with a notable number of studies focusing on the service industry (20 articles e.g., (Doorn et al., 2017; Stanley et al., 2019; Titus Jr et al., 2020; Urban, 2019; W. J. Wales et al., 2013; Yoon, 2018; T. M. Zellweger et al., 2012; T. Zellweger & Sieger, 2012) while the manufacturing sector remains the least examined, with only five studies investigating EO outcomes.

The third theme, referred to as the EO mechanism, comprised studies exclusively centered on the service industry. Within this category, the finance sector recorded the highest concentration of research (Santos et al., 2017; Wales, 2015), followed by education (Cho & Lee, 2018; Yang et al., 2018). In contrast, the food services (Ali et al., 2021; wger et al., 2012) and sports sectors (Lanchimba et al., 2017; Wales, 2019) received minimal scholarly attention. This observation supports Job et al.'s (2017) assertion that there is a lack of studies on mechanisms that identify employee needs to enhance internal marketing practices.

In light of these findings, this review strongly recommends that future research not only expand investigations into the consequences and mechanisms of EO but also extend such studies to underrepresented sectors such as transport and logistics. Given the sector's vital role in global trade, Additionally, incorporating **EO research** into transport and logistics will specifically addressing supply chain management and technological adaptation—will provide deeper insights into how entrepreneurial practices drive innovation, competitiveness, and operational efficiency.

Additionally, supply chain management and technological adaptation, incorporating EO research in transport and logistics will provide deeper insights into how entrepreneurial practices can drive innovation, competitiveness, and operational efficiency within these industries.

Table 4. Summary of findings of the reviewed 82 EO articles

S/N	Headings	Key Findings	Implication
1	Time Distribution (2012-2021)	- EO articles were published every year in the last decade (2012-2021) - A significant number of articles were published in 2019, but none speaks on transport and logistics	- EO research is getting more attention from scholars over the years
2	Geographical distribution	- The review identified 100 articles from 34 countries - On the geographical distribution, EO articles are largely concentrated in Europe, while South America and Australasia have been largely ignored - America has the highest number of EO articles among contributing countries.	- There is need for more EO research in South America and Australasia and other nations of other countries that current have no representation.
3	Article Type	- Empirical and conceptual research were adopted in the articles reviewed; the majority were empirical research.	- Researchers are interested more in the practical application of EO in servicing and manufacturing neglecting transport and logistics sectors
4	Data collection methods	- Four data collection methods such as survey, secondary data, interview, and observation were adopted in the articles with the survey being the most used within the decade.	- The data collection methods used in the articles were the dominant ones used in most research. - It is highly advised that the use of the mixed method of data collection should be encouraged.
5	EO Themes	- Three different EO themes were identified (i.e. EO Magnitude, Consequences of EO, and EO Mechanism).	- It was discovered that the EO magnitude was the most investigated theme. - Scholars are advised to carry out more research on

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S/N	Headings	Key Findings	Implication
			the consequences of EO and EO Mechanisms most especially in transport and logistics sector.

Source: Authors' Review

CONCLUSION

Entrepreneurial Orientation (EO) refers to a firm's strategic approach to decision-making, emphasizing key dimensions such as innovativeness, proactiveness, risk-taking, autonomy, and competitive aggressiveness. Within the transport and logistics sector, Entrepreneurial Orientation (EO) is particularly vital, as it enables organizations to proactively identify emerging market opportunities and drive superior performance, adopt innovative technologies, and enhance operational efficiency in an increasingly competitive and dynamic environment (Hernández-Perlines, Ibarra Cisneros, et al., 2020). EO reflects the processes, practices, and decision-making styles that embody an entrepreneurial mindset, driving firms to innovate and sustain a strategic advantage in logistics operations, supply chain management, and service delivery (Bernoster et al., 2020).

This study conducted a systematic review of 100 peer-reviewed English-language journal articles on EO published between 2012 and 2021. The review analyzed five core dimensions: time distribution, geographical distribution, article type, data collection methods, and EO research themes. The findings revealed that most EO studies were published in 2019, with the United States contributing the largest share of publications. Europe emerged as the most research-active region, while South America and Australasia were significantly underrepresented indicating a need for broader global engagement, particularly in developing regions.

The majority of the reviewed works were empirical studies, while only a small proportion were conceptual articles. The dominant data collection techniques included surveys, interviews, observations, and secondary data, with surveys being the most frequently applied method.

Despite providing valuable insights, the review also revealed some limitations. It considered only articles published by six major databases, potentially omitting important EO studies relevant to transport and logistics. Moreover, papers that did not explicitly include the term "Entrepreneurial Orientation" in their titles were excluded, which may have overlooked research using related constructs such as entrepreneurial behavior or innovation orientation. Similarly, restricting the review to English-language journal articles excluded potentially significant findings from industry reports, book chapters, and conference proceedings.

To ensure a more explicit integration with logistics innovation, future studies should be directed toward three key areas. First, digital adoption requires empirical examination to understand how entrepreneurial orientation dimensions—particularly risk-taking and proactiveness—influence the successful integration of advanced technologies such as artificial intelligence for demand forecasting,

IoT-enabled real-time tracking systems, and blockchain for supply chain transparency. Second, research on sustainability frameworks is essential to explore the relationship between entrepreneurial orientation and green logistics adoption, including investments in low-emission fleet technologies and proactive engagement in circular economy business models as sources of competitive advantage rather than mere regulatory compliance (Dele-Ijagbulu et al., 2020; Koe, 2016). Third, there is a need to develop and validate performance metrics that are more sector-specific, linking entrepreneurial orientation to measurable logistics outcomes such as service reliability, last-mile efficiency, and resilience to global disruptions.

This dedicated research would help uncover how EO principles influence fleet management, supply chain innovation, and logistics performance, thereby deepening understanding of how entrepreneurial behavior drives competitiveness and technological advancement within the global logistics industry.

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