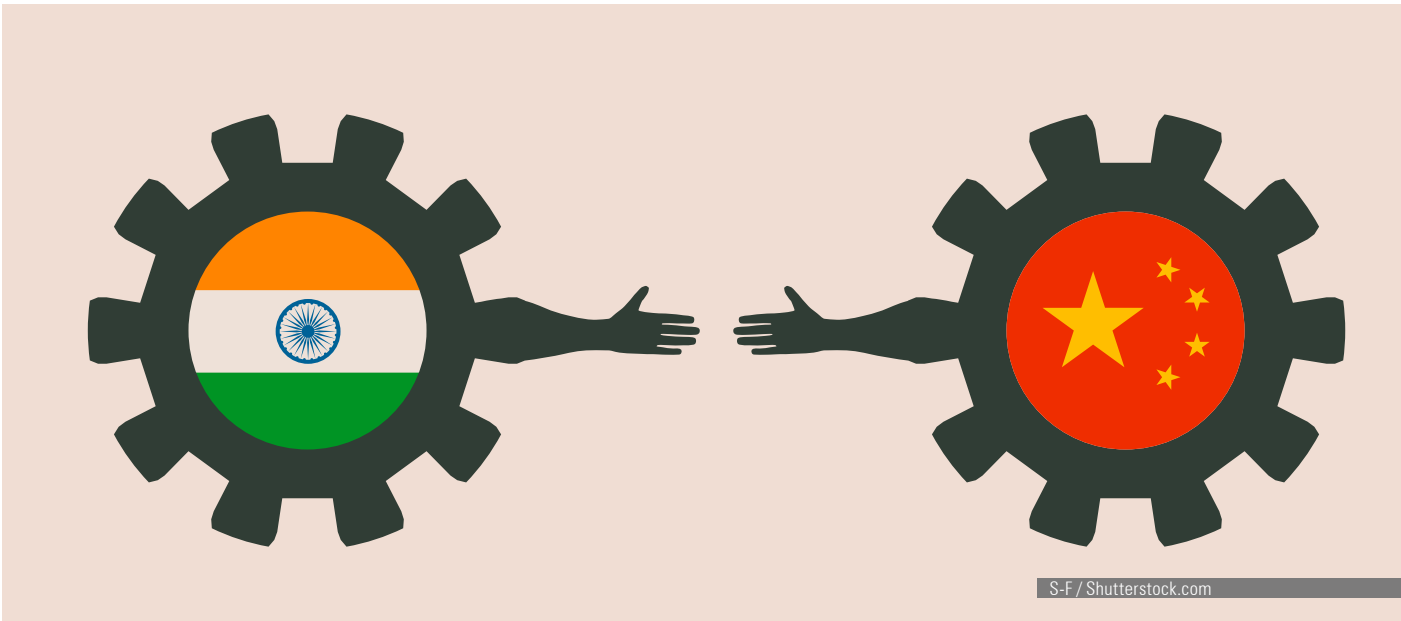
e-ISSN 2344-8172 - Vol. 9, No. 16 enero junio 2020 I DOI: 10.17230/map.v9.i16.02



S-F / Shutterstock.com

Unicorns Gallop Rampant Through China And India: Successes And Similarities

Los unicornios galopan rampantes a través de China e India: éxitos y similitudes

James Pérez-Morón
Universidad Tecnológica de Bolívar
jperez@utb.edu.co
https://orcid.org/0000-0001-9808-2400

Lina Marrugo Salas
Universidad Tecnológica de Bolívar
lmarrugo@utb.edu.co
https://orcid.org/0000-0001-9297-8644

Verónica Tordecilla Acevedo
Universidad Tecnológica de Bolívar
vtordecilla@utb.edu.co
https://orcid.org/0000-0002-0509-8719

Recibido: 1 de noviembre 2019
Aprobado: 6 de abril 2020
Publicado: 15 de junio 2020

Abstract

This study aims to explore the success and characteristics of the novel business model used by Chinese and Indian unicorn firms as well as attempts to develop a framework called CEHI (Collocation, Entrepreneurship Attitudes, High Tech Startups, and Innovation) for the analysis of global unicorn firms. The literature on unicorn firms is immature in business, management, and accounting (BMA) literature found in Scopus and Web of Science. To bridge this gap, this paper performs a holistic review of the existing literature, exploring and analyzing all unicorns in China and India (referred to collectively as Chindia) (89 Chinese Unicorns and 16 Indian Unicorns as of 2019) to provide insights into the phenomenon and contribute towards future avenues for research into unicorns.

Keywords

Unicorns, Unicorn firms, Startups, China, India, Chindia

Resumen

Este estudio tiene como objetivo explorar el éxito y las características del nuevo modelo de negocio de las empresas unicornio chinas e indias, así como los intentos de desarrollar un marco CEHI (Colocación, Actitudes de emprendimiento, Startups de alta tecnología e innovación) para el análisis de las empresas de este tipo a nivel global. La literatura de la firma Unicorn es inmadura en negocios, administración y contabilidad (BMA) en Scopus y Web

of Science. Para cerrar esta brecha, este artículo revisa la literatura existente que explora y analiza de manera integral todos los unicornios en China e India (coloquialmente denominado Chindia, con 89 unicornios chinos y 16 unicornios indios a partir de 2019) para proporcionar información sobre el fenómeno y contribuir a futuras vías para la investigación de los unicornios.

Palabras claves:

Unicornios, empresas Unicornio, Startups, China, India, Chindia

Introduction

Animals have played a key role in both Chinese and Indian cultures (Xu & Sharifian, 2018). The animal-time relationship is around 4.000 years old in both countries (Yip, Lee & Cheung, 2002). The Chinese zodiac (Shēngxiào, Traditional Chinese: 屬相) has 12 animals (rat, ox, tiger, rabbit, dragon, snake, horse, goat, monkey, rooster, dog, and pig), and each animal has attributes representing fertility (Wong & Yung, 2005), luck (Grech, 2015), and economic behavior (Johnson & Nye, 2011), among others. In India, the soul of an animal and the soul of a person are the same, and all are an equal part of the cycle of life, death, and rebirth (Krishna, 2008, p. 2). Animals in India are deities (the elephant-headed Ganesha, the simian Hanauman, the animal incarnations of Vishnu, Vaghdeo the tiger, the blackbuck, the cow "a gift of the gods"), vahanas[1] (the bull and the eagle) and avatars[2] (fish, tortoise, and boar) (Dowson, 1982; Krishna, 2008, p. 3).

Surprisingly, unicorns are an exciting and controversial species that are not so revered in China or India. In China, they are known as Qilin (Chinese: 麒麟) or Zhi (Parker, 2007), while in India they are known as Karkadann (Persian: كرگدن) (Sarton and Siegel, 1951; Contadini, 2003). Unicorns are considered a myth (Caillois and Scott, 1982; During Caspers, 1991; Paul-Choudhury, 2009; Reimer, 1997), and their existence has always been controversial. Vajracharya (2010) provided evidence for the existence of unicorns (rsya in the classical Sanskrit) in ancient India. Chinese unicorns were considered a female goat (Cheng, 2012); Indian unicorns were simply rhinoceros (Bice, 1955).

However, the debate surrounding the existence of unicorns is over as unicorns do exist, especially in China and India. Unicorn firms are firms that reach a market value of USD 1 billion-plus (Lee, 2013; Simon, 2016; Rungi, Saks & Tuisk, 2016). Decacorns are firms valued at over USD 10 billion and Hectocorns at over USD 100 billion (CBInsights, 2018). Unicorns are considered "tech-start-ups" (Kopera et al., 2018) and scalable business models (Blank & Dorf, 2013), and are closely related to technology (Au-Yong- Oliveira et al., 2018).

Ten years ago, the Indian economist and member of parliament Jairam Ramesh first used the term Chindia (Pesek, 2014) to refer to collaborations existing between the two countries. (Hitt, Haiyang & Worthington, 2005).

Unicorn firms are growing in importance worldwide; however, scarce scholarly attention and research has been paid and applied to Chindian unicorns. This study aims to explore the success of the novel business model of Chinese and Indian unicorn firms and the similarities between unicorns in both countries. This paper is structured as follows: First, the literature on the topic is reviewed. The results are then analyzed using SPSS for statistical purposes. Finally, the conclusions are outlined. The results provide insights into the Chindian unicorn phenomenon and help us contribute toward a future research agenda.

---

[1] The vehicles of the gods in Hindu mythology.
[2] The incarnation of a deity in animal or human form.


S-F / Shutterstock.com

1. Literature Review

As of 2019, there are 346 unicorn firms on the CB Insights Unicorn list, the most reputable list of unicorn firms (Lougen, 2017). The United States of America dominates this list with 172 unicorns (49.7%), China holds the second position with 89 unicorns (25.7%), the UK has 17 unicorns (4.9%), India has 16 unicorns (4.6%), and the rest of the list covers other countries from around the world (CB Insights, 2019).

China is becoming a valley of unicorns (Marrugo, Pérez & Tordecilla, 2018). In 2014 it had eight unicorn firms and now it has 89, positioning China as the country with the largest growth on the list. Chinese unicorns are galloping rampant through Beijing, Shanghai, Hangzhou, Shenzhen, and Guangzhou. Simultaneously, India, which had only four unicorns, now has 16, mostly in New Delhi, Noida, and Bangalore (CB Insights, 2019). Table 1 shows all Chinese unicorns and Table 2 all Indian unicorns as of May 2019.

Table 1. Chinese Unicorns and sectors

Sector	Number of Unicorns	Company
Agricultural Tech	1	Nxin (农信互联)
Artificial Intelligence	3	Cloudwalk, Face＋＋ (Megvii), Horizon Robotics
Autotech	6	AIWAYS, Momenta, SouChe Holdings, Tuhu, XPeng Motors, Youxia Motors
Big Data	1	Jusfoun Big Data
Biotechnology	1	Gan and Lee Pharmaceuticals
Blockchain	1	Bitmain Technologies
Chips and Semiconductors	1	Cambricon
Clothing and Accessories	1	Trendy Group International
Computer Vision/AI	2	SenseTime, YITU Technology
Construction Tech	1	Aijia Life
Consumer Hardware	1	Coocaa
Cibersecurity	2	4Paradigm, Tongdun Technology
Digital Health	3	Ding Xiang Yuan, LinkDoc Technology, Medlinker
Digital Media / AI	2	Toutiao (Bytedance), Yidian Zixun
Drug Development	1	ESR Cayman (e-Shang Redwood)
eCommerce/Marketplace	15	BeiBei, Fanli, Guazi (Chehaoduo), Jiuxian, JOLLY Information Technology, Koudai Gouwu, Lianjia (Homelink), Mia.com, Poizon, Tujia, VANCL, Xiaohongshu, XiaoZhu, Yijiupi (易久批), Zhaogang
EdTech	6	17zuoye, HuJiang, iTutorGroup, Logic Show (Luojisiwei), Vipkid, Yuanfudao
Entertainment	1	Dadi Cinema
Facilities	1	Mofang Gongyu
Fintech	3	9f Group, CGTZ, Tuandaiwang
Food and Beverage and Grocery	3	Luckin Coffee, Meicai, Yiguo (易果生鲜)
Hardware	3	DJI Innovations, Meizu Technology, Royole Corporation
Healthcare	3	GuaHao (We Doctor), iCarbonX, United Imaging Healthcare
HR Tech	1	Huike Group (Uniquedu Corporation)
Internet, Mobile Software and Services	6	58 Daojia, Apus Group, DouyuTV, Dt Dream, LinkSure Network, Zhihu
Marketplace	1	Aihuishou
On Demand	3	CAOCAO, Didi Chuxing, Huimin
Real State and Tech	4	Eggshell Apartment, Shanghai Henlius, Ucommune, Ziroom
Retail	2	EasyHome, MINISO Life
Robotics	2	Geek＋, UBTECH Robotics
Scientific, Engineering Software	1	Unisound
Social	2	Kuaishou, Yixia
Supply chain and Logistics Tech	4	Manbang Group, New Dada, Shansong Express (FlashEx), YH Global
Travel	1	Hellobike

Source: Adapted by the author from CB Insights (2019).

Table 2. Indian Unicorns and sectors

Sector	Number of Unicorns	Company
Ad Tech	1	InMobi
eCommerce/Marketplace	4	BigBasket, Shopclues, Snapdeal, Udaan
Ed Tech	1	BYJU'S
Energy and Utilities	1	ReNew Power Ventures
Fintech	2	One97 Communications (operates Paytm), PolicyBazaar
On-Demand	2	Olacabs, Swiggy
Social	2	Hike, Zomato Media
Sports/Gaming	1	Dream11
Supply Chain and Logistics	1	Delhivery
Travel Tech	1	Oyo Rooms

Source: Adpted by the author from CB Insights (2019).

The literature review was conducted using articles published from 2003 on, when the term "unicorn" was coined (Lee, 2013). This paper used the following keywords "Unicorns", "Startups", "Chinese Unicorns", "Chinese Startups", "Indian Unicorns", "Indian Startups". Keyword synonyms were identified and combined with keywords for a broader search. The search used Boolean operators (OR, AND). Due to the novelty of unicorn firms as a business model, this paper's search criteria sought to source and analyze all articles/journals. The search criteria were limited to documents in BMA categories from 2003 to 2019 with the abovementioned keywords.

2. Results Analysis

The results for each keyword are displayed below.

1. "Chinese Unicorns". Nine results, only one related article published in 2019 (Table 3). An additional article has been included because of the elements brought to the discussion, even though it belongs to the field of economics. Regarding author affiliations, one of them is from the USA and is affiliated with Stetson University, USA, and the other is from China and is affiliated with Northeastern University, China.

Table 3 Chinese unicorns

Cites	Indexed by	Authors	Year	Title	Source title	Source´s h-index
0	Scopus	No author name available	2016	MyFC setting up JV in China to launch JAQ charger in key market	Fuel Cells Bulletin	19
0	Web of Science Core Collection: Social Sciences Citation Index	Jinzhi, Z., Carrick, J.	2019	The Rise of the Chinese Unicorn: An Exploratory Study of Unicorn Companies in China	Emerging Markets Finance and Trade	26

Source: Adapted by the author based on Scopus (2019).

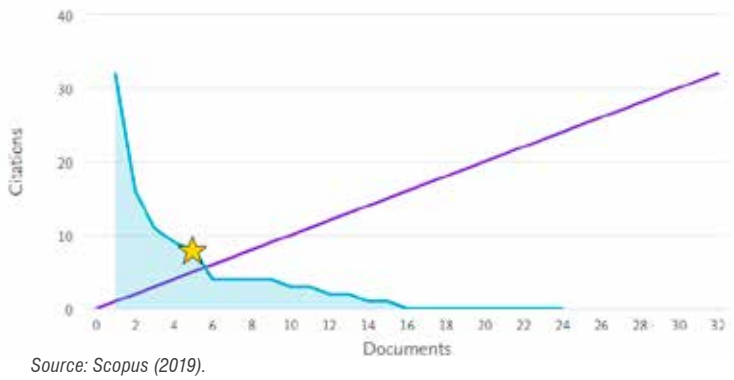
2. "Chinese Startups". From 2003 onwards, two hundred thirty-one (231) results were returned and twenty (24) were selected. The top 5 most cited articles are presented in Table 4.

Table 4. Top 5 most-cited articles

Position	Indexed by	Cites	Authors	Year	Title	Source title	Source´s h-index
1	Web of Science Core Collection: Social Sciences Citation Index	32	Yiu, D.W., Wan, W.P., Ng, F.W., Chen, X., Su, J.	2014	Sentimental Drivers of Social Entrepreneurship: A Study of China's Guangcai (Glorious) Program	Management and Organization Review	55
2	Web of Science Core Collection: Social Sciences Citation Index	20	Chin, T., Liu, R.-H., Yang, X.	2016	'Reverse internationalization' in Chinese firms: a study of how global startup OEMs seek to compete domestically	Asia Pacific Business Review	29
3	Web of Science Core Collection: Social Sciences Citation Index	16	Zhao, Y.L., Di Benedetto, C.A.	2013	Designing service quality to survive: Empirical evidence from Chinese new ventures	Journal of Business Research	158
4	Web of Science Core Collection: Science Citation Index Expanded	9	Zhao, Y.L., Libaers, D., Song, M.	2015	First product success: A mediated moderating model of resources, founding team startup experience, and product-positioning strategy	Journal of Product Innovation Management	126
5	Web of Science Core Collection: Science Citation Index Expanded	8	Sharif, N., Tang, H.-H.H.	2014	New trends in innovation strategy at Chinese universities in Hong Kong and Shenzhen	International Journal of Technology Management	51

Source: Adapted by the author from Scopus (2019) and SCImago (2019).

Figure 1. Chinese startups h-index

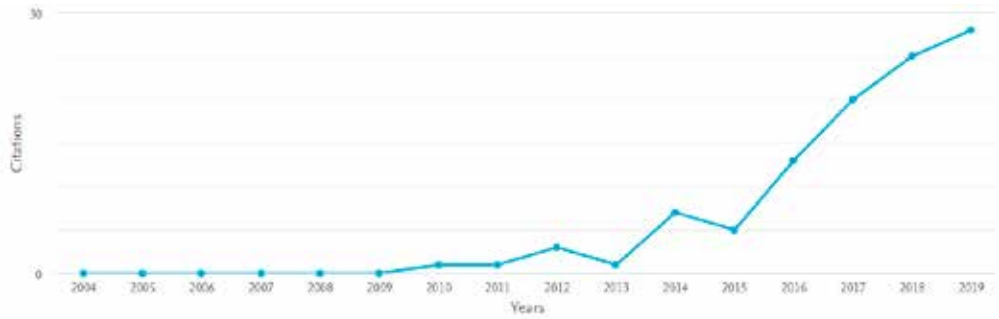


Source: Scopus (2019).

Regarding citation distribution, the average number of citations per article is 6.1, with an h-index of 5 (Figure 1).

Nine (37.5%) documents did not have any citations, and two documents (8.3%) had just one citation, showing that newer publications tend to be the most cited. The number of citations per document (excluding self-citations by all authors) has gradually been increasing since 2015, with seven citations per document, to 28 in 2019. 2019 and 2017 were the most productive years with four publications each. There were no publications at all in 2003, 2004, 2006, 2011 and 2012 (Figure 2). The US is the most productive country with nine publications (45%), followed by China, with eight publications (40%).

Figure 2. Chinese startups citation overview 2004-2019



Source: Scopus (2019).

The most productive author was Zhao, with two publications. The University of Missouri-Kansas City, USA, and Tsinghua University, China, are the two most productive institutions with two articles each. The US leads with nine papers while China is second with two. The 24 selected results are as follows: 19 articles (79.2%), one book (4.2%), one book chapter (4.2%), one conference paper (4.2%), one conference review (4.2%), and one review (4.2%). The journal with most publications is International Journal of Entrepreneurship and Innovation Management, h-index 20, with two articles.

3." Indian Unicorns". The research found 11 results, of which only one was a related article published in 2019 (Table 5).

Table 5 Indian unicorns

Cites	Indexed by	Authors	Year	Title	Source title	Source´s h-index
0	Web of Science Core Collection: Social Sciences Citation Index	No author name available	2016	An Indian unicorn: Global appetites	Economist	9

Source: Adapted by the author from Scopus (2019).

5. "Indian startups". The research found 83 results, of which 20 were related to the BMA field. The top 5 most cited articles are presented in Table 6.

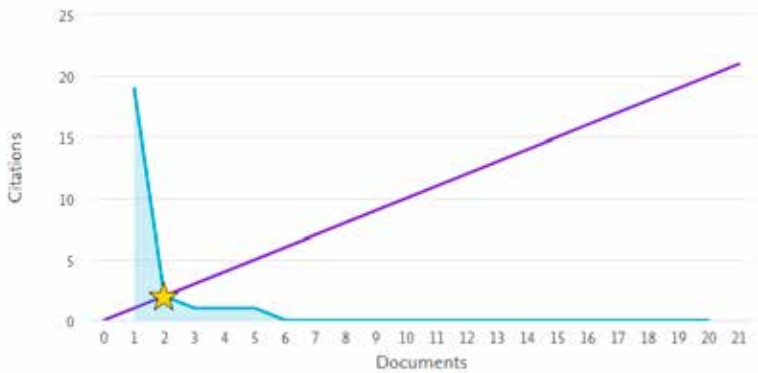
Table 6. Top 5 most-cited articles

Position	Indexed by	Cites	Authors	Year	Title	Source title	Source´s h-index
1	Web of Science Core Collection: Emerging Sources Citation Index	20	Peltier, J.W., Naidu, G.M.	2012	Social networks across the SME organizational lifecycle	Journal of Small Business and Enterprise Development	55
2	Web of Science Core Collection: Emerging Sources Citation Index	2	Jha, S.K.	2018	Entrepreneurial ecosystem in India: Taking stock and looking ahead	IIMB Management Review	15
3	Web of Science Core Collection: Emerging Sources Citation Index	2	Varma, S., Nayyar, R., Bansal, V.	2016	What Drives Precocity? A Study of Indian Technology-Intensive Firms	Journal of East-West Business	14
4	Scopus	1	Dinesh, K.K., Sushil	2019	Strategic innovation factors in startups: Results of a cross-case analysis of Indian startups	Journal for Global Business Advancement	7
5	Scopus	1	Sindhani, M., Parameswar, N., Dhir, S., Ongsakul, V.	2019	Twitter analysis of founders of top 25 Indian startups	Journal for Global Business Advancement	7

Source: Adapted by the author from Scopus (2019).

Regarding allocation, the average number of citations is 1.5, rounded up to an h-index of two (Figure 3).

Figure 3. Indian startups h-index

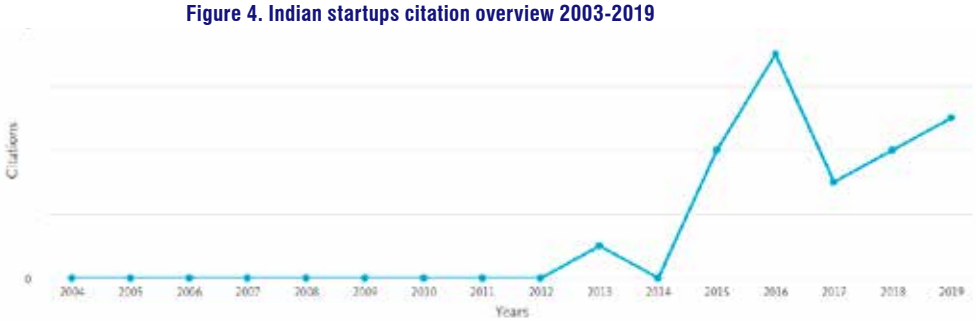


Source: Scopus (2019).

14 publications (70%) did not have any citations, while three documents (15%) had just one citation. The newer documents were the most cited.

The number of citations per document (excluding self-citations by all authors) has almost doubled since 2015, with four, to seven in 2019. In particular, 2016 and 2019 were the most productive years with seven publications each (Figure 4), although eight years is the longest period with an absence of productions on this topic (2004 to 2012).

Figure 4. Indian startups citation overview 2003-2019



Source: Scopus (2019).

India is the most productive country with 13 publications (65%), followed by Kazakhstan, with one publication (5%). Anirvinna, Bansal, Bhowmick, Chauhan, and Sand Clarke all have one publication. The Indian Institute of Technology Delhi[3] is the most productive institution with two articles.

Going forward, the 20 selected results were as follows: 15 articles (75%), one book (4.2%), one book chapter (5%), two conference papers (10%), one conference review (5%), and one note (5%). The journals with most publications were the International Journal of Applied Business and the Economic Research and the Journal for Global Business Advancement, with two articles each. The top three keywords used were Entrepreneurship, India, and Start-Up with four documents each.


S-F / Shutterstock.com

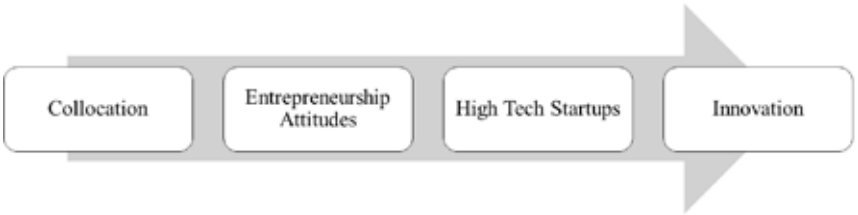
3. CEHI- A four-factor analysis model for international unicorn firms

This research developed a new framework called CEHI (Collocation, Entrepreneurship Attitudes, High Tech Startups, and Innovation) based on previous research (Aldrich & Ruef, 2018; Jinzhi & Carrick, 2019). This study found common concepts, drew them out, and introduced the CEHI framework. This

[3] Official website: http://www.iitd.ac.in/.

is expected to be a framework for analyzing unicorns around the world. Figure 5 shows the structure of the developed framework and the constructs (each one explained in the following sections).

Figure 5. CEHI Structure



Source: Author.

De Massis, Frattini, and Quillico (2016) analyzed 146 unicorns to identify the reasons for their success: 1) Unicorns are small in size, 2) Unicorns are led by serial entrepreneurs, 3) Unicorns are financed by venture capital firms, and 4) Unicorns are narrowly focused. This study holistically analyzed 89 Chinese unicorns and 16 Indian unicorns to identify additional success factors for Chindian unicorns, making this one of the first studies to provide a Scopus and Web of Science indexed integrated review exploring the phenomenon of Chindian unicorns.

3.1 Collocation

Monaghan, Gunnigle, and Lavelle (2017) and Narula and Santangelo (2012) define collocation as spatial proximity to specific unaffiliated firms, which may be suppliers, competitors, or customers.

Bruton and Ahlstrom (2003) and Zhang (2011) argued that the geographical relationship between startups and financial resources is crucial (Pan & Yang, 2018; Zeng & Dornberger, 2009).

Thus, we can look at countries like China and India that have become a "fertile ground" for these new types of projects (Muramalla and Al-Hazza, 2019). China is considered a "valley for companies" (Marrugo et al., 2018) because of the optimal conditions for development. On the other hand, India offers a potentially large consumer market accompanied by national growth rates, making it an extremely attractive market.

Similarly, a strategic location is vitally important for a startup and indispensable for its survival. According to Glaeser (2007), cities that have "more startups usually have better economic performance than those that do not" which shows a directly proportional relationship between the effective operation of city economies and the creation and location of startups in them.

Cities like Bangalore and Delhi in India have become major reception hubs for startups, thanks to their entrepreneurial ecosystems and financial environments that facilitate starting and growing businesses. Beijing and Shanghai are places where both economic development and technological development are key, and both contribute fundamentally to the survival of startups (Ghosh, 2014). Bangalore, Delhi, Beijing, and Shanghai are also financial centers and major technological hubs.

Table 7 show the top 10 highest value Chindian unicorns and their locations.

Company	Valuation ($B)	Country	City Location	Category	Investors
Bitmain Technologies	$12	China	Beijing	Blockchain	Coatue Management, Sequoia Capital China, IDG Capital
Didi Chuxing	$56	China	Beijing	On-Demand	Matrix Partners, Tiger Global Management, Softbank Corp.,
DJI Innovations	$10	China	Shenzhen	Hardware	Accel Partners, Sequoia Capital
Guazi (Chehaoduo)	$9	China	Beijing	eCommerce/ Marketplace	Sequoia Capital China, GX Capital
One97 Communications (operates Paytm)	$10	India	Noida	Fintech	Intel Capital, Sapphire Ventures, Alibaba Group
Snapdeal	$7	India	New Delhi	e-commerce	SoftBankGroup, Blackrock, Alibaba Group
Toutiao (Bytedance)	$75	China	Beijing	Digital Media/ AI	Sequoia Capital China, SIG Asia Investments, Sina Weibo, Softbank Group
BYJU'S	$5	India	Bengaluru	Ed Tech	Tencent Holdings, Lightspeed India Partners, Sequoia Capital India
Olacabs	$4	India	Koramangala	On-demand	Accel Partners, SoftBank Group, Sequoia Capital
Oyo Rooms	$4	India	New Delhi	Travel Tech	SoftBank Group, Sequoia Capital India, Lightspeed India Partners

Source: Author's elaboration based on CBInsights (2019).

To find the right location, unicorns consider factors such as economic development, industrial capacity, and accessibility to resources and investment. Singh (2017) argued that there are new ways of doing business, new ways of doing commerce, and new ways of providing services and products to customers. As a result, a number of startups have come to new cities in recent years, looking for new ways to operate and work at centers of progress, making themselves more visible to new customers.

3.2. Entrepreneurship attitudes

Kusmintarti, Asdani, & Indah (2017, p. 31) defined an entrepreneurship attitude as a tendency to react based on a like or dislike of entrepreneurship, reflecting respect for entrepreneurial activities or an absence thereof .

Entrepreneurs have common traits and attitudes that are shared among successful businesspeople. The population selected is from China and India (Dou et al., 2019; Cinar & Hienkel, 2018; Qihai, Xueyuan & Jun 2019). Risk tolerance and problem-solving are amongst the skills entrepreneurs have that allow them to adapt to difficult situations (Anderson & Lee, 2008; Pan & Yang,

2018; Tan, 2001; Van Praag & Cramer, 2001; Yang, 2004; Zeng & Dornberger, 2009; Zhang, 2008).

In China, we find four important forces that increase the "entrepreneurial spirit".

1. Market emergence. After liberalization of the economy, from a centralized system to an "open" economy in the 1980s, planning has become market-oriented, providing intensive markets.

2. The strength of redistributive institutions, regulated and controlled by the government. These are tasked with encouraging private companies to participate in international trade by providing favorable environments.

3. Foreign direct investment is very important for China as it has around 1.3 billion inhabitants, and, as a result, has great potential for generating cheaper labor than other countries. (Haiyang & Michael, 2006).

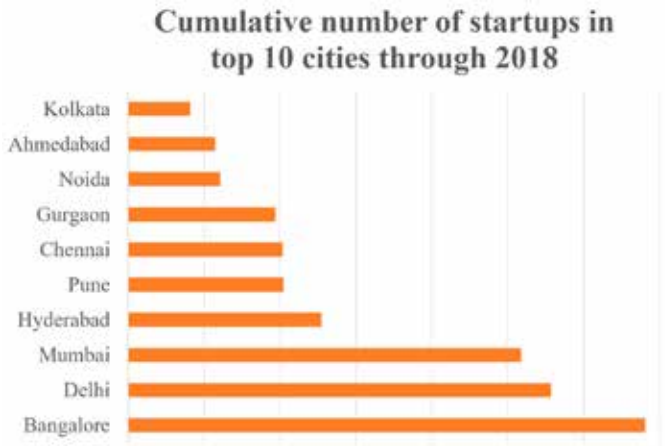
4. Changes in Chinese cultural values: It is interelose to traditional Chinese values, as they understand that industry and business start-ups ensure their survival and improve the their country's economic growth (Chang & Macmillan, 1991).


S-F / Shutterstock.com

3.2.1. Bangalore as India's Dominant Entrepreneurial Hub

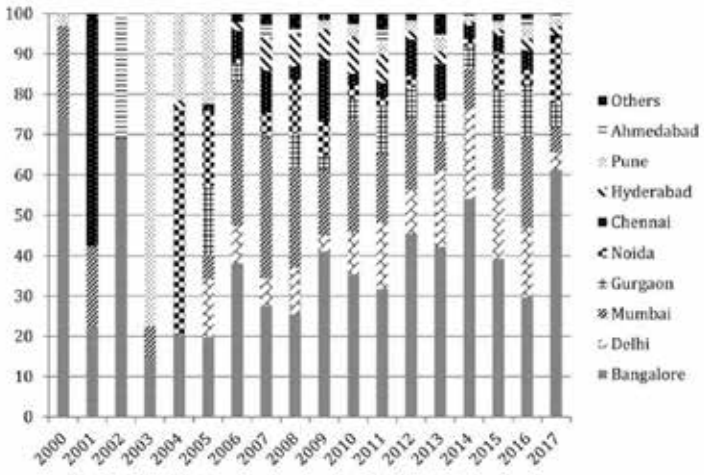
Bangalore is the largest hub for multinational high-tech companies in India. This is due to the implementation of incubators by the state government, which has promoted entrepreneurship in the country. Bangalore is ranked first compared to other cities, as shown in Figure 6, hosting 23% of all multinational enterprise subsidiary startups in 2018. Second place goes to the National Capital Region (Delhi) with 19%.

Figure 6. Cumulative number of startups in the top 10 cities through 2018



Source: Author's adaptation.

Figure 7. Industry-wide funding of startups in India by city, 2000-2017 (by percentage)



Source: Author's adaptation

Figure 7 shows the percentage of participation of each city per year, with Bangalore averaging 39% between 2000 and 2017. Initially, internet facilities were scarce and credit card positioning was weak, which surely led to the disappearance of many high-tech companies. However, the expansion of the dot-com era allowed the incorporation of new limited businesses in India (Shane, 2009; Timmons & Spinelli, 2008).

Some Multinational Enterprises-MNE use specialized services provided by accelerator programs (Surana, Singh & Sagar, 2018), while others have them located in their physical facilities. Bangalore is considered a young city for entrepreneurship compared to other ecosystems (Herrmann et al., 2015), but this is the fundamental reason for its popularity in the Indian acceleration model (Goswami, Mitchell & Bhagavatula, 2018), which is mainly developed in metropolitan areas (like Hyderabad, Chennai, Bangalore, Delhi & Ahmedabad).

Morris and Schindeutte (2005) suggest that entrepreneurial attitudes swiftly adapt to political and economic adversity. This shows that the entrepreneurial process includes actively maintaining a positive engagement with the establishment, so as to avoid political persecution or worse. In India, Roy, Akhtar, and Das (2017) have shown that entrepreneurial attitudes

and strategies towards growth are characterized by experimentation, innovativeness, and risk-taking, skills that have been mentioned above many times (Trivedi, 2017).

Based on these attitudes, we can infer that such attributes can best shape individuals for the cut-throat competitive scenario of entrepreneurship, no matter their opportunities and skill sets. They would obviously not meddle in politics and take care to not clash with institutions. To maintain solid relationships, they must establish positive feedback channels.

3.3. High-Tech Startups

Kam, Ping, and Crystal (2017) and Adler et al. (2019) define high-tech firms as young enterprises in high-technology sectors with over 50% individual ownership and that employ at least 1 worker.

Unicorns as high-tech startups coevolve with the venture capital industry (Avnimelech & Teubal, 2004, 2006) and offer varied signals that make them attractive for investors (Conti et al., 2013). There are is a large number of high-tech startups in China, mostly because of the unique advantages provided there, including a new business environment with fewer competitors. Most of these new enterprises are located in the famous "Chinese Silicon Valley" of Shenzhen. Government regulations, new patterns of technology usage, and demographics are some of the advantages that facilitate the entry of high-tech startup companies into Chinese markets. The Alibaba Group (in billions of USD) ($52 B), Tencent ($79 B), Xiaomi ($49 B), SenseTime ($7 B), iCarbonX ($1 B), CloudWalk ($75 B), and DaSouChe ($180 B) are some of the largest and successful Chinese enterprises today. (Chang et al., 2020)

Bangalore is also known as the Silicon Valley of India (Saxenian, 2001), and was ranked 15th out of 20 cities with the best ecosystems for startups worldwide. BharatPe ($17.5 million), Fyle ($5.9 million), QuikRide ($14.3 million), FtCash ($10.2 million), FreshToHome ($11 million) are some of the companies based in India's Silicon Valley. Bangalore is one of the most important hubs for the IT industry, from software to electronics manufacturing and IT consultancies. "[. . .] in India, an average of 400 new technology startups were created during 2009-2012" (Meenakshi & Sinha, 2019).

Ivanova (2019) argues that the Research and Development (R&D) and innovation battle is between China and India. The more they develop these areas, the more their respective high-tech sectors will be stimulated. Table 8 summarizes the top 10 Chindian high-tech unicorns.

Table 8. Chindian high-tech unicorns

Company	Valuation ($B)	Country	Category	Select Investors
Bitmain Technologies	$12	China	Blockchain	Coatue Management, Sequoia Capital China, IDG Capital
BYJU'S	$5	India	Ed Tech	Tencent Holdings, Lightspeed India Partners, Sequoia Capital India
Cloudwalk	$3	China	AI	Oriza Holdings, Guangdong Technology Financial Group
Horizon Robotics	$3	China	AI/Robotics	Hillhouse Capital Management, Linear Venture, Morningside Venture Capital
One97 Communications (operates Paytm)	$10	India	Fintech	Intel Capital, Sapphire Ventures, Alibaba Group
Oyo Rooms	$4	India	Travel Tech	SoftBank Group, Sequoia Capital India, Lightspeed India Partners
SenseTime	$5	China	Computer Vision/ AI	Star VC, IDG Capital, Infore Capital, Alibaba Group
SouChe Holdings	$3	China	AutoTech	Morningside Ventures, Warburg Pincus, CreditEase Fintech Investment Fund
Toutiao (Bytedance)	$75	China	Digital Media/ AI	Sequoia Capital China, SIG Asia Investments, Sina Weibo, Softbank Group
UBTECH Robotics	$5	China	Robotics	CDH Investments, Goldstone Investments, Qiming Venture Partners

Source: CB Insights (2019).

For example, in India, the following tech unicorns raised important funding in 2007: Olacabs raised over $1,430 million from Softbank Group, Tencent Holdings, and UC-RNT Fund, series J and H. One97 Communications also raised $1,400 million from Softbank Group. Other investors that have contributed to India's unicorns are New York's Tiger Global Management, Japan's SoftBank Group, and Accel India. (CB Insights, 2019).

In 2018, in China, the 5 most active venture capital firms were Sequioa with 247 investments, IDG Capital with 127 investments, Matrix Partners with 102, Shunwei with 79, and GGV Capital with 55. Other venture capital firms include Legend Capital, Morningside, and Gaorong Capital.

3.4. Innovation

China and India are knowledge-based societies, and innovation is crucial for the unicorns' expansion (Bruche, 2009). R&D staff as well as high-quality universities in China and India have a close relationship with innovation and offer a qualified network of personnel ready to develop Chinese and Indian firms (Crescenzi and Rodriguez-Pose, 2017). China and India have different innovation indices (Chatterjee and Sahasranamam, 2017; Lundvall, 1999). Wu, Revi, and Doshi (2008) summarized the similarities and differences between Chinese and Indian approaches to innovation:

1) The research organization structure is government led in both countries.

2) As for the innovation operation system, China has far more investment in innovation. India has higher efficiency in R&D input and output.

3) R&D expenditure as a share of gross domestic product in the two countries is still low compared to the European Union and the United States.

4) The innovation performance subsystem shows that India's economic development has greater potential in the knowledge-intensive service-oriented economy.

China and India's innovation performance has turned them into knowledge economies through "managers' ties with managers at other companies (i.e., business ties) and government officials" (Zhang et al., 2019). This is a key part of innovation and unicorn growth in China and India.

3.4.1. India's National Innovation System

S-F / Shutterstock.com

From 1985 onward, the main strategy used by branches of foreign multinational companies located in India was to apply imitation techniques and cost-based competition (Teece, 1992). This meant that much of the production activities of global value chains imitated productive processes developed in advanced countries, albeit at lower costs, in a process called "exit capabilities" (Awate, Larsen, & Mudambi, 2012), mainly because acquisition of these processes is easier through imitative strategies, resulting in a faster recovery of production (Lall, 1990).

The emergence of innovation capabilities in the entrepreneurial environment of India began about two decades after the creation of the Bangalore group (Parthasarathy and Aoyama, 2006), using US patent registrations as an indicator of innovative world-class production and for protecting intellectual property in India against piracy (Ministry of Law, Justice and Business Affairs, 2000).

China is a socialist state, unlike India, which is a Westminster-style parliamentary democracy. Another difference lies in China's structural reforms that balance government public policies and encourage national private initiatives with efficient and economic work. India, on the contrary, is far from this situation, since government investments are few. (Drori, Jang, & Meyer,2006; Kenney & Von Burg, 1999; Fleming & Sorenson, 2004).

Both countries have great technological advantages due to "India's highly skilled manpower" (Kapur & Ramamurti, 2001) and "the Chinese government policies to become a knowledge-based economy" (Paul & Mas, 2016; Wang,

2017). As such, they need each other, as can be seen today with Indian enterprises with headquarters in China and selling in India or vice versa. This is due to a belief that China's environment is built for new ventures (Wei & Mei, 2019). China has become attractive because of its high level of socio-economic and political stability, a capacious domestic market, cheap labor, and an active national investment policy (Dean, Lovely & Wang, 2017; Melnichuk, 2018; Yu, Duan & Fan 2019).

With technological advances, electronic commerce -E-Commerce- has gained strength, driving companies in both the West such as Amazon, and the East, like Alibaba (Qiao et al., 2020). Guo, Xie, and Jiang (2019) consider that this is an innovative strategy with great potential to connect the world and help companies grow.

Innovation has also taken other forms in the Asian country's economy, including its integration into the agricultural sector. Mao, Wang, and Sun (2019) argue that innovation in this sector has favored multiple regions that, thanks to technology, have improved the performance of their products. In conclusion, it appears that innovation has a lot to do with the nature of a country's institutions and the support they provide.

4. Conclusions

BMA research on *Chindian* unicorns is immature, yet their current impact and worldwide knowledge gaps define future research challenges. As of 2019, there are 346 unicorn firms on the CB Insights Unicorn list. China is ranked second with 89 unicorns (25.7%), and India has 16 (4.6%). Until 2019, the number of unicorns in both China and India grew exponentially. China went from two unicorns in 2009 to 89 in 2019 (over 4000% growth in 8 years), India went from four unicorns in 2014 to 16 (an increase of 300%). The main Chinese cities where unicorns are located are Shanghai, Hangzhou, Shenzhen, and Guangzhou. In India they are concentrated in New Delhi, Noida, and Bangalore.

Chinese unicorns can be found in several different industries and focus mostly on eCommerce, Autotech, Edtech and Internet, Mobile Software, and Services. India is focused on eCommerce, Fintech, Social, and On Demand. eCommerce appears as the main sector where unicorns proliferate, while participation varies in the remaining sectors.

Scholars are finding research into unicorns more attractive, as shown by the fact that its Scopus percentile is over 99% (Scopus, 2019), together with research into high-tech, entrepreneurship, and innovation. 90 percent of the intellectual production related to unicorns comes from institutions and authors in the US and China. The lack of production from the rest of the world on this topic is worrying and excludes Latin American researchers from global conversations. The results of this research can be replicated with Latin-American unicorns, and further analysis could also be performed in other countries (US, Europe or Latin America).

Third, this study develops a new CEHI analysis framework that suggests there is a strong collocation of unicorns and top financial centers in China and India. Cities like Bangalore and Delhi in India and Beijing and Shanghai in China have become major hubs for startups due to their financial environment. Other key factors are entrepreneurship attitudes, high-tech startups, and innovation.

Chinese and Indian government regulations are key advantages that facilitate the entry of high-tech startup companies into their markets, making their unicorns very attractive to investors. China and India are knowledge economies with two different approaches to innovation and governments that promote innovation in their territories.

The Chinese government's support has been more effective in promoting innovation through policies and the use of public-sector research potential. On the other hand, India has made progress, but is not in a comparable position yet. Innovation in Chindia also comes from business and how it has helped change China and India's worldview, allowing them to attract investors.

5. Future Research Agenda

Future studies could evaluate the reasons for discrepancies in unicorn proliferation between China and India and how more researchers can join this research trend, especially in India, due to the novelty of unicorn firms. They could also look at whether China and India have a solid tech ecosystem or whether their growth is due to a few foreign companies. Finally, future research could study the failures of Chindian unicorns or the number of Chinese and Indian citizens returning to their home countries to become entrepreneurs, for family reasons, professional development and solid economic opportunities (Bao et al., 2016; Wang & Bao, 2015; Wadhwa, 2008).

References

- Adler, P., Florida, R., King, K., & Mellander, C. (2019). The city and high-tech startups: The spatial organization of Schumpeterian entrepreneurship. Cities, 87, 121-130.
- Aldrich, H., & Ruef, M. (2018). Unicorns, Gazelles, and Other Distractions on the Way to Understanding Real Entrepreneurship in America. Academy of Management Perspectives. doi:10.5465/amp.2017.0123
- Anderson, A. R., and Yiu-Chung Lee, E. (2008). From tradition to modern. Journal of Small Business and Enterprise Development. 15(4), 775–787. doi:10.1108/14626000810917852
- Anwar ul Haq, M., Usman, M., Hussain, N. and Anjum, Z.-u.-Z., (2014) Entrepreneurial activity in China and Pakistan: a GEM data evidence, Journal of Entrepreneurship in Emerging Economies, Vol. 6 No. 2, pp. 179 -19 3
- Avnimelech, G., and Teubal, M. (2004). Venture capital start-up co-evolution and the emergence and development of Israel's new high-tech cluster. Economics of Innovation and New Technology, 13(1), 33–60. doi:10.1080/1043859042000156020
- Avnimelech, G., and Teubal, M. (2006). Creating venture capital industries that co-evolve with high tech: Insights from an extended industry life cycle perspective of the Israeli experience. Research Policy, 35(10), 1477–1498. doi:10.1016/j.respol.2006.09.017
- Au-Yong-Oliveira, M., Costa, J. P., Gonçalves, R., and Branco, F. (2018). The Rise of the Unicorn: Shedding Light on the Creation of Technological Enterprises with Exponential Valuations. Trends and Advances in Information Systems and Technologies, 967–977. doi:10.1007/978-3-319-77703-0 _ 94
- Awate, S., Larsen, M. M., and Mudambi, R. 2012. EMNE catch-up strategies in the wind turbine industry: Is there a trade-off between output and innovation capabilities? Global Strategy Journal, 2(3): 205–223.<
- Bice, D. S. (1955). Richard Ettinghausen: Studies in Muslim Iconography, i: The Unicorn. (Smithsonian Institution, Freer Gallery of Art Occasional Papers, vol. I, No. 3.) xii, 209 pp., 48 plates, 5 figs. Washington, 1950. Bulletin of the School of Oriental and African Studies, 17(01), 172. doi:10.1017/s0041977x00106470
- Bruche, G. (2009). The Emergence of China and India as New Competitors in MNCs' Innovation Networks. Competition & Change, 13(3), 267–288. doi:10.1179/102452909x451378
- Bruton, G. D., and Ahlstrom, D. (2003). An institutional view of China's venture capital industry: explaining the differences between China and the West. Journal of Business Venturing, 18(2), 233
- Caillois, R., Scott, R. (1982). The myth of the unicorn. International Council for Philosophy and Human Sciences. doi.org/10.1177/039219218203011901
- CBInsights (2018). As Early-Stage Deals Fall in India, Unicorns Continue to Raise Mega-Rounds Research Brief. https://app.cbinsights.com/research/india-unicorns-investment-trends/
- CBInsights (2019). The Global Unicorn Club. Available at: https://www.cbinsights.com/research-unicorn-companies
- Chang, J., Cacciolatti, L., Ainurul, R., Ruiz-Alba, J.(2020). Strategic alliances and firm performance in startups with a social mission. Journal of Business Research. Volume 106, January 2020, Pages 106-117. doi: Volume 106, January 2020, Pages 106-117
- Chen, S. (2012). Multicultural China in the Early Middle Ages. University of Pennsylvania Press. Encounters with Asia.
- Cinar, E. M., Du, Y., and Hienkel, T. (2018). Chinese entrepreneurship attributes a comparative GEM data analysis. Journal of Entrepreneurship in Emerging Economies, 10(2), 217–248. doi:10.1108/jeee-03-2017-0016
- Contadini, Anna. (2003). A Bestiary Tale: Text and Image of the Unicorn in the Kitāb naʿt al-hayawān. British Library Muqarnas. 20. 17-33. 10.2307/1523325.
- Conti, A., Thursby, M., and Rothaermel, F. T. (2013). Show Me the Right Stuff: Signals for High-Tech Startups. Journal of Economics and Management Strategy, 22(2), 341–364. doi:10.1111/jems.12012
- Crescenzi, R., & Rodríguez-Pose, A. (2017). The Geography of Innovation in China and India. International Journal of Urban and Regional Research, 41(6), 1010–1027. doi:10.1111/1468-2427.12554
- Dean, J., Lovely, M., Wang, H. (2017). Are foreign investors attracted to weak environmental regulations? Evaluating the evidence from China. International Economic Integration and Domestic Performance. Pages 155-168
- D'Souza, C., McCormack, S., Taghian, M., Chu, M., Sullivan Mort, G., and Ahmed, T. (2019). An empirical examination of sustainability for multinational firms in China: Implications for cleaner production. Journal of Cleaner Production, 242, 118446. doi: 10.1016/j.jclepro.2019.118446
- De Massis, A., Frattini, F., and Quillico, F. (2016). What Big Companies Can Learn from the Success of the Unicorns? Harvard Business Review
- Dou, X., Zhu, X., Zhang, J., Wang, J. (2019). Outcomes of entrepreneurship education in China: A customer experience management perspective. Journal of Business Research. Volume 103, October 2019, Pages 338-347. doi: 10.1016/j.jbusres.2019.01.058
- Dowson, J. (1982). A Classical Dictionary of Hindu Mythology and Religion. Rupa and Co. New Delhi

- Drori, G. S., Jang, S. Y., and Meyer, J. W. 2006. Sources of rationalized governance: Cross-national longitudinal analyses 1985–2002. Administrative Science Quarterly, 51(2):205–229.
- E. C. L. During Caspers. (1991). The Indus Valley 'Unicorn': A Near Eastern Connection? Journal of the Economic and Social History of the Orient, 34(4), 312-350. doi:10.2307/3632455
- Fleming, L., and Sorenson, O. (2004). Science as a map in technological search. Strategic Management Journal, 25: 909–928.
- Glaeser, E. L. (2007). Entrepreneurship and the city. Ssrn Electronic Journal. Harvard Institute of Economic Research (32–33), 1626. https://doi.org/10.2139 /ssrn.1001108
- Ghosh, S., and Bhowmick, B. (2014). Technological uncertainty: Exploring factors in Indian start-ups. IEEE Global Humanitarian Technology Conference (GHTC 2014). doi:10.1109/ghtc.2014.6970317
- Grech, V. (2015). The influence of the Chinese zodiac on the male-to-female ratio at birth in Hong Kong. Journal of the Chinese Medical Association, 78(5), 287–291. doi:10.1016/j.jcma.2014.11.010
- Goswami, K., Mitchell, J. R., and Bhagavatula, S. 2018. Accelerator expertise: Understanding the intermediary role of accelerators in the development of the Bangalore entrepreneurial ecosystem. Strategic Entrepreneurship Journal, 12(1): 117–150.
- Guo H., Xie C., Jiang H., Huang W., Chen Y., Xue M. (2020) Training Strategy of E-Commerce Innovation and Entrepreneur Talents. In: Abawajy J., Choo KK., Islam R., Xu Z., Atiquzzaman M. (eds) International Conference on Applications and Techniques in Cyber Intelligence ATCI 2019. ATCI 2019. Advances in Intelligent Systems and Computing, vol 1017. Springer, Cham
- Hitt, M.., Haiyang, L., and Worthington, W. (2005). 'Emerging markets as learning laboratories: learning behaviors of local firms and foreign entrants in different institutional contexts. Management and Organization Review. Volume 1, Issue 3, pp. 353-380. doi: https://doi.org/10.1111/j.1740-8784.2005.0019a.x
- Johnson, Noel D., and Nye, John V. C. (2011). Does fortune favor dragons? Journal of Economic Behavior and Organization, 78(1-2), 85–97
- Kam, W. P., Ping, H. Y., & Crystal, N. S. J. (2017). Growth Dynamics of High-Tech Start-ups in Singapore a Longitudinal Study. National University of Singapore.
- Kenney, M., and Von Burg, U. 1999. Technology, entrepreneurship and path dependence: Industrial clustering in Silicon Valley and Route 128. Industrial and Corporate Change, 8(1): 67–103.
- Krishna, N. (2008). Sacred animals of India. Penguin Books India. ISBN13 9780143423201
- Kopera, S., Wszendybył-Skulska, E., Cebulak, J., and Grabowski, S. (2018). Interdisciplinarity in Tech Startups Development – Case Study of the "Unistartapp" Project. Foundations of Management, 10(1), 23–32. doi:10.2478/fman-2018-0003
- Kusmintarti, A., Asdani, A., & Riwajanti, N. I. (2017). The relationship between creativity, entrepreneurial attitude and entrepreneurial intention (case study on the students of State Polytechnic Malang). International Journal of Trade and Global Markets, 10(1), 28-36.
- Lall S. 1990. Technological capabilities and industrialization. World Development 20(2): 165–186.
- Lee, A. (2013). Welcome to the Unicorn Club: Learning from Billion-Dollar Startups. Available at https://techcrunch.com/2013/11/02/welcome-to-the-unicorn-club
- Lougen, C. (2017). CB Insights. Journal of Business and Finance Librarianship, 22(3-4), 247–250. doi:10.1080/08963568.2017.1372018
- Lundvall, B. 1999. National business systems and national systems of innovation. International Studies of Management and Organization, 29(2): 60–77.
- Mao, W., Wang, W., and Sun, H. (2019). Driving patterns of industrial green transformation: A multiple regions case learning from China. Science of The Total Environment, 697, 134134. doi: 10.1016/j.scitotenv.2019.134134
- Marrugo-Salas, L., Pérez-Morón, J. and Tordecilla-Salas, V. (2018). Unicorns aren´t a fairytale, China is their valley. Online Asia Pacific Journal. e-ISSN 2344-8172 - Vol. 8, No. 13, julio-Diciembre 2018 I doi: 10.17230/map.7.13.
- Meenakshi, N., and Sinha, A. (2019). Food delivery apps in India: wherein lies the success strategy? Strategic Direction. doi:10.1108/sd-10-2018-0197
- Melnichuk, M.V. (2018). Analysis of the investment activity regulation in priority sectors of the economy: A case study of China. European Research Studies Journal Volume 21, Issue 4, 2018, Pages 783-793
- Ministry of Law, Justice and Company Affairs (2000). The Semiconductor Integrated Circuits Layout-Design Act, 2000 No. 37 of 2000, Republic of India, New Delhi
- Monaghan, S., Gunnigle, P., & Lavelle, J. (2017). Firm-location dynamics and subnational institutions: creating a framework for collocation advantages. Industry and Innovation, 25(3), 242–263. doi:10.1080/13662716.2017.1315562
- Morris, M.H., Schindeutte, M. (2005). Entrepreneurial values and the ethnic enterprise: An Examination of Six Subcultures. Journal of Small Business Management.Volume43, Issue 4. Pages 453-479. doi.org/10.1111/j.1540-627X.2005.00147.x

- Muramalla, V. S. S. R., and Al-Hazza, A. M. (2019). Entrepreneurial Strategies and Factors Stimulate the Business of Tech Startups. International Journal of Financial Research, 10(3), 360. doi:10.5430/ijfr.v10n3p360
- Narula, R., and G. D. Santangelo. 2009. "Location, Collocation and R&D Alliances in the European ICT Industry." Research Policy 38 (2): 393–403. doi:10.1016/j.respol.2008.11.005
- Pan, F., and Yang, B. (2018). Financial development and the geographies of startup cities: evidence from China. Small Business Economics. doi:10.1007/s11187-017-9983-2
- Parker, J. (2007). The Mythic Chinese Unicorn. Friesen Press. ISBN: 978-1-4602-2408-3. Available at: http://chinese-unicorn.com/title/
- Parthasarathy, B., and Aoyama, Y. (2006). From Software Services to R & D Services: Local Entrepreneurship in the Software Industry in Bangalore, India. Environment and Planning A, 38(7), 1269–1285.
- Paul, J., and Mas, E. (2016). The Emergence of China and India in the Global Market. Journal of East-West Business. Volume 22, 2016 - Issue 1. https://doi.org/10.1080/10669868.2015.1117034
- Pesek, W. (2014). The Japan Times. Available at: https://www.japantimes.co.jp/opinion/2014/06/23/commentary/world-commentary/time-make-chindia-reality/#.XYqA_yhKjlU
- Paul-Choudhury, S. (2009). Review: The Natural History of Unicorns by Chris Lavers and Bigfoot: The life and times of a legend by Joshua Blu Buhs. New Scientist 202(2702), 44. doi:10.1016/s0262-4079(09)60935-0
- Qiao G., Ryan C., Zhou C., Lockyer T. (2020) The Entertainization of Business Event: The Case of Alibaba Computing Conference in Hangzhou. In: Ratten V. (eds) Entrepreneurship and the Community. Contributions to Management Science. Springer, Cham
- Qihai, H., Xueyuan, L. and Jun, L. (2019): Contextualization of Chinese entrepreneurship research: an overview and some future research directions, Entrepreneurship and Regional Development, doi: 10.1080/08985626.2019.1640437
- Reimer, M. (1997). Could there have been unicorns? International Journal of Philosophical Studies. Volume 5, 1997 – Issue 1. doi.org/10.1080/09672559708570844
- Roy, R., Akhtar, F., and Das, N. (2017). Entrepreneurial intention among science and technology students in India: extending the theory of planned behavior. International Entrepreneurship and Management Journal, 13(4), 1013–1041. doi:10.1007/s11365-017-0434-y
- Rungi, M., E. Saks, and K. Tuisk. (2016). The financial and strategic impact of VCs on startup development: Silicon Valley decacorns vs. Northern-European experience. In Industrial Engineering and Engineering Management (IEEM). 452–56, Washington, D.C: IEEE.
- Sarton, G. and Siegel, F. (1951). Seventy-Seventh Critical Bibliography of the History and Philosophy of Science and of the History of Civilization (To March 1951). The University of Chicago Press on behalf of The History of Science Society. https://www.jstor.org/stable/226816 Vol. 42, No. 4, pp. 309-395
- Saxenian, A.L. (2001). Bangalore: The Silicon Valley of Asia. Center for research on economic development and policy reform. Working Paper No. 91 Stanford University 579 Landau Economics Building.
- Shane, S. A. (2009). Fool's gold? The truth behind angel investing in America. Oxford University Press, New York, NY, p. 14.
- Simon, J. P. (2016). How Europe missed the mobile wave. Info, 18(4), 12–32. doi:10.1108/info-02-2016-0006
- Singh, D. (2017). Spatial Distribution of Startup Cities of India. The Urban Book Series, 73–84. doi:10.1007/978-3-319-47145-7_5
- Surana, K., Singh, A., and Sagar, A. 2018. Enhancing SandT based entrepreneurship: The role of incubators and public policy. DST Centre for Public Policy, IIT Delhi.
- Tan, J. (2001). Innovation and risk-taking in a transitional economy: A comparative study of Chinese managers and entrepreneurs. Journal of Business Venturing, 16(4), 359–3<6.
- Teece D. (1992). Competition, cooperation, and innovation: Organizational arrangements for regimes of rapid technological progress. Journal of Economic Behavior and Organization 18(1): 1–25.
- Timmons, J., and Spinelli, S. (2008). New venture creation: Entrepreneurship for the 21st Century, 8th ed Mc Graw-Hill / Irwin.
- Trivedi, R. H. (2017). Entrepreneurial-intention constraint model: A comparative analysis among post-graduate management students in India, Singapore, and Malaysia. International Entrepreneurship and Management Journal, 13(4), 1239–1261. doi:10.1007/s11365-017-0449-4
- Vajracharya, G. (2010). Unicorns in Ancient India and Vedic Ritual. Electronic Journal of Vedic Studies (EJVS) Vol. 17, Issue 2, 135-147 © ISSN 1084-7561
- Van Praag, C., Cramer, T. (2001). The roots of entrepreneurship and labor demand: Individual ability and low-risk inversion. Económica, 68(269), 45-62
- Yu, L., Duan, Y., and Fan, T. (2019). Innovation performance of new products in China's high-technology industry. International Journal of Production Economics, 219, 204-215. doi: 10.1016/j.ijpe.2019.06.002
- Wong, K.-F., and Yung, L. (2005). Do dragons have a better fate? Economic Inquiry, 43(3), 689–697.
- Wu, X., Revi, A., Doshi, H. (2008). The Comparison of China and India: National Innovation System. India China Institute

- Xu, Z., and Sharifian, F. (2018). Cultural conceptualizations of Chinese zodiac animals in Chinese English. World Englishes. doi:10.1111/weng.12351
- Yang, K. (2004). Institutional holes and entrepreneurship in China. The Sociological Review, 52(3), 371-189.
- Yip, P. S. F., Lee, J., and Cheung, Y. B. (2002). The influence of the Chinese zodiac on fertility in Hong Kong SAR. Social Science and Medicine, 55(10), 1803–1812.
- Zhang, M., Qi, Y., Wang, Z., Zhao, X., and Pawar, K. S. (2019). Effects of business and political ties on product innovation performance: Evidence from China and India. Technovation. doi:10.1016/j.technovation.2018.12.002
- Zeng, X., and Dornberger, U. (2009). The locational factors and performance of high-tech startups in China. International Journal of Entrepreneurship and Small Business, 2009, vol. 7, issue 3, 312-323
- Zhang, Y., Yang, X., and Ma, F. (2008). A quantitative analysis of the characteristics of rapid-growth firms and their entrepreneurs in China. Journal of Small Business and Enterprise Development, 15(4), 675–688. doi:10.1108/14626000810917799
- Zhang, J. (2011). The spatial dynamics of globalizing venture capital in China. Environment and Planning A, 43(7), 1562–1580. https://doi.org/10.1068/a43562.