
| RESEARCH ARTICLE

Revisiting the Entrepreneurial State Argument: A Malaysian Perspective

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| ABSTRACT

The *Entrepreneurial State* was a concept that was put forth by Mariana Mazzucato in 2013. Since then, the concept has not received as much attention as it should, as the traditional view regarding entrepreneurship still holds sway among many academicians. This paper revisits this concept with an overview of Mazzucato's main thesis, followed by a critique. Some lessons regarding the concept from the Malaysian perspective are shared. Mazzucato's thesis regarding government intervention in the entrepreneurship process deserves greater attention, especially in light of the developments surrounding Covid-19. Further research areas are highlighted in the concluding remarks of this paper.

| KEYWORDS

Entrepreneurship, innovation, entrepreneurial state, management

| ARTICLE INFORMATION

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1. Introduction

In 2013, economist Mariana Mazzucato authored a controversial book entitled *The Entrepreneurial State*. The purpose of this piece was a radical rethink of the role of the entrepreneur, who is often thought of as being an individual or a group of individuals. Instead, Given the latest developments surrounding Covid-19, Mazzucato's thesis appears to be more relevant than ever, as the role of governments around the world was critical in combating the healthcare crisis. This paper re-examines the notion of State driven entrepreneurship through the lens of Mazzucato's main arguments and provides a basis for researchers to continue their efforts to understand the important role that governments may play in the process of innovation and entrepreneurial success.

2. Review of Mazzucato's Arguments

The topic of entrepreneurship has been widely researched. In a study published in 2018, it was found that much of the research concerning entrepreneurship was derived from five main topics, one of which was related to institutional entrepreneurship (Chandra, 2018). The amount of research on this area reflects the importance of the discussion on whether entrepreneurship is, in fact, driven by the State. Mariana Mazzucato's work focused on the notion that, in order for entrepreneurial ventures to happen, the State must go beyond acting as an occasional interventionist. In order for entrepreneurship to thrive in an entrepreneurial society, an *Entrepreneurial State* must arguably exist as a precursor. Such a State will actively participate in investments that are strategic in nature across the innovation chain, acting as an enabler to entrepreneurs and allowing them to spot growth opportunities as well as attract investment (Mazzucato, 2016a).

In her seminal work, *The Entrepreneurial State*, Mazzucato puts forward three main arguments for her thesis on the role of the State in entrepreneurial ventures. These three arguments are that, firstly, businesses are not the force for innovation, but rather, it is the State that is the main driver. Secondly, if social returns outweigh monetary returns, businesses are not likely to invest. As such, the State should lead the growth process. Thirdly, the State must act as a risk taker, whilst entrepreneurs should only participate in what is termed as "last mile innovation" (Mazzucato, 2013). These are further elaborated below:

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2.1 Government as the driver for innovation

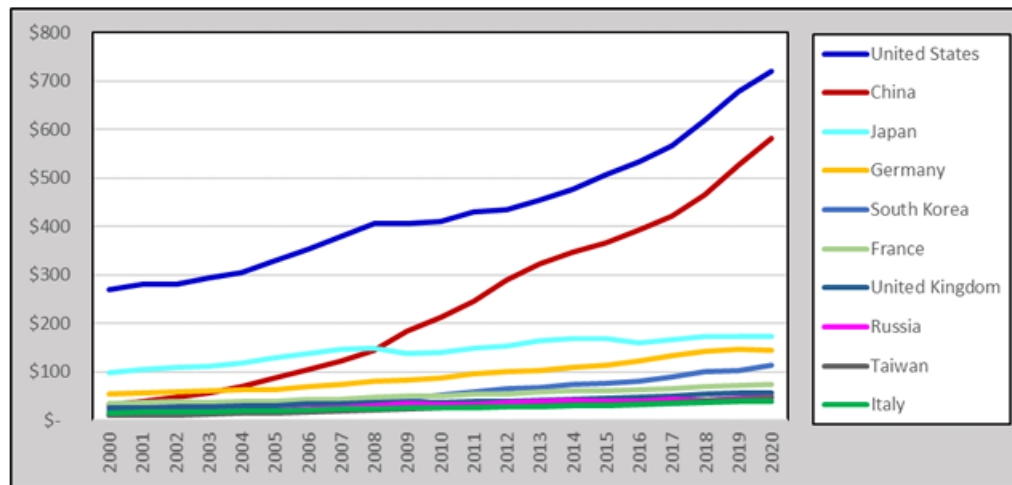
In the view of Mazzucato, the State ought to be viewed as a valuable partner of the private sector, which is willing to take risks that businesses would normally avoid (Mazzucato, 2013). In particular, the role of the State should be questioned in today's society, and it should be seen as a driver for innovation. During the time of Adam Smith, the prevailing view was that the government's role in society should be limited to a few key areas, such as government policy (Lipford & Slice, 2007). Mazzucato notes that the world has seen a withdrawal of the functions of the State and, instead, has placed the burden of competition and innovation solely on the shoulders of businesses. Given this shift, Mazzucato points out that governments have shown the ability throughout history to exhibit innovation (Mazzucato, 2013). The State has the potential to act as a catalyst for innovation, minimize the risks in the economic landscape and act as an enabler for private businesses (Mazzucato, 2016b). Some research conducted has provided support for this notion. To a certain extent, government policies play a vital role in the entrepreneurship process (Stam, 2008) and some governments around the world may view entrepreneurship as a key part of industrialization and encourage its development (Obaji & Olugu, 2014). Acting as a partner, the notion of governments driving innovation has its merit as governments may enact legislation or approve policies to drive entrepreneurial ventures or even intrapreneurship within corporations. In Malaysia, we have seen this take the shape of targeted policies such as the historical National Economic Policy, which has been seen as a catalyst for economic growth through entrepreneurship in the past (Abdullah & Muhammad, 2008).

2.2. Businesses are unlikely to invest, and the State should lead the growth process

Businesses are usually viewed as promoters of entrepreneurship. Despite this common view held by many, Mazzucato argues that one of the main reasons that companies, which focus on profitability, invest less in basic research is because these investments are considered high-risk in nature (Mazzucato, 2013). As such, Mazzucato's view is that the entrepreneurial landscape consists of businesses that are unwilling to put their money into risky ventures. The author also highlights that whilst standard economic theory advocates State intervention when social returns exceed private returns. This accounts for less than a quarter of investments in research made in the United States. In addition to this, it is argued by Mazzucato that the State must not only invest where businesses may not but must lead the growth process to create an ecosystem where the entrepreneurial process can thrive. Specifically, Mazzucato notes that the public sector can produce new products and related markets by engaging and investing in the initial stages of technological development (Mazzucato, 2013). In short, Mazzucato's view is that government investment is a precursor to entrepreneurial ventures.

We can observe that this is taking place in a more obvious manner than before. Mazzucato once argued that the internet was a precursor technology that obtained government support in its initial stages of development. This led to increased investments by private businesses in the internet, that had led to a revolution and increase in entrepreneurial ventures using the internet in later decades. This has been observed as well in the modern era as research and development expenditure by governments has increased tremendously in light of the Covid-19 pandemic. Investments by corporations, governments, non-profits, universities, and others have reached their highest levels, growing to USD 2 trillion in 2018 from a much lower figure of USD 676 billion in the year 2000 (Congressional Research Service, 2020). Research and development expenditures continue to rise into 2020, as illustrated in Figure 1 below:

Figure 1
R&D Expenditures of Selected Countries, 2000 to 2020 (billions of current PPP dollars)



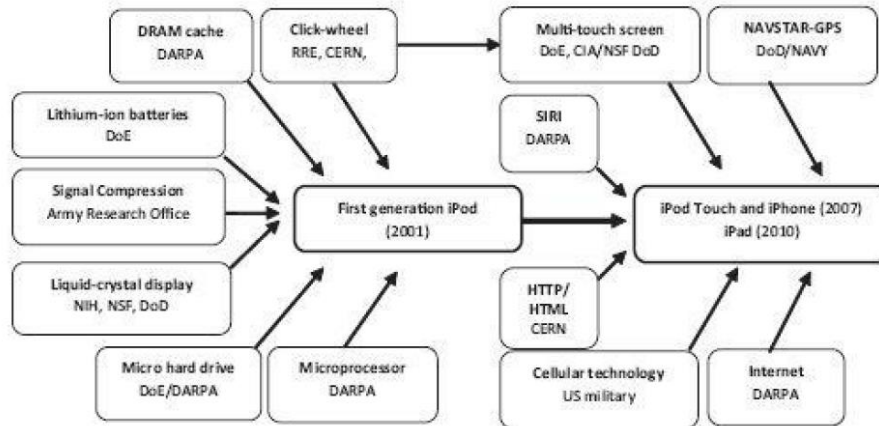
Note: This figure showcases the research and development (R&D) expenditures of major countries around the world as documented by the Congressional Research Service. From "Global Research and Development Expenditures: Fact Sheet" by Congressional Research Service, 2022, p. 2.

In part, this large increase in research and development has been driven by Covid-19. The pandemic has highlighted the need for global collaboration on technology and support mechanisms to solve the severe health crisis (Studt, 2022). From the United States' perspective, the global share of research and development has reduced not due to a reduction in investments but as a result of greater investment in governments of other countries (Congressional Research Service, 2022). This highlights the importance of government driven investment initiatives that makes Mazzucato's thesis ever more important. In 2016, Mazzucato observed that the Government of the United Kingdom's investments in research could resultantly increase private investments and lead to higher productivity fuelled by innovation (Mazzucato, 2016c). We can see this prediction of the State's involvement is true, especially in the area of vaccine development during the health crisis, as investments into critical research surrounding the vaccine for Covid-19. The United Kingdom's Government had specifically invested more than GBP 88 million in the development of the AstraZeneca vaccine for Covid-19 (Department of Health and Social Care, 2022). Mazzucato's view that investments must take place at the government level seems to be more true today than ever before in light of the drive for investments into research and development to tackle a global crisis such as the Covid-19 pandemic.

2.3 The State acting as a "risk taker."

As businesses may be unlikely to invest in risky ventures, the State must then invest in key technologies and, to a certain extent, envision the end product/service before businesses can. The crux of Mazzucato's thesis was that entrepreneurs are more suited to be involved in "last mile" innovation and would not be interested in investment without the presence of monetary returns. Mazzucato notes the case of Apple, where without large public investments by the State into the internet and other related infrastructure, the invention of the iPhone and iPad would not have been possible (Mazzucato, 2013). As such, the State appeared to function as an active partner with mission-oriented innovation policies. In 2006, former President of the United States, George W. Bush, famously noted that the government had been at work on key technologies that made the first generation iPod a possibility (Perton, 2006). Mission-oriented innovation policies move away from a public sector role and seek to solve market failures whilst directing public investment to shape markets as well as drive innovation (Kattel & Mazzucato, 2018). Recently, Mazzucato expanded on some of these notions to argue for a redefining of how the public sector creates value. Instead of viewing the public sector as a market corrector, it is argued that the public sector must be involved in public value creation by driving public-private collaborations to solve problems in society (Mazzucato & Ryan-Collins, 2022). In Mazzucato's earlier work, the author had outlined the basic research that had to be undertaken by the government in the United States to make the iPod and iPhone possible:

Figure 2
Technologies contributed to the development of the iPod and iPhone



Note: Figure provides an illustration regarding the precursor technologies that had contributed to the development of the iPod and iPhone. From “The Entrepreneurial State: Debunking Public vs. Private Sector Myths”, by M. Mazzucato, 2013, p. 109.

Therefore, from the perspective of Mazzucato, the State takes up a significant part of the basic research needed as well as the riskier ventures that businesses refuse to venture into. The role of the entrepreneur is focused on “last mile” innovation, which is what we view as entrepreneurship in the generic sense. The entrepreneur’s role in the entrepreneurial process is not focused on innovation but rather on combining key technologies that create a valuable product (or service). In this sense, Mazzucato alludes to a view held by Drucker regarding entrepreneurship. Peter Drucker noted that entrepreneurs acted to endow resources with new capacities to generate wealth and subsequently create more resources as a result of the innovation that follows (Drucker, 1985). Through mission-oriented innovation policies, the government creates the resources necessary, and entrepreneurs merely build onto that process, i.e., individual and corporate entrepreneurship takes once precursor investments in technology or innovation have been fully realized.

3. Critiques of Mazzucato’s Arguments

The main argument set out in *The Entrepreneurial State*, as proposed by Mazzucato, is that the government is the driving force for innovation, businesses are unlikely to invest in risky ventures where monetary returns are unlikely, and the entrepreneur only participates in the “last mile” innovation. Whilst Mazzucato does have support for her views, the assessment she provided on the State was controversial in nature. Further, her view of entrepreneurship ignores the individual effort associated with the process. Entrepreneurship is viewed as a process where individuals pursue opportunities in order to exploit future goods and services (Barringer & Ireland, 2016). There appears to be very little consideration for the role of the individual and a skewed view of the role of the State.

3.1 Government as a driving force for innovation is an ex-post rationalization

Whilst governments may be a driver or contributor to the entrepreneurial process, the role that the government plays can be thought of as being complementary in nature. Governments may bring about change in the economy, provide new goods, ways of production, markets, and sources of supply, as well as the management process through new combinations, which can disrupt existing markets, leading to growth in the long-term (OECD, 2010). Meanwhile, the entrepreneur is recognized as the individual who organizes labour, capital, and resources to take advantage of opportunities and convert them into marketable ideas (Frederick, et al., 2016). Governments may develop policies that are supportive of entrepreneurship. However, it is often found that entrepreneurial opportunities are created by individuals themselves, who are able to perceive and create new opportunities that are competitive in the market (Braunerhjelm, 2012). As such, for Mazzucato to argue that governments are driving for may be an overstatement. Critiques of the role of the government point out that innovations put forth by Mazzucato were initially private ventures and subsequently nationalized (Mingardi, 2015).

Therefore, the argument that the State fosters innovation and entrepreneurship is an incomplete one. In contrast, the opposite appears to be true. Governments are known for being natural barriers to entry for many firms due to the complex regulations that impede new business formation (Henrekson & Stenkula, 2009). The over-involvement of the State through ownership also results in decreased interest by corporate managers to participate in innovation as they would be unable to reap the benefits associated with independent private ownership (Shleifer, 1998). Therefore, there is a solid case to argue that government intervention may actually impede entrepreneurial activities in the long term.

3.2 Government intervention is not intelligently designed

Another main criticism of Mazzucato's argument is that it is based on the assumption that government intervention was intelligently designed. Mazzucato argued that there existed a uniformed and intelligent allocation of resources by governments to achieve entrepreneurial results. As highlighted by Mingardi (2015), her focus was limited to developments in 20th century America in making a case for how the United States government was intentionally driving certain innovative ventures (e.g., the creation of the commercialized version of the internet). This was questionable. Governments often encounter challenges in developing policies that can stimulate entrepreneurship among the population (Igwe, 2016). These government initiatives were not entirely successful or as intelligently designed as Mazzucato notes. Some government programs may even create further issues that adversely impact entrepreneurship. Initiatives launched by the government may also be manipulated by political interest groups, subjected to pressure to show success, as well as targeting companies that were already successful without government intervention (Hall & Sobel, 2006). Government policies could also introduce errors into markets, which may result in entrepreneurs becoming focused on navigating through regulations instead of focusing on innovative ventures.

In actual fact, government policymakers themselves find that regulatory and policy barriers were found to be one of the most common barriers to deter entrepreneurial ventures (Fernandez & Komives, 2019). These barriers revolve around complexities in the tax system, licensing requirements, labour issues, and the slow pace of government bureaucracy. This study highlights that policymakers, the individuals tasked with the so called "intelligent design," find that government policies may be hindering entrepreneurial activity in markets. Mingardi (2015) notes that technologies that have benefited from public spending have arguably been an unintended consequence of public investment in research and development.

3.3 Ignorance of the role of the entrepreneur

Mazzucato's thesis also notes that the role of the entrepreneur was limited to "last mile" innovation. This view goes against the long held view by academicians that entrepreneurs are mostly successful due to certain character traits they exhibit. Entrepreneurs are an exception to the normal, where their success is a result of plans that they have made, which are well executed, and backed by solid business ideation (Barringer & Ireland, 2016). Therefore, Mazzucato incorrectly minimizes the role of the entrepreneur to a mere repackaging of innovative solutions developed by governments and marketing them to customers in the open market (Mingardi, 2015).

Mazzucato's view is also limited in the sense that it only applies to some forms of entrepreneurship. In general, there are six types of entrepreneurs, i.e., lifestyle start-ups, small businesses, scalable start-ups, buyable start-ups, larger companies, and socially driven start-ups (Blank, 2011). As such, there appears to be a clear disconnect between Mazzucato's thesis and the diversity of entrepreneurs that exist in the market. This is especially so given that much of the examples she refers to relate to corporate entrepreneurship (e.g., Apple and the innovation surrounding the internet) whilst ignoring smaller scale start-ups. Whilst institutions may shape businesses, frequent intervention in the markets creates unpredictable policy changes that could increase business uncertainties (Eroglu & Picak, 2011), lending support to the notion that the role of the entrepreneur should not be minimized.

4. Discussion and analysis

Even though Mazzucato's views have been well-received by some, others have argued that her thesis has serious concerns. Recent studies have found that an entrepreneurial State, such as Singapore, implements policies that eventually crowd out entrepreneurship and limit its progress within the country itself (Audretsch & Fiedler, 2022). Therefore, a greater discussion needs to be had regarding whether the State's involvement represents a positive or negative intervention in the entrepreneurial process. Mazzucato noted in the past that innovation was driven by government agencies, including the likes of the Defense Advance Research Project Agency (DARPA) and the Small Business Innovation Research (SBIR), which had resulted in the State shaping markets and enabling innovation (Mazzucato, 2013). Therefore, the State acted as an unseen collaborator in the development of

industries. However, the landscape has changed. Whilst government agencies have played a role for much of the 20th century, developments in recent years have shown that government intervention has taken the shape of direct investments instead of involvement in research and development.

The 21st century has seen a rise in government involvement in the entrepreneurial process, but this has taken various forms. In 2014, G20 leaders at the Leaders Summit highlighted the need for the promotion of innovation and competition along with entrepreneurship to help stimulate job creation (Mazzarol, 2014). Consequently, this led to economic policies that were focused on creating an entrepreneurial ecosystem that could boost innovation and entrepreneurship itself. Fostering entrepreneurship became something of an economic strategy for development (Isenberg, 2014) where the ecosystem was viewed as a necessity for successful entrepreneurship to take place (Maroufkhani, et al., 2018). The argument, therefore, is that a State with an economically relevant ecosystem that benefits entrepreneurs would result in better entrepreneurial outcomes among the population.

We can observe from the above that the argument for the existence of an *Entrepreneurial State* may differ from country to country. Examples provided by Mazzucato in her seminal work point to certain successes pioneered by the United States government through DARPA and SBIR. Whilst in Singapore, complicated policies have resulted in the crowding out of entrepreneurship in the country. Meanwhile, from a Malaysian context, we can see that State intervention in the entrepreneurial process has yielded immense benefits. Examples from the Malaysian context are provided below:

4.1 Case in Malaysia – Government Led Entrepreneurship

A common way for the State to intervene in the entrepreneurial ecosystem is through the usage of government backed venture capital firms. In the 1990s, governments began promoting venture capital as a means of positively influencing economic growth (Manigart & Sapienza, 1999). Financing through government venture capital firms improved entrepreneurial ventures in comparison to private ventures, which showed that government support was a positive enabler so long as it was not excessive in nature (Brander, et al., 2010).

Government involvement through venture capital firms takes place at earlier stages where investments are still risky and enables firms to have quicker access to funding opportunities (Owen, et al., 2019). This replaces government's efforts in being directly involved in new developments in innovation and instead passes on the task of "innovating" to private companies supported by the government. These innovative and entrepreneurial ventures funded by government venture capital companies were found to have received subsequent additional funding and had improved performance over time (Brander, et al., 2015).

Differences between countries may also explain whether the entrepreneurial State argument holds water. Using Malaysia as an example, it is observed that many entrepreneurial initiatives and innovative solutions were developed by start-up companies funded by government backed venture capital companies. The venture capital ecosystem in Malaysia has grown significantly over the last decade, fuelled in part by government-linked investment companies that function as catalysts to guide the private sector (Gomez, 2020). In that sense, Malaysia has been widely acknowledged as a leader in government investments that are channelled to small and medium enterprise development (Ajagbe, et al., 2012). Venture capital was considered an important method to finance research and development activities. This was conducted through venture capital arms such as MAVCAP – the Malaysian Venture Capital Company. (Musibau & Kamariah, 2013). The company was specifically formed by the Malaysian government to stimulate technological development through partnerships (Malaysia Venture Capital Management Berhad, 2015). Through MAVCAP and other critical agencies, such as the Malaysian Digital Economy Corporation (MDEC), entrepreneurship is driven by government intervention. These agencies support and fund early-stage firms, provide the resources they need, and train entrepreneurs to meet the requirements of future investors (Ajagbe, et al., 2012).

Since the late 1990s, MDEC has established the Multimedia Super Corridor Incubator to offer expertise to tenants in terms of access to experts and venture capitalists to determine whether concepts developed by entrepreneurs and innovators are marketable (Said, et al., 2012). Through MDEC, collaborations with venture capital firms in Malaysia have supported start-ups progress through direct investment, which has benefited over 50 investors as of April 2020 (Penzel & Gauthier, 2020). The Malaysian government has since built on these successes through the re-imagining of the Multimedia Super Corridor into Malaysia Digital. Malaysia Digital represents a strategic initiative by the government to attract companies, talents, and investments into Malaysia to transform the Malaysian economy into a vibrant digital based economy (MDEC, 2022). Through attaining Malaysia Digital Status, start-ups can have access to catalytic programs, resources, and government support that can help increase their competitiveness

both locally and abroad. The Malaysia Digital initiative is another example of how the State may intervene positively to encourage entrepreneurship. The success of government intervention in Malaysia contradicts the notion that innovation and entrepreneurship ought to be privately led instead of government driven. In the past, researchers have pointed out that such intervention is not suitable for innovation (Yoon, et al., 2018). However, others have noted that the government, which is supportive of entrepreneurial ventures, would be effective in upgrading innovation capabilities and increasing innovation (Michael & Pearce, 2009; Wang, 2018).

The above contradicts existing notions that technological innovation and entrepreneurship should be privately led instead of government led. In the past, some researchers have pointed out that such intervention by the government is not suitable for innovative pursuits (Yoon, et al., 2018). Others, however have pointed out that a government that is supportive of entrepreneurial ventures is effective in upgrading innovation capabilities and increasing innovation output (Michael & Pearce, 2009) (Wang, 2018). From the Malaysian perspective, there are a significant number of ventures and private initiatives that appear to be government funded. For example, as of 2007, there were over 100 technology-based firms that were supported by MAVCAP in Malaysia that had successfully marketed their products and services to countries overseas (Musibau & Kamariah, 2013). Successful companies such as Billplz, an online payment platform that services some of Malaysia's largest companies (Crunchbase Inc., 2020), showcases that government supported entrepreneurship was successful in creating new ventures that could help positively impact markets. Hence, while there are many facets to the on-going discussion surrounding government intervention, the case can be made, at least from the Malaysia standpoint, that Mazzucato's assertion on government support may be valid. The entrepreneur is able to perform better in a landscape where the State is more supportive of technology development, early stage investments and supporting in high risk investments until such a time private enterprises can catch up (Mazzucato, 2013).

5. Conclusion

The examples provided from a Malaysian context showcase that there could be other factors at play that may affect how effective the State is in its intervention in the entrepreneurial process. Given that neighbouring countries, such as Singapore and Malaysia, which share a common geographical border and history, have very different results with State sponsored intervention in the entrepreneurial process, showcases that there are unstudied effects that researchers can delve into. Therefore, the question as to whether the State should intervene or not in the entrepreneurial and innovation process continues to be a valid question that may evolve as the years go by. What can be observed from today's environment, especially amidst the backdrop of developments such as the Covid-19 pandemic, is that without active involvement from the State to create a vibrant ecosystem, businesses may struggle to compete in terms of innovation. Within the Malaysian context, it is observed that through government sponsored interventions such as venture capital and ecosystem creation through government agencies, the innovation and growth of the entrepreneurial space can be fostered. Nevertheless, the critique of Mazzucato's thesis remains relevant, and the question of an intelligent design by a State may not always hold true and could be viewed as an ex-post rationalization at best. Despite this, the paper outlines that the conversation regarding the entrepreneurial involvement of the State will continue to evolve, and researchers must rise to the occasion to identify differences between nations and cultures to aid in finding an equilibrium between State sponsored intervention and individual contribution.

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