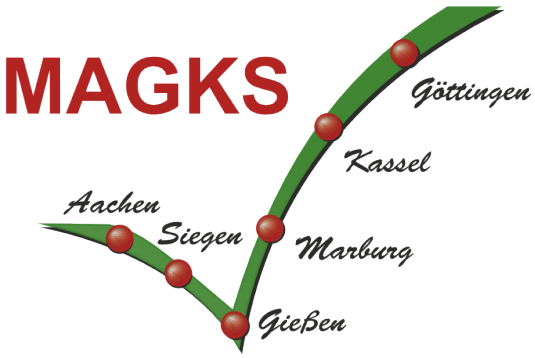

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Public Perception of Science and Technology, Government Support for the AI Sector, and AI Startups

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Abstract

The purpose of this study is to examine the relationship between public opinion of science and technology (S&T), government support to the Artificial intelligence (AI) sector, and AI startups across countries. By controlling for other macro determinants of business formation and applying OLS, Robust and 2SLS regressions, our results show that the number of AI startups is significantly higher in countries where the public has a less negative perception of S&T and where governments provide stronger support to the AI sector. In addition, we show that spiritual perception of S&T is more important than materialistic perception of S&T in explaining the cross-country differences in the number of AI startups. Finally, our results suggest that the availability of AI talent and financial development are positively correlated with a higher number of AI startups.

Keywords: Artificial intelligence (AI); AI talent; Government support; Public perception; Science and technology

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1. Introduction

Artificial intelligence (AI) is a "technology that enables computers and machines to simulate human intelligence and problem-solving capabilities" (IBM, 2024; p.1). After the introduction of Generative AI in 2023, AI experienced a phase of excitement and hype but has since transitioned to a period of rational and strategic adoption by most businesses globally in 2024 (JLL, 2024), emerging as a transformative force reshaping industries, economies, and societies worldwide (World Economic Forum and Accenture, 2024).

In response to the significant rise in demand for AI services, the number of businesses registered in the AI sector has been growing rapidly in most countries. However, it has been observed that the formation of AI businesses varies significantly across countries, even among those with similar levels of economic and financial development as well as population size. For example, the UK and France are both classified as advanced economies with nearly identical population sizes. However, the total number of AI startups in France is almost half of that in the UK (Tortoise Media, 2024). This raises an important set of questions: why do countries with almost the same level of economic and technological development have such a different level of AI startups? Does public perception of science and technology (S&T) and the level of government support to the AI sector explain the difference in AI startups across countries?

In this study, we examine whether the number of AI startups is higher in societies where the public has a more positive perception of S&T and where governments have clearer strategies for the AI sector. Using data from 40 developed and emerging economies and controlling for other key determinants of business startups, we find a robust and positive association between public opinion, government strategy and AI start-ups. These findings provide new empirical support for three strands of literature: (1) public opinion and success and impact of new technology; (2)

government support and success and impact of new technology; (3) social values and entrepreneurial activities.

2. Literature review

2.1. *Public opinion of science and technology (S&T) and AI startups*

Understanding public perception of AI is essential, as it directly influences the technology's design, development, and adoption. Societal views shape policy agendas, research priorities, and industry practices, underscoring the importance of addressing public concerns. As a key element of innovation policy (OECD, 2016), public acceptance must guide the next production revolution to ensure technological advancements align with societal values and needs.

Public perception can significantly influence the direction, pace, and diffusion of innovation. When societal concerns about emerging technologies are strong, they can impede progress — even in cases where technical and economic feasibility has been demonstrated, adoption appears rational, and substantial investments have been made (Gupta et al., 2012). Ethical and social apprehensions have occasionally emerged as obstacles to the development and adoption of promising technologies (EC, 2013).

For example, in Europe, public resistance to genetically modified organisms limited innovation and development in this area. Strong public opposition led to strict regulations, reduced funding, and slower innovation compared to other regions (Currall et al., 2006). In a similar vein, during the mid-20th century, many countries began investing heavily in nuclear reactor construction, as this energy source was suggested to be safe and efficient by many experts. However, after widespread public protests fuelled by fears of catastrophic accidents and unresolved ethical concerns, many of these projects were abandoned or delayed (Winner, 2020).

These examples illustrate how societal concerns can overrule technical and economic arguments, delaying even the most well-founded innovations.

On the other hand, this resistance can act as a constructive force, leading to the development of regulatory frameworks that enhance public trust and guide technological progress in ways that are ethically and socially acceptable to the public (Rodricks, 2006; Packer, 2008; Davis, 2014). These efforts have paid off on many occasions, as the adoption of safeguards in areas such as biotechnology has enhanced public confidence and ensured that innovations in these sectors are more widely accepted.

As discussed above, understanding the complex nature of public acceptance is a crucial factor for the successful adoption of new technologies. As the first step, we should acknowledge that the concept of a singular ‘public’ is simplistic and fails to capture the diverse views and priorities within a society. As highlighted in a report by the OECD (2017), there are multiple 'publics,' each with its own distinct influence on the acceptance of technologies. Wüstenhagen et al. (2007) and Reith et al. (2013) provide an example from the context of renewable energy, emphasizing the importance of acknowledging a 'triangle of acceptance' among stakeholders. This triangle consists of political acceptance, consumer acceptance, and community acceptance, each with its own agenda and interests. As such, it is crucial to emphasize the need for tailored strategies that address the concerns and expectations of each group.

Another factor that influences public attitudes toward new technologies is the alignment between the technology and individual or societal values (Cormick, 2019). Therefore, the perceived ethical, social, and cultural fit plays a critical role in shaping acceptance. Technologies that resonate with public values — such as equity, environmental sustainability, or personal autonomy —are more likely to be accepted, even if their functionality or purpose is not fully

understood by the public. Conversely, technologies that look to conflict these values often face scepticism or resistance, regardless of their potential benefits.

Societal attitudes toward the professions behind these technologies also play a role in shaping trust and credibility, which influence technological acceptance. According to a Pew Research Center study, U.S. adults hold engineers, medical doctors, and scientists in high esteem (Funk et al., 2016). Other strategies to enhance public trust in scientific advancements include clearly defined responsibilities, increased transparency, stakeholder consultations, direct engagement with civil society, and open communication (OECD, 2015).

Shifting our attention to public perception of AI, emerging research highlights critical factors that shape its development, adoption, and societal impact. Seth (2024) indicates that public sentiment is strongest and most positive when AI is applied to social good, particularly in health, medicine, environmental challenges, and other important global issues. At the same time, the public is equally concerned about AI risks, particularly job displacement.

Regional and socioeconomic differences underscore the diversity in AI perceptions. Public awareness and optimism about AI seem to be greater in some emerging economies, such as Brazil and Mexico, compared to people in developed countries like the US, UK, Canada, France, Germany, and Japan, who exhibit more scepticism toward this technology (Kelley et al., 2021). More recently, the rapid rise of Generative AI has further magnified public misconceptions, with its capabilities often being overestimated and its limitations underestimated (Seth, 2024).

In an Australian study on public perceptions of AI, Yigitcanlar et al. (2024) identify three key insights. Firstly, the public expresses significant concerns about privacy but shows minimal fear of AI surpassing human intelligence. Secondly, while people trust AI for personal use, they

are less confident in its deployment by companies and governments. Thirdly, AI's potential role in urban services and disaster management is widely appreciated.

Public perception of AI varies substantially based on contexts, its applications and the level of trust it inspires. Stai et al. (2020), in their study on perceptions of AI and robotic surgery in healthcare, report similar findings—strong confidence in AI for medical diagnoses but persistent concerns about misinformation. They also report that demographic factors—such as age, race, education, income, and internet access—positively influence perceptions of robotic surgery. Similarly, Lillemäe et al. (2023) suggest that positive attitudes toward AI are strongly correlated with favourable perceptions of military AI systems.

Another key factor discussed in the literature is the role of AI governance in its adoption. According to Deloitte (2024), organizations across the Asia-Pacific region that established trusted AI governance experienced increased staff adoption of AI solutions. The sectors that benefited the most include customer service, marketing and sales, operations, production, and research and development. Additional benefits included higher revenue growth and an improved reputation among customers.

Brauner et al. (2023) explore how people perceive trust in AI agents and robots managing fictitious money. The authors suggest that when technologies are perceived as reliable in cognitive performance and fairness, they are viewed as more trustworthy. Fast and Horvitz (2017) observe a sharp rise in discussions about AI since 2009, with a generally optimistic tone, particularly in areas such as the application of AI in healthcare and education. However, specific concerns, such as loss of control, ethical issues, and AI’s impact on employment, have increased as well.

Hick and Ziefle (2022) identify two dominant narratives in public expectations of AI: dystopian fears and overly optimistic beliefs about AI's capabilities. Their study emphasises the need for accurate information and education to align public expectations with AI's actual potential, mitigating misconceptions and fostering informed trust.

Together, these studies highlight the complex and multifaceted nature of public perception toward AI, demonstrating how trust, education, and communication are critical to its responsible adoption across various sectors. Further, most of these studies suggest that much of society has embraced a more optimistic perspective, envisioning a future where humans and AI evolve together, despite the catastrophic scenarios predicted by entrepreneurs like Elon Musk and scientists such as Stephen Hawking (Miller, 2019). Table A1 in the appendix summarises existing studies on public perceptions of AI.

Based on our review of literature, we present the following hypothesis:

Hypothesis 1: Societies with a more negative public perception of science and technology have a lower number of AI startups, *ceteris paribus*.

2.2. Government action on the AI sector and AI startups

Government support towards the AI start-up ecosystem is transmitted directly through government initiated or government backed entities, such as venture capital funds that provide financial support (Bertoni et al., 2019), and business mentoring and monitoring services (Groh et al., 2010; Crehan et al., 2024). These entities also provide access to industry collaboration and networking platforms where start-up founders interact with peers, mentors and other potential funders (Wang & Wang, 2012; Huang et al., 2008).

Indirectly, governments provide national AI strategies that induce long-term investment plans to start-ups by enabling investor protection mechanisms enshrined in law (Cumming et al., 2006), regulating industries to foster accountability (Krishna, 2023), international partnerships to accelerate knowledge sharing, market access and expansion (OECD, 2024).

Government backed start-ups have been found to outperform their private sector backed peers both in labour productivity and revenue generation (Kim & Lee, 2024). These advantages stem from a more flexible operating framework, marked by fewer contractual obligations with portfolio firms, reduced pressure to meet both financial and non-financial targets (Cumming et al., 2017), and the added benefit of government funding. This government backing not only enhances the reputation of portfolio firms but also increases the likelihood of securing additional funding, compared to private-sector-backed startups (Guerini & Quas, 2016). While private funds tend to prioritise profit and growth agendas, government associated funds are more geared towards social entrepreneurship (Wahyudi et al., 2022). Their significance is not only felt in solving social, environmental, and cultural concerns, but also boosting the growth of AI start-ups, particularly when public perception towards AI driven solutions is strong (Seth, 2024).

On the other hand, regulatory action from governments stemming from concerns on privacy, human rights, ethics, competition and risk, such as the European Union's AI Act (European Commission, 2024) that aims to foster trustworthy AI is accompanied by externalities. The strict regulatory environment hampers innovation in place of compliance (Public Cloud Group, 2024). A clear example is Europe's complex AI compliance environment, where AI startups in Europe struggle to compete with their peers in America or China, where more flexible approaches have fostered growth and technological advancements (Castro et al., 2019).

In short, government involvement in the AI start-up ecosystem has a dual impact, acting both as a catalyst for growth and a regulatory gatekeeper. Direct support through funding, mentorship, and networking initiatives can enhance start-ups' access to capital and industry collaboration. Moreover, developing national AI strategies creates a structured investment environment that fosters accountability and long-term sustainability. Government support often enables startups to outperform their private-sector counterparts due to the flexibility and goodwill associated with public funding. However, stringent regulatory frameworks, such as the EU AI Act, highlight the trade-off between fostering innovation and ensuring ethical, responsible AI development. Striking the right balance between support and regulation remains crucial for sustaining a competitive and socially responsible AI ecosystem.

Given the above discussion, we hypothesise that:

Hypothesis 2: Societies where governments have clearer strategies for the AI sector have a higher (lower) number of AI startups, *ceteris paribus*.

3. Data and method

We use annual data from 40 countries: Argentina, Armenia, Australia, Brazil, Canada, Chile, China, Colombia, Czech Republic, Egypt, Estonia, Germany, Greece, India, Indonesia, Ireland, Japan, Kenya, Korea, Malaysia, Mexico, Morocco, Netherlands, New Zealand, Nigeria, Pakistan, Poland, Russia, Singapore, Slovakia, Slovenia, South Africa, Spain, Sweden, Tunisia, Turkey, UK, Uruguay, US, and Vietnam. Our sample covers all economies for which data on the number of AI startups, public opinion about S&T and government AI strategy index are available. The sample represents countries from different geographical regions and income levels.

The dependent variable for our analysis is the number of AI startups. As a proxy of this variable, we use the estimated total number of 'AI startups' in a given country which has been

calculated by Tortoise Media (2024). The highest number of AI startups in the sample have been recorded in the US (5,938) followed by China (1,398), UK (1,052) and India (624). The lowest numbers (with only four startups) are in Armenia, Morocco and Uruguay as of June 2024 (time of data collection).

Two explanatory variables of interest are (1) public opinion about S&T and (2) the level of government support in the AI sector. As proxies for public opinion of S&T, we rely on four questions under Science and Technology section of the World Value Survey (WVS)[1] waves 6 and 7. These questions are (1) *Science and technology are making our lives healthier, easier, and more comfortable*; (2) *Because of science and technology, there will be more opportunities for the next generation*; (3) *We depend too much on science and not enough on faith*; (4) *One of the bad effects of science is that it breaks down people's ideas of right and wrong*. The possible answers to these questions range from 1 (completely disagree) to 10 (completely agree). We reverse the responses to questions (1) and (2) so higher values of average of these two questions mean that public do not have good perception of S&T. We use questions (3) and (4) as they are, since higher values indicate less favourable perceptions of S&T. We name this variable as "*Public perception on disadvantages of S&T*". We expect that higher value of this variable is negatively associated with the number of AI startups.

As a proxy for the depth of government support to the AI sector, we use sub-pillar scores of Government Strategy in The Global AI Index (Tortoise Media, 2024). The score for this sub-pillar ranges from 0 to 100. The higher values mean that the governments have clearer and dedicated AI strategies (e.g., higher government dedicated spending on AI; governments having

[1] The WVS is "an international research program devoted to the scientific and academic study of social, political, economic, religious and cultural values of people in the world". For more information about their data collection procedures and methodology, please visit the https://www.worldvaluessurvey.org/WVSContents.jsp

dedicated AI Minister for the AI sector). We expect a positive association between this variable and the number of AI startups.

In addition to our main variables of interest, we control for three major macro determinants of business startups in the AI sector in our estimations including availability of AI talent, financial development, and economic development. AI Talent index, domestic credit to the private sector as percentage of GDP (average over the period 2019-2022), GDP per capita, PPP (average over the period 2019-2022) are used as measures of these three variables, respectively. Data for the AI Talent index is collected from Tortoise Media (2024)[2]. It ranges from 0 to 100 where higher values indicate the higher level of capacity offered by human capital to deploy, manage and implement technology systems. Data for GDP per capita and domestic credit to private sector[3] are collected from the World Development Indicators of the World Bank (2024). Regional dummies are also included in the regression analyses. The regions are North America, Latin America and Caribbean, Europe and Central Asia, East Asia and Pacific, South Asia, Middle East and North Africa and Sub-Saharan Africa. Table 1 presents the descriptive statistics of all variables used in this study. The empirical model is specified as follows:

$$\text{Startups}_i = \beta 0 + \beta 1\ \text{Opinion}_i + \beta 2\ \text{Strategy}_i + \beta 3\ \text{Control}_i + \varepsilon_i \qquad (1)$$

where *Startups* is the number of AI startups in each country, *Opinion* is a measure of public perception on disadvantages of S&T, *Strategy* stands for the level of government support to the AI sector, *Control* represents the control variables, ε is an error term., i= 1,..., n denotes the country,

[2] It measures AI talent by examining AI-related activity on online software development platforms and the work of AI scientists and professionals. See https://www.tortoisemedia.com/2024/09/19/the-global-artificial-intelligence-index-2024

[3] Domestic credit to private sector refers to "financial resources provided to the private sector by financial corporations, such as through loans, purchases of nonequity securities, and trade credits and other accounts receivable, that establish a claim for repayment." See https://databank.worldbank.org/metadataglossary/world-development-indicators/series/FS.AST.PRVT.GD.ZS

and βs are the estimated parameters. We use logarithm values for AI startups and GDP per capita in the analyses.

Table 1. Descriptive statistics (before transformation)

Variable	Mean	Std. Dev.	Min	Max
Number of AI startups	322.225	957.019	4	5,938
Public perception on disadvantages of S&T	4.428	0.472	3.495	5.412
Public perception of the material disadvantages of S&T	3.544	0.488	2.175	4.38
Public perception of the spiritual disadvantages of S&T	5.312	0.888	3.69	7.23
Government AI support index	59.677	30.852	0	93.9
AI talent index	29.707	19.238	9.1	100
Domestic credit to private sector % of GDP	0.844	0.515	0.127	2.077
GDP per capita	35,705.86	25,449.46	5,137.016	112,338

To ensure robust results, we estimate the model using three methods: (1) Ordinary Least Squares (OLS) regression with bootstrap standard errors, (2) Robust regression, and (3) Two-Stage Least Squares (2SLS) regression. OLS with bootstrap standard errors is employed to address the potential unreliability of traditional standard error estimators in small samples. Robust regression is applied to mitigate the influence of outliers, as some sample countries exhibit extreme values in the dependent or explanatory variables[4]. Finally, the 2SLS estimator is used to address potential endogeneity in government support to the AI sector. We assume that government support of AI startups is positively related to the higher number of business formations in the AI sector. However,

[4] Robust regression first performs an initial screening based on Cook's distance > 1 to eliminate gross outliers before calculating starting values and then performs Huber iterations followed by bi-weight iterations, as suggested by Li (1985).

one may argue that government involvements and strategies for the sector is in response to increases in AI businesses. This can lead to an endogeneity issue caused by simultaneity, which arises when there is a bi-directional relationship between the explanatory and dependent variables in the model. We use Oil rents (% of GDP - average 2020 -2023) and Natural Resources Rents (% of GDP - 2021 latest available data) as instruments for government support of AI sector. It is assumed that natural resource dependency is positively/negatively related to government support to the AI sector. This assumption is based on relevant studies suggesting that natural resource abundance reduces entrepreneurial activities. For example, Farzanegan (2014) finds a significant negative association between oil rent dependency and entrepreneurship indicators, using data from 65 countries over the period 2004-2011. Data for Oil rents (% of GDP) and Natural Resources Rents (% of GDP) are obtained from World Bank (2024). Tests of overidentifying restrictions are performed to check the validity of instruments. As can be seen at the bottom of Tables 2 and 3, statistically insignificant statistics (Score chi2) indicate that the instruments are valid.

4. Empirical results

Regression results are presented in Table 2. As can be seen from columns 1-3 of Table 2, there is a negative and significant relationship between public perception on disadvantages of S&T and number of AI startups ($p < 0.05$) after controlling for other macro determinants of AI startups. This is in line with our hypothesis that AI startups are significantly lower in societies where the public has a more negative perception of S&T. A one unit increase in the negative public perception of S&T is associated with about 15% ((exp(-0.169)-1)*100= -15.54) decrease in the number of startups, controlling for other factors (based on Model 1 in Table 2). Our results are in line with arguments by Rios-Campos et al., (2024) and Southwell and White (2022). The latter posit that

public confidence in science and scientists remains high with substantial interest in information seeking jointly sparking entrepreneurial ambitions and research and development spending.

We also find that there is a positive and significant association between government AI support and number of AI startups across various estimations (see columns 1-3 of Table 2). It means that government AI economic support and institutional framework are important in business establishment in the AI sector. Similar sentiments are echoed by Kim and Lee (2024) and Bertoni et al. (2019). Regarding the control variables, the estimation results suggest that AI startups are significantly higher in economies with larger pools of AI talents and deeper financial systems.

Table 2. Results of regressions

Dependent variable: Log (Number of AI startups)			
Explanatory variables	OLS with bootstrap standard errors	Robust regression	2SLS regression
	(1)	(2)	(3)
Public perception on disadvantages of S&T	-0.169**	-0.146**	-0.160**
	(0.078)	(0.055)	(0.083)
Government AI support	0.012***	0.009***	0.013***
	(0.003)	(0.000)	(0.003)
AI talent index	0.018***	0.017***	0.017***
	(0.006)	(0.001)	(0.002)
Domestic credit	0.516***	0.201***	0.523***
	(0.226)	(0.065)	(0.109)
GDP per capita	0.012	0.666***	-0.014
	(0.272)	(0.116)	(0.249)
Dummy for regions	Included	Included	Included
Number of observations	40	40	40
R-squared	0.91		0.91
Test of overidentifying restrictions: Score chi2			0.781 (p = 0.376)

Note: Robust standard errors are in parentheses. Constant was included not reported. *** Significance at 1% and ** Significance at 5%.

Next, we examine whether the negative association between public perception of the disadvantages of S&T and AI startups is driven by citizens' views on the material disadvantages of S&T or the spiritual disadvantages of S&T.

In doing so, we take the average of two questions in the WVS to measure the citizen's perception about material disadvantages of S&T: "Science and technology are making our lives healthier, easier, and more comfortable" and "Because of science and technology, there will be more opportunities for the next generation." We reverse the responses to questions so higher values of average of these two questions mean that the public do not have good perceptions about S&T. Chile, Colombia, and Ireland have the highest scores for this variable, whereas Vietnam, China, and Armenia have the lowest among our sample countries.

To measure the citizen's perception about spiritual disadvantages of S&T, we rely on the average of responses to two questions in the WVS: "We depend too much on science and not enough on faith." and "One of the bad effects of science is that it breaks down people's ideas of right and wrong." Higher values of this variable mean the public have lower confidence in S&T. For this new variable, Armenia, South Africa, and Colombia have the highest scores, while the UK, Sweden, and the Netherlands have the lowest.

The results of regressions for sub-dimensions of public perception of S&T are presented in Table 3. We observe that while both material and spiritual components are negatively associated with AI startups but only *Public perception of the spiritual disadvantages of S&T* is statistically significant across two estimations (columns 3 and 4 of Table 3). This implies that the spiritual aspect of S&T has a stronger effect on AI startups than the material aspect of S&T across our sample countries. In addition, the results show that Government AI support, AI talent index and

Domestic credit are positively and significantly related to the number of AI startups across two specifications and two estimators.

Table 3. Results of regressions: Sub-dimension analysis

Dependent variable: Log (Number of AI startups)

Explanatory variables	Robust regression		2SLS regression	
	(1)	(2)	(3)	(4)
Public perception on the material disadvantages of S&T	-0.032 (0.062)		-0.054 (0.099)	
Public perception on the spiritual disadvantages of S&T		-0.166*** (0.020)		-0.076* (0.042)
Government AI support	0.010*** (0.0009)	0.0097*** (0.000)	0.013*** (0.004)	0.013*** (0.003)
AI talent index	0.017*** (0.001)	0.018*** (0.001)	0.018*** (0.003)	0.018*** (0.002)
Domestic credit	0.157** (0.067)	0.215*** (0.045)	0.527*** (0.122)	0.516*** (0.112)
GDP per capita	0.726*** (0.148)	0.232*** (0.082)	0.026 (0.266)	-0.126 (0.238)
Dummy for regions	Included	Included	Included	Included
Number of observations	40	40	40	40
R-squared			0.91	0.91
Test of overidentifying restrictions: Score chi2			0.792 (p = 0.373)	.662 (p = 0.415)

Note: Robust standard errors are in parentheses. Constant was included not reported. *** Significance at 1%, ** significance at 5% and * significance at 10%.

Our findings highlight the crucial role of public perception in shaping AI startup ecosystems. Specifically, a more negative perception of S&T is significantly associated with fewer AI startups, supporting the argument that societal confidence in S&T fosters entrepreneurial activity and investment in AI-driven innovation. Further analysis reveals that concerns about the spiritual implications of S&T have a stronger dampening effect on AI startup formation than concerns about its material disadvantages. Meanwhile, government AI support, the availability of AI talent, and

financial system depth remain key drivers of AI startup growth. These results underscore the need for policies that not only provide economic and institutional support but also address public concerns about S&T, particularly regarding its perceived impact on societal values and ethics, to create an environment conducive to AI entrepreneurship.

5. Conclusion

In this paper, we investigate the relationship between public opinion of science and technology (S&T), government support to the AI sector, and the number of AI startups, while controlling for other relevant macro determinants of startup formation. Using a sample of 40 countries and applying various regression models, our findings show that AI business formation is more prevalent in societies where the public holds a more positive view of S&T, and where governments provide substantial economic and institutional support for the AI sector. Additionally, we find that the availability and quality of AI talent, as well as access to finance, play significant roles in fostering AI startups.

Our results imply some policy recommendations: Governments and institutions should implement campaigns to improve the public understanding and appreciation of science and technology. By fostering a culture that values innovation and technology, societies can create a more supportive environment for AI startups. The other point is about development of AI talent. Investment in specialized AI training programs is essential. Partnerships between academia and industry can help ensure that the workforce is equipped with the skills needed for the rapidly evolving AI sector. Moreover, increasing government support for AI through clear national AI strategies joint with tax incentives and stimulating regulatory burden can encourage entrepreneurship in AI. The specialised research and development hubs to stimulate AI innovation

is also recommended. Finally, the public concerns matter. Policy makers should address the ethical concerns about AI including privacy and job displacement concerns, increasing social trust and support for new technological development.

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Appendix

Table A1. Existing studies on public perceptions of AI

Aspect	Key Insights	References
Positive Applications	Public sentiment is strongest when AI is applied for social good, such as in healthcare, medicine, and environmental challenges.	Seth (2024)
Regulation & Risks	Strong calls for regulation to address concerns, especially about job displacement and ethical issues.	Seth (2024); Fast & Horvitz (2017)
Regional Differences	Developing nations (e.g., China, South Korea, Brazil, Mexico) show greater awareness and optimism. Developed countries (e.g., US, UK, Germany) exhibit more scepticism.	Kelley et al. (2021)
Public Misconceptions	Generative AI has amplified misunderstandings, leading to an overestimation of capabilities and an underestimation of limitations.	Seth (2024)
Contextual Variations	Strong public trust in AI for personal use but less trust in corporate or governmental applications. High appreciation for urban services and disaster management.	Yigitcanlar et al. (2024)
Healthcare Perceptions	Strong confidence in AI for medical diagnoses, but concerns persist about misinformation. Demographic factors (e.g., education level) shape trust in AI-based medical decisions.	Stai et al. (2020)
Sector-Specific Trust	Trust in AI extends to military systems and depends on perceived reliability, fairness, and cognitive performance.	Lillemäe et al. (2023); Brauner et al. (2023)
Dominant Narratives	Public expectations alternate between dystopian fears and overly optimistic beliefs about AI's capabilities. Accurate education is necessary to mitigate misconceptions.	Hick & Ziefle (2022)
Broader Trends	Optimism for AI's potential in healthcare and education continues to grow. Concerns about control, ethical issues, and employment remain persistent.	Fast & Horvitz (2017)
General Public Outlook	Most of society envisions a future where humans and AI co-evolve, despite catastrophic predictions from prominent figures.	Miller (2019)

Table A2. Government support towards AI start-ups

Country	Government backing	Related link
United States	The U.S. government supports AI start-ups through initiatives like the National AI Initiative Act of 2020.	https://www.congress.gov/bill/116th-congress/house-bill/6216/text
India	The "Startup India" initiative aims to provide support to AI start-ups.	https://www.startupindia.gov.in/content/sih/en/home-page.html
United Kingdom	The AI Sector Deal supports AI start-ups through the Industrial Strategy Challenge Fund.	https://www.gov.uk/government/publications/artificial-intelligence-sector-deal
Germany	In the 2019 federal budget, the Federation has taken a first step, allocating a total of €500 million to beef up the AI strategy for 2019 and the following years. Up to and including 2025, the Federation intends to provide around €3 billion for the implementation of the Strategy.	https://www.de.digital/DIGITAL/Redaktion/EN/Standardartikel/artificial-intelligence-strategy.html
Israel	The Israeli Innovation Authority supports AI start-ups with funding and mentoring.	https://aiisrael.org.il/