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Readiness for the Adoption of Generative AI Technology, Organizationally and Internationally

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ABSTRACT: Generative Artificial Intelligence (AI) represents the volatile frontier of growth and research with a rapidly growing literature base. In this article, I create an empirical framework to evaluate the readiness of countries to adopt AI technology, approaching the topic from its impacts on business' go-to-market strategy. I conduct a principal component analysis to illustrate the multi-dimensional nature of technology adoption. To increase real-world accuracy, I use unique variables that account for recent technological growth, such as cloud computing. Beyond quantitative analysis, I obtained qualitative data through interviews with business leaders at a publicly traded infrastructure software company that serves more than 300,000 customers, including most Fortune 2000 companies internationally. This mid-market software company has monitoring, observability, and IT management products. The qualitative data provides insights about the future transition to and transformation of generative AI technologies across industries and within businesses in different departments. These collective opinions have allowed me to corroborate contrasting aspects of AI growth and set the stage for future econometric developments that weigh both the positive and negative facets of adoption presented in this paper.

KEYWORDS: Mathematics; Analysis; Technology Adoption; Go-to-Market Strategy; Generative Artificial Intelligence.

Introduction

Artificial Intelligence (AI) is currently on the frontier of technological change. AI has been used, especially AI and machine learning (AI/ML). But recently, people have been able to experience AI technologies at their fingertips. Even though most are aware of AI/ML's existence, the rise of ChatGPT and other Generative AI technology chatbots has given people a hands-on experience with generative AI.

This paper will discuss how the growth of generative AI technologies has affected where AI will be adopted and implemented internationally. The results of this paper will not only affect different companies' go-to-market strategies for AI's fusion into existing technologies and the development of new AI technologies, but it will also provide an outlook of the target areas of product and organizational growth. First, I will discuss a framework to evaluate the readiness of countries to adopt AI technology and how I have picked variables. Then, I conduct a principal component analysis to illustrate the multi-dimensional nature of technology adoption. To increase real-world accuracy, I use unique variables that account for recent technological growth, such as cloud computing. This forwards an international ranking for Generative AI technology adoption.

Additionally, as an intern at a publicly traded infrastructure software company that serves more than 300,000 customers, including most Fortune 2000 companies internationally, I have collected opinions through interviews and collaborative discussions regarding how industry leaders believe Generative AI technologies will transform and transfer across industries and within different departments. This mid-market software company has monitoring, observability, and IT management products. The qualitative data provides insightful thoughts about the future transition to and transformation of generative AI technologies across industries and within businesses in different departments. These collective opinions have allowed me to corroborate contrasting aspects of AI growth and set the stage for future econometric developments that weigh both the positive and negative facets of adoption presented in this paper.

Ultimately, the development of Generative AI technology will inevitably impact the labor markets, depending on how various industries address its implementation within their businesses. This paper combines qualitative and quantitative data to create a holistic picture of Generative AI's adoption and implementation and, thus, its effects on global markets.

As mentioned, the prevalence of AI technologies and their research has grown in the past decade. Different countries are at different readiness levels, but as far as I can ascertain, this is one of the first papers that actively ranks countries through an index, highlighting its contribution to the literature and business's go-to-market strategies commercially. Additionally, the recent uptick in generative AI massively affects this study's variables and qualitative analysis. AI technologies are already being used daily, but generative AI technologies face hesitance. Some have described AI and its adoption or readiness for adoption thoroughly and globally but without focusing on generative AI technology, commercial usage as opposed to governmental readiness, and many cross-sectional variables.

The concept of country-by-country adoption and data science related to how prior adoption of a new product in one country could affect adoption in other countries starts with diffusion models. These diffusion models set the path for understanding product growth and interaction as a science.[1] Slowly, conceptual models for adopting technology, specifically electronic business, grow based on the technology-organization-environment (TOE) theoretical framework and a pros

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and cons or facilitators and inhibitors approach.[2] Shifting forward to more recently, many have researched what determines cloud computing adoption, primarily through the TOE framework for developing countries.[3] This marks a shift in technological transition, of which many predict the next stage will be Artificial Intelligence technologies. However, the effectiveness of this macro-level framework analysis is limited without the complement of a micro-level, organization-specific framework.

This analysis across businesses starts in the public sector management domain, where empirical research emerges to substantiate the perception of AI by healthcare stakeholders in China.[4] Now, a question emerges: are AI research and the fields that study societal trends keeping pace? The pace of AI's evolution and spread across businesses has spiked.[5] This is mainly because, despite challenges to AI implementations, organizations still use it in some capacity because it is an efficiency module in the workforce.[6] Many have investigated the interpretability of AI and the correlated drivers, barriers, and social implications of AI adoption in business and management, a huge foundation of this paper but without focus on generative AI technology,[7-10] which I will later discuss in greater detail. In addition, the first formal analysis of a modular or non-modular implementation of AI technology and how that is key to productivity and usage is introduced in 2021.[11] The analysis serves to contribute to overall organizational productivity instead of focusing on individual tasks but instead interacting components that must be modular and coordinated in the technology sphere especially. In part, because of all this information, consolidating the growing body of knowledge about AI, specifically marketing, has been a big deal because marketing historically has been seen as a domain-dependent on creativity and human skills.[12] This has alternatively also led to questions about the competitive landscape of AI technology and its tensions with ethics and productivity compared to the aims of the United Nations' Sustainable Development Goals (SDG 8).[13] This is further implied by studies that aim to understand both positive and negative employee experiences due to AI and its implementation and how this creates "technostress."[14] After all, eleven components have generally been outlined for the effective adoption of AI technologies within an organization. These include communication, management support, training, ethics, reporting, enforcement, measurement, technical accompaniment, technical infrastructure, organizational structure, and an interdisciplinary approach.[15]

Beyond detailed examinations within and across specific businesses, there has been ample comparison of AI implementation across different industries. Chronologically, the concept of technology readiness and the impact of evolving technologies on it is observed across various industry sectors. For example, traveler satisfaction has been prevalent from a cross-country perspective, and mobile payment adoption or even smallholder farmers choosing between bull service and AI for dairy cow breeding have been predominant.[16-18] More recently, interests have also evolved to areas such as the construction industry and how AI technology might have prospects in analyzing data by certain facets or even the Indian mining industry, where managers confront many challenges in adopting emerging technologies.[19] AI can also be applied with machine learning algorithms in industries such as the forestry sector and biodiversity conservation interests across the globe.[20] Although these are notable changes, the industry that seems to interest onlookers the most is the healthcare industry, where AI is being used and tested further to analyze data. Accelerating the adoption of data-driven AI and, more generally, AI-enhanced care by focusing on healthcare providers' resources in individual health systems has been of primary concern.[21] Regarding financial services and FinTech, the Cambridge Centre for Alternative Finance and the World Economic Forum have contributed to AI's role in current technological shifts, specifically how it is currently being employed and faces risks and regulations as it is being implemented.[22] Although there are comprehensive global analyses on AI adoption and readiness, they often lack a specific focus on generative AI technology and its commercial applications instead of governmental readiness. Moreover, these analyses include many cross-sectional variables, which might dilute the focus on generative AI.[23] I explore this nexus of integration in Section 5.

Methods

Previous Indicators of AI readiness have considered variables based on three main factors: Governance, Technology, and Data and Infrastructure.

The first is governance, which indicates the strategic vision and capacity of the government and its ethics. This aims to include the adaptability of technology in each respective country. The next main analysis area is the technology sector pillar, accounting for how mature a population is regarding innovation and human capital. The last group is data and infrastructure, a key area in which to analyze the representativeness and data availability that indicates a chosen country's data. This also includes the infrastructures that determine if a population can access a certain technology in the first place.

In line with Oxford Insights' Index,[24] I aim to determine the path of adoption of generative AI technologies and how that affects populations, more specifically to the applications on how AI can tutor business growth, as opposed to a top-down governmental approach. Previous attempts have focused on adopting different technologies, such as mobile services and the governmental adoption of AI technologies, as opposed to the availability of such services to consumers.

Ideally, this index would cover all the countries in the world. Still, there is limited data coverage for specific restrictive regimes of developing countries that the World Bank Development Indicators, a major source of data collection in this index, cannot collect.

Ultimately, I concluded seven categories to account for an intersectional and whole approach: Technological Infrastructure, Regulatory Environment, Research and Development, cultural barriers, economic development, and International Collaboration.

The first category, like Oxford Insight's index, accounts for the countries' technological infrastructure through secure internet servers (per 1 million people), individuals using the

internet (% of the total population), and the GSMA mobile connectivity index.

The information and communications technology (ICT) exports, imports, services, overall government effectiveness (percentile rank upper bound of 90% confidence interval), and the Governmental AI Readiness Index were used to consider the governmental regulations and regulatory environment. This is an important determiner of AI readiness because it illustrates the environment where AI can be supported.

Research and development of individual countries is another important category to consider as AI is seen to be evolving in these areas, and the level of adoption can be more questionable or straightforward based on scientific presence across countries. This also tends to be a good statistic for educational attainment and skill. The Global Innovation Index, governmental education expenditure (% of total expenditure), and labor force educational attainment (% of working-age population) were used for this.

Next, it is important to include the societal effect of cultural barriers and ethical considerations, especially regarding AI technology, which many have questioned. To account for this, the gender equality index and the economist democracy index were used. This is meant to serve as a marker of a society's progressivity and accessibility to change.

The next set of variables concerns economic factors that may affect the variability of AI adoption. This includes factors that inculcate the stage of the economy as well. The variables here are employment in services (% of total employment), trade in services (% of GDP), the Human capital index, and GNI per capita (international dollar).

The final set of variables pertained to international collaboration and cooperation. AI, the next frontier of technology, has seen many overseas contributions central to its understanding and applications. The variables in this section are Foreign direct investment (net inflows, % of GDP) and international tourism expenditures (% of total imports).

Unlike previous studies that focus primarily on government's adoption and infrastructure, this study makes a contribution by integrating elements related to commercial adoption, such as the influence of cloud computing. It then combines this quantitative data with qualitative insights from business leaders, which helps to establish a fuller comprehension of AI readiness.

Following the standard PCA procedure, the tails of all variables are reduced by 1% up and down to eliminate the influence of extreme variables. Table 1 presents descriptive summary statistics for the variables used, exhibiting significant standard deviation and thus indicating that they can be subject to a PCA method.

Nineteen variables were used to ensure a comprehensive approach while retaining as many output countries as possible. PCA is a standard method for index creation with multiple variables, which was applied following the standard methodology of Baxter (1995) and Joliffe (2002).

First, correlations and normalizations are considered, and the variables are transformed when required. This involved trimming outliers (1 percent) from the data because PCA is not scale-invariant. All variables are then scaled to a range of 100 based on a calculation of the ratio of the difference between the actual value of the variable and its minimum value to the difference between the maximum and minimum value, multiplied by 100. PCA produces the same number of components as the number of variables used, which are linear combinations of the variables. The components were chosen so that the eigenvalue did not go beyond 1. The STATA version 17 was used.

Specifically, the equation used is: $0.51/0.75*pca1++0.12/0.75*pca2+0.05/0.75*pca3+0.04/0.75*pca4+0.03/0.75*pca5$.

Result and Discussion

Quantitative Results:

Table 1: ***Descriptive Summary Statistics.*** This table provides an overview of the descriptive statistics for various variables. The data highlights disparities and similarities in technological and economic development across different regions through the different statistical measures.

Category	Variable	Mean	Median	Std. Dev.	Minimum	Maximum	Number of Countries
Technological Infrastructure	Secure internet servers (per 1 million people)	26285.6538	12849.7	36328.9102	19.7436	140804	44
Technological Infrastructure	Individuals using the Internet (% of the population) (2021)	78.3703977	84.7865	20.0869841	21.0372	100	44
Technological Infrastructure	Mobile Connectivity (GSMA)	74.0447727	77.535	13.0787524	41.58	90.62	44
Regulatory Environment	ICT goods exports (% of total goods exports)	3.56473436	1.90688	4.66650438	0.004517	16.1241	44
Regulatory Environment	ICT goods imports (% of total goods imports)	7.61412705	6.815615	3.36729279	2.49103	16.8881	44
Regulatory Environment	ICT service exports (% of service exports, BoP)	14.7556786	10.055	13.8283235	0.572135	58.2141	44
Regulatory Environment	Government Effectiveness: Percentile Rank, Upper Bound of 90% Confidence Interval	74.2242068	73.07695	18.7332832	26.4423	100	44
Regulatory Environment	Governmental AI Readiness (Oxford)	57.3977273	60.61	14.2330673	24.77	85.72	44
Research and Development	Global Innovation	36.6	34.7	11.8319434	13.9	61.8	44
Research and Development	Government expenditure on education, total (% of GDP)	4.80304841	4.709955	1.32036706	2.36572	7.80931	44
Research and Development	Labor force with advanced education (% of total working-age population with advanced education)	77.4613636	77.19	5.65986547	61.89	92.78	44
Cultural Barriers	Gender Equality Index (0-1)	0.72320455	0.7245	0.05948366	0.556	0.861	44
Cultural Barriers	Democracy (0-10)	6.63545455	6.785	1.82222641	0.556	9.81	44
Economic Development	Employment in services (% of total employment) (modeled ILO estimate)	62.2235	64.0416	15.5611292	26.6577	89.47	44

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Economic Development	Trade in services (% of GDP)	31.561963	21.528	48.9354835	4.74489	298.832	44
Economic Development	Human Capital (HCI)	0.63797207	0.643517	0.12102004	0.362405	0.796001	44
Economic Development	GNI per capita, PPP (current international $)	39590.6818	36880	28414.1655	2730	118440	44
International Collaboration	Foreign direct investment, net inflows (% of GDP)	0.53808623	2.855945	19.1285746	-117.419	19.7929	44
International Collaboration	International tourism, expenditures (% of total imports)	3.37586118	2.75318	2.94471245	0.479314	19.477	44

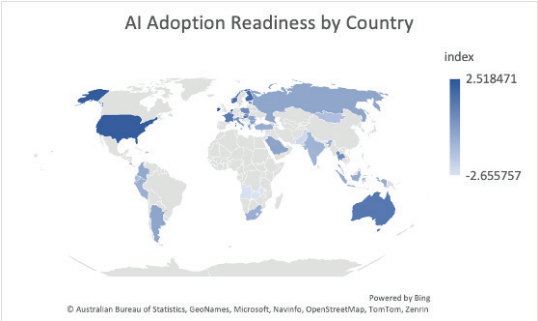

Figure 1: Global distribution of AI Readiness and Adoption Index. Source: Authors' calculations. This map illustrates the global disparities in AI readiness and adoption, with certain regions showing higher preparedness and implementation rates. Developed countries tend to have higher scores, reflecting better infrastructure and resources.

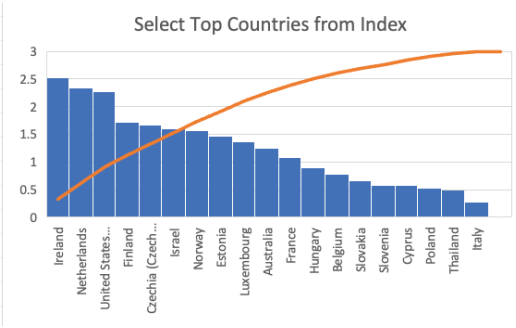

Figure 2: Select Top Scores and Results of AI Readiness and Adoption Index. Source: Authors' calculations· This bar chart emphasizes the leading positions of select Western European countries. This trend highlights the advanced capabilities and investments these countries have made in AI technology.

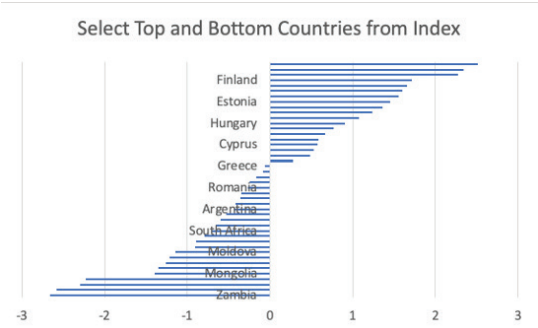

Figure 3: Varied scores of top and bottom quartiles from the AI Readiness and Adoption Index.
Source: Author's calculations. This chart contrasts the AI readiness and adoption scores between the highest and lowest-performing countries. These findings demonstrate a stark divide, showcasing regional differences and the effect of strong lag and weak diffusion.

Discussion:

Figure 1 presents the global distribution of the AI readiness index. Almost all data is from 2022, meaning an average over time was unnecessary. Taken together, the European countries and developed countries tend to rank higher. This aligns with the literature surrounding the Eastern European sphere when discussing technological adoption instead of development, which is commonly outsourced to developing countries because of globalization. Countries like Ireland, the Netherlands, and the United States share similar market structures that are more liberal and share many technological connections built over the years by companies. The countries towards the bottom, as shown in Figure 3, such as Zambia, Mongolia, or Moldova, tend to face shortages on multiple faces, whether in educational attainment or technological development. This makes it harder for countries to encourage technological growth to the extent of the present, let alone the future, where Generative AI technology lies.

At the same time, Figure 2 shows that the selected top scores from the Index reflect high variability. The standard deviation is relatively high, meaning there is enough statistical variation to contribute to the analysis. Some key variables presented by the data in the table, such as the global innovation index, are very well reflected in the Index as countries that have topped the innovation index have similarly topped the AI readiness Index. However, side constraints such as the liberalization of policies, information, and communications technology collaboration (identified to be a key promoter of AI readiness, see Literature Review) because of trade or the governmental regulation and the regulatory environment tend to hold these highly innovating countries back in terms of fast growth. However, it is important to note that slow growth is not necessarily bad for AI technologies, allowing them to grow sustainably and not pressuring labor in the economy to produce products that might face ethical or programmable concerns.[25]

It might be surprising why certain countries, especially those within Asia, need to rank higher on the AI Readiness and Adoption Index. Firstly, many countries expected to top this Index based on Oxford Insight's Governmental AI Readiness Index's predictions did not have enough data for the remaining 19 variables, meaning they could not be added to the scope of this Index. Additionally, the Index takes a more holistic approach, which is necessary when assessing AI readiness. Although these countries may seem to be at the forefront regarding technology and its adoption, the adoption and readiness of an emerging new technology that poses unique threats to the economy and consumers necessitates different aspects of national economies. The variables corroborate these earlier aspects, especially regarding cultural barriers and governmental regulation variance.

In addition, although this index does aim to consider many cross-sectional data points and variables, it is important to note that a few areas of concern can be addressed more adequately in future research. First, based on the World Development Indicators, I struggled to quantify how the ethicality and trust in AI technologies could be reflected in the Index between each country. This variable is highly volatile and perception-based,

making it hard to quantify precisely. Second, culture is a component of this Index. However, more cultural concerns brought up by the UN's Sustainable Development Goals, such as the worker's place in labor and technology replacing those jobs, are also very volatile and perception-based variables. This tends to reflect larger societal norms in countries, based on how relaxed work is treated, the emphasis on productivity in society, or, in the cases of certain countries, if nationalism holds a human-centric approach to labor. These are a few gaps that this Index could not control.

Although quantitative analysis provides a good ground for understanding global readiness, proven by alignment with existing verified models such as the Oxford Insights model, because generative AI technologies have not been fully implemented into countries' governance and company products, it is difficult to validate this data with real-world empirics. As a result of this, I use qualitative insights from industry leaders, controlling for this factor and many others listed above, to offer an additional perspective on how these emerging trends take shape in the context of individual companies and industries.

Qualitative Outlook:

To complement the quantitative findings, I collected qualitative data to highlight how adaptive trends shift at an organizational level.

Unlike many papers analyzing the effects of Generative AI adoption, I received qualitative data or primary data directly from industry-leading professionals while interning, which I present in this section. This information is uniquely beneficial because it reflects the transition trend created in a rippling effect on the growing market. Through different sessions, I also gained other helpful insights that businesses may find useful to pursue. This section is broken into two parts. The first part describes certain professionals' opinions regarding how Generative AI will affect different industries, such as fashion or technology. The second part comes from interviews with leaders in individual parts of the organization, describing where they see AI fits into the future of their departments.

Industrial Causes and Effects:

The underlying question of how AI will be implemented in different industries is: What key factors define technology usage?

Probably the most tech-forward and richest industries [are first], but we may be surprised. Medicine and agriculture require the easiest innovation, and Generative AI will be first.

Notably, industry leaders are looking into Generative AI and how to harness its power from an organizational and efficiency standpoint. However, they recognize that other industries might have different types of AI.

I need to point this out because depending on the different types of AI, my answer may differ seriously… Look to laser weeding or AI's usage in Agriculture… It's already there. The question is how we can use generative technology to make it run off the loop or without humans altogether. This sounds dangerous, but it's important to consider that humans are usually the ones who can lead to errors or miscalculations.

Some also mentioned unique aspects of implementation.

Look to the fashion industry and Ralph Lauren, which are announcing the testing of Generative AI technology. There's no question whether people are open to trying or considering it. The question of efficacy arises. Is generative AI creative? For this exact reason, I do not think it will affect the labor market as much as people anticipate. People still need to inspect clothes, innovate, and design; ultimately, these products are all for people.

This is where the trend of value migration starts to emerge. What role will humans play if Generative AI can handle all the monotonous or programmable tasks?

The value shifts from people being able to code to people being able to come up with something AI could never have come up with. Or maybe society will start rejecting a world without labor and necessitate the humanization of products instead of alienating work from humans. It is a field of uncertainty.

One consistent theme, however, is that creativity will be a huge consideration for Generative AI. The natural underpinning of any coded technology is that there will always be a programmer's bias. These models are always trained on what is fed to them, and as a result, even when you ask ChatGPT for an answer, there is a specific formula that reverse programs can detect. This means that companies cannot rely on creativity from AI across industries.

Pop Culture – Fashion, music, screenwriting. People could observe a value migration to these areas. These seem to be evergreen because the bottom line is that humans must enjoy life, and if these give humans enjoyment, then they must be original, innovative, yet classic. It's the nature of performing arts, or any art for that matter.

At the same time, it may still be valuable to have Generative AI's perspective or point of view on creative concepts, and AI can be used to help creative minds be more efficient.

This then goes on to affect pricing. There will be a premium for one or another—it's all value migration. We could see this through a premium on well-qualified humans who are needed to give opinions or a premium for people who can work with AI and are qualified to do so at a higher level. This results in a pricing dilemma—you can have AI for cheaper or humans for more expensive—because human time is always deemed more valuable. It's the same reason concerts or concert tickets cost more, but buying a premium subscription to Spotify and listening to music for free costs much less or nothing.

To define the use of technology, industries need to evaluate the value migration that AI brings to the table and assess the situation that an implementation of AI would bring to the products. Although many will work to perfect AI, its drawbacks are where humans will hold on (e.g., creativity), and industries need to contextualize this individually as soon as possible before they are behind in this technological transition.

Qualitative observations support the quantitative findings in terms of showing that sectors having more developed technological frameworks, such as software and finance, are best positioned to effectively integrate AI. Sectors like healthcare, though slow at the beginning, have since scaled up their efforts owing to potential benefits associated with the same AI-powered operational efficiencies. This difference captures some

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of the multifaceted nature of readiness as represented by the quantitative index."

Internal Business Use-Cases and Qualitative Results:

I also analyzed and collected data from different departments within a software company, discussing how they plan to transition to using AI in other departments. Since software companies are on the horizon of implementing Generative AI, yet still with some hesitation, I found it optimal to analyze this industry. It is important to note that the companies within these industries may contain different departments and, therefore, other use cases for Generative AI technologies, compared to, for example, the medicine and hospital areas. But many areas of business apply universally.

One notable distinction in the adoption of AI technologies is firm size. Larger firms, such as those represented in this study, have more capacity to invest in new technologies and are therefore more likely to adopt AI. Smaller firms might adopt AI more selectively, focusing their choices of tools on those that present immediate operational efficiencies with lower capital investment. Further research could do more with this dimension, comparing the rates of adoption by firm size.

To present this data, Table 2 is separated by departments or areas of business that I met with individually to collect their opinions. These departments are divided arbitrarily as every business component orchestrates a business plan. As a result, they are organized for convenience and by groups/departments of people I encountered as I interned.

Table 2: ***Qualitative Interview Summaries.*** This table summarizes key insights from interviews conducted across various departments regarding the potential and concerns of using Generative AI for their teams and tasks. The main findings highlight a mix of enthusiasm and caution; many departments see benefits in efficiency and innovation, but there are concerns about ethical considerations, security risks, and creativity.

Departments	Thoughts
Product/ Product Design	The core question is: what is being used to create products from a component and creation standpoint? Physically, this means using AI as a part of the team in building products and using AI as a part of the products themselves. This demonstrates two main concerns: will customers trust products that contain AI, or can AI be used as part of the product offering to attract more customers? Can Generative AI be used in the developmental phases of product design as a tool to brainstorm or generate code? These two areas are points of concern and optimization. As product leaders, they are worried about whether an opportunity is slipping away from them and if others in the same industry can take advantage of it and raise their market share or even expand the market cap.
Product Marketing	Product marketing teams should be more concerned with how AI can position products or whether using Generative AI as a part of products can attract or detract more customers. This relies on a sense of trust in AI technology and is heavily reliant on a societal mindset towards technological development if people are willing to take a risk on a potentially more efficient or better product. This paper aims to bridge this gap, providing a conclusion about AI adoption rates, which vary by country, as this paper demonstrates.
Sales Side of Marketing	Sales heavily rely on lead generation. How can we identify the leads we should call and do it more effectively or efficiently? This will be a major industrial shift because companies that can identify the best customers to approach and how to approach them will have a far more effective sales strategy that generates more revenue.
Finance and Accounting	AI offers a huge leap of improvement in pricing. Not only can Generative AI programs potentially be trained to generate forecasting and provide a better outlook on how much can be sold and what targets should be set, but optimization of pricing plans such as 5-year vs. 3-year vs. 1-year plans or subscription vs. perpetual can be immediately assigned to different financial plans and can go through extensive financial analysis on a company-by-company basis. Additionally, the unique part of AI is that it considers more whole-world data and offers more perspectives, consistently creating the statistically best response. This is important for financial teams whose strategies heavily rely on projections and evolving trends. "Finance is more worried about reading the tea leaves and telling the company how to read the tea leaves." AI can be seen as just another teammate reading far more tea leaves faster and, therefore, holds important information and perspectives, even if conclusions are still formed through human corroborative analysis.
Business Apps and Systems	BizApps and Systems teams will need to become experts on AI technology because the BizApps teams need to be on board and ensure its security to implement it. These technologies must synergize with existing workflows to drive efficiency and enable innovation.
Legal	Some say the legal business areas will be taken over soon but still need humans to guide the AI. Putting the legal department in the hands of technology can be risky because even small errors can cost much more regarding the business' function and legality. Not only have they already started trying to use AI to generate, read over, and verify contracts, but legal can also be seen as a rather monotonous task or area of business that is critical to its functioning yet is based on accuracy and not innovation. If AI can improve accuracy to levels that do not risk error or user error, you won't need a paralegal, but you will need someone who can train the AI properly based on the company's data and information.
Information Technology and Security	Due to the increasing effect and prevalence of cyber-attacks, AI finds a unique area of use in creating a consistent real-time analysis of what's going on and extrapolating conclusions from data alone based on a worldwide database of information. Additionally, to use AI to help design a product, the company would have to be okay with throwing the code into an AI engine, which requires security. This requires an analysis of what hackers are trying to get into the systems, as hackers always adapt to new technologies, and it is uncertain what they will do in response to AI. This also ties into the core idea that no matter how fast security companies can solve security issues, potentially using AI to increase efficiency, bad actors will come up with ways to challenge those solutions. And if AI becomes as widespread as many predict it, bad actors will also use AI. This is proven through the malicious usage of AI, which has been able to bypass safety features and write and inject malicious code or malware. If AI cannot scan for these issues, that will become another security concern. Outside of security, AI can also aid with the efficiency of background searches, keeping equipment lean, governance over usage, and control of the devices on the network to generate diagnoses. Ironically, the company I worked for does exactly this—diagnosing networks—so the IT department buys their company's product to monitor their networks. This underlines AI's significance in the network and security niche of products.
Customer Service and Support	Customer Service and Support is already innovating with AI. Some have used it to extract data from the salesforce and spit out why the customer may be worried about something and why, giving the consumer service representatives an angle to approach the customer while also giving development teams areas to improve the product. Not only this, but Generative AI can also do everything from collecting feedback, generating summaries for employees to review, generating questions that need to be asked to customers, and overall automating and oiling the entire tedious progress.

Conclusion

In summary, this paper presents a comprehensive analysis of the readiness of countries to adopt Generative AI technology and how that might impact go-to-market strategies. A unique perspective is corroborated using the empirical framework combined with quantitative analysis. The quantitative results reveal a global distribution of AI readiness, with European nations ranking near the top. This analysis includes technological infrastructure, regulatory environment, research and development, cultural barriers, economic growth, and international collaboration. The findings of this paper highlight a significant divide between Western and developed countries, which are leading the charge in AI readiness, and less-prepared nations that must accelerate their efforts to remain competitive. Without increased investment in infrastructure and education, these countries risk falling further behind as AI continues to drive global economic transformation. At the same time, the qualitative outlook and interviews show the significance of creativity and value migration in determining the role of AI in various industries. Insights from different software company departments shed light on AI's internal use cases, ranging from product design and marketing to finance, legal, and customer service.

In a larger picture, the research contributes to the growing literature on Generative AI adoption by offering a holistic view of how future econometric developments can stem from AI adoption. Future research could delve deeper into specific industries, like exploring the nuances of AI adoption within healthcare and examining the ethical considerations and societal perceptions of Generative AI, which would enhance our understanding of the usage of this technology. This would also complement the industry-specific study-innovation cycles, regulatory limitations, or labor market characteristics, and their contribution to the pace and nature of Generative AI adoption across different verticals, such as healthcare, logistics, and manufacturing. Longitudinal studies that track the evolution of AI adoption over time, considering chronology, will also be valuable for business leaders and policymakers.

There are also some limitations to consider with this research. The data coverage for certain countries, especially those in restrictive regimes, is limited. Ethical consideration and societal perceptions, crucial factors in AI perception, were also not able to be quantified in the span of this project. Additionally, qualitative data is based on interviews from a specific industry, and findings may vary across different sectors.

Moreover, the rapid pace of technological developments means that the landscape of AI adoption is continually evolving. The data in this paper, up to 2022, will heavily rely on future developments that influence readiness and adoption patterns. Despite these limitations, the research still creates a foundation for understanding the complex dynamics of AI adoption at the national and organizational levels.

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