Trinity College Dublin
Coláiste na Tríonóide, Baile Átha Cliath
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The AI Economy in Ireland 2025: Trends, Impact & Opportunity

A Report from

Trinity Centre for Digital Business and Analytics (CDBA)

Trinity Business School

Trinity College Dublin

In Collaboration With

Microsoft Ireland

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Foreword

Ireland's AI Opportunity: A Vision for Leadership and Growth

Artificial Intelligence (AI) holds the key to Ireland's future prosperity, driving innovation, economic growth, and global competitiveness. With deliberate and strategic investments in AI skills and infrastructure, Ireland has the potential to infuse €250 billion into the economy by 2035. This promises a future where individuals and organisations, from startups to private enterprise and public sector, flourish at the forefront of technological advancement. This report, in collaboration with Trinity College Dublin, illuminates the path forward, spotlighting both the challenges and significant opportunities that lie ahead.

An Taoiseach, Micheál Martin, said recently that he believes *"AI can be a game-changer in helping us to deal with many of the economic and societal challenges facing Ireland and the EU."* That's why the Government is determined to step up its efforts to fully realise the benefits of the digital and AI revolution. Martin continued: *"We are committed to building on our long-standing reputation as a technology hub to become a global innovation leader. Ireland has the potential to be a leader in specialised areas of AI and to become a vibrant location for AI innovation. We have the foundations in place."*

We too share this ambition for Ireland to spearhead AI advancements in Europe, capitalising on its vibrant tech industry, talented workforce, and forward-thinking policies. The recent increase in AI adoption—from 49% to 91% within just one year—demonstrates the nation's progressive approach to harnessing AI's transformative capabilities.

AI: A General-Purpose Technology

AI is more than just a tool for efficiency; it is a general-purpose technology akin to electricity or the internet, enhancing daily activities while fostering creativity and innovation. AI has the potential to reshape public services, healthcare, education, and government. From optimising patient care in hospitals to enhancing efficiency in government services, AI is already driving tangible benefits. However, SMEs, which comprise 99.8% of Irish businesses, face challenges in AI adoption, including limited expertise, cost concerns, and implementation uncertainty.

To truly unlock AI's full economic and societal value, these gaps can be bridged by:

- Scaling AI adoption in SMEs and public services through targeted initiatives and incentives.
- Strengthening AI skills development to equip the workforce for AI-driven roles.
- Enhancing AI governance and regulatory clarity to foster trust and responsible AI deployment.

As part of our commitment to responsible AI, Microsoft is working with Irish businesses, policymakers, and industry leaders to shape a future where AI is not only widely adopted but ethically and securely integrated into society. Through initiatives like Skill Up Ireland - our national AI skilling programme - Microsoft is helping build an AI-literate workforce that can confidently adopt AI to drive innovation and competitiveness. We are also supporting SMEs, startups, and enterprises with enterprise-grade AI solutions, ensuring AI adoption is scalable, impactful, and responsible.

Ireland's AI Future

Ireland has all the essential ingredients to become a global leader in AI - but realising this potential requires collective action. By fostering a culture of collaboration, innovation, and responsible AI adoption, Ireland can be a pioneer in AI-driven economic transformation.

At the IDA's Special Recognition Award ceremony in March 2025, An Taoiseach, celebrating Microsoft's 50th anniversary, said, *"You (Microsoft) have had a presence here in Ireland for 40 of those 50 years, demonstrating our long, deep and fruitful partnership, as a key part of Microsoft's and Ireland's history – indeed, I and many legislators of my generation consider Microsoft's investment in 1985 to be one of the country's gateway investments, which helped to establish Ireland as a technology hub at the edge of Europe."*

At Microsoft Ireland, we are committed to playing our role in Ireland's digital future – we have been a key partner to Ireland for 40 years and will continue to partner with businesses, policymakers, and educational institutions to shape an AI-powered future that benefits all. Together, we can ensure Ireland becomes Europe's most AI advanced nation, driving growth, competitiveness, and innovation in an increasingly AI-driven world.

Catherine Doyle,

General Manager, Microsoft Ireland

Executive Summary

Artificial Intelligence (AI) is already transforming businesses and everyday life. With the enforcing phase of the EU AI Act, AI is once again under scrutiny - both for its potential to reshape industries and for the challenges organisations face in adopting, integrating, and adapting to these technologies.

This report is the second prepared by Trinity CDBA, in collaboration with Microsoft Ireland, to analyse the state of AI in Ireland. It examines business and public sector leaders' sentiment towards AI, their readiness for adoption, and the overall impact of AI on the economy. The second part of the study analyses the projected GDP and GNI growth in Ireland over the next decade due to AI adoption.

The report finds that sentiment towards AI has significantly improved compared to last year's survey. Organisations are increasingly open to using AI across various aspects of their operations. However, public sector organisations are lagging behind both domestic firms and multinationals in AI adoption. The report also highlights the persistence of a "shadow AI" culture, where managers are aware that employees use AI tools despite organisational policies discouraging or prohibiting them.

Currently, most AI adoption occurs through AI-integrated software procured by organisations, with many moving towards enterprise-grade tools. While there is a clear shift towards broader business model innovation driven by AI, most organisations are still focused on achieving incremental productivity gains.

One of the most significant findings relates to AI policy preparedness - about half of organisations still lack clear AI policies. Additionally, organisations in Ireland are seeking greater government support and investment in AI to accelerate and enhance adoption.

In the second part of the analysis, the report explores the projected economic growth in Ireland attributable to AI adoption. By comparing various scenarios, it finds that AI adoption will contribute at least €250 billion to the Irish economy over the next 10 years. Furthermore, a supportive AI environment and set of policies could add an additional €60 billion to the economy by 2035. In per capita terms, the analysis reveals that widespread AI adoption,

supported by strong policies, could result in Ireland's per capita GDP being 42% higher compared to a scenario with no AI adoption.

Purpose of Report

With the rise of AI, particularly generative AI, it is essential to understand where Irish organisations - as well as their customers, clients, and suppliers - stand in terms of AI adoption, preparedness, and expectations.

Trinity CDBA and Microsoft Ireland are committed to helping Irish businesses, policymakers, and other stakeholders better understand the challenges and impact of AI adoption. This report is part of our annual effort to assess the state of AI adoption and its effects on Irish organisations. A similar study was conducted in 2023-24, with the findings released in February 2024, available at: https://pulse.microsoft.com/en-ie/work-productivity-en-ie/na/fa1-generative-ai-adoption-rates-are-on-the-rise-in-workplaces-according-to-our-latest-report-supported-by-trinity-college-dublin/

This report aims to establish a baseline and track its evolution over time, with the goal of influencing policy, informing customers, raising awareness about AI, and deepening the understanding of stakeholders' pain points regarding AI preparedness.

Part 1 of the report will reference the 2024 study, providing a comparative analysis of how the market has evolved since the last report. Part 2 focuses specifically on 2025 and does not have a direct parallel in the 2024 study. In this section, we conduct a detailed analysis of AI adoption in the Irish economy and present projections for Irish GDP and GNI under various scenarios.

Ashish Kumar Jha
Director, Trinity CDBA

Part 1- AI Adoption in Ireland: 2025 Snapshot

Data collection

Method

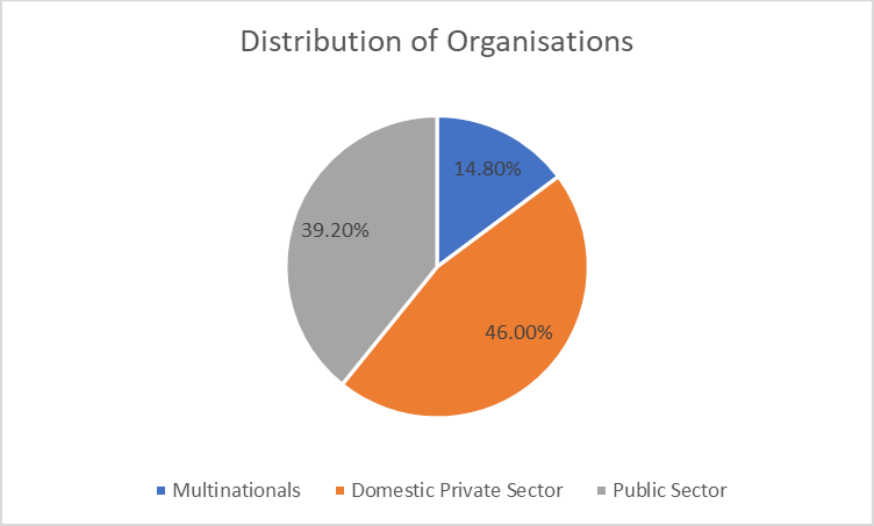
To create a comprehensive report on the state of AI adoption in Ireland, we collaborated with a market research organisation and gathered insights from senior technology decision-makers. Data collection was conducted in partnership with 3GEM.

A total of 250 senior leaders from various organisations across Ireland participated in the survey, ensuring both the breadth and depth of the analysis presented in this report. In addition 50 senior leaders from Northern Ireland were also surveyed. The data was collected from organisations across the island of Ireland to provide an island-wide perspective on AI adoption.

The survey was designed by the research team at Trinity CDBA, following best practices in survey design and knowledge extraction. It was carefully structured to minimise respondent fatigue, enable cross-validation of responses, and ensure that the findings could be meaningfully connected to broader research frameworks.

Data

We collected robust and representative data from organisations across all industries and sectors in Ireland.



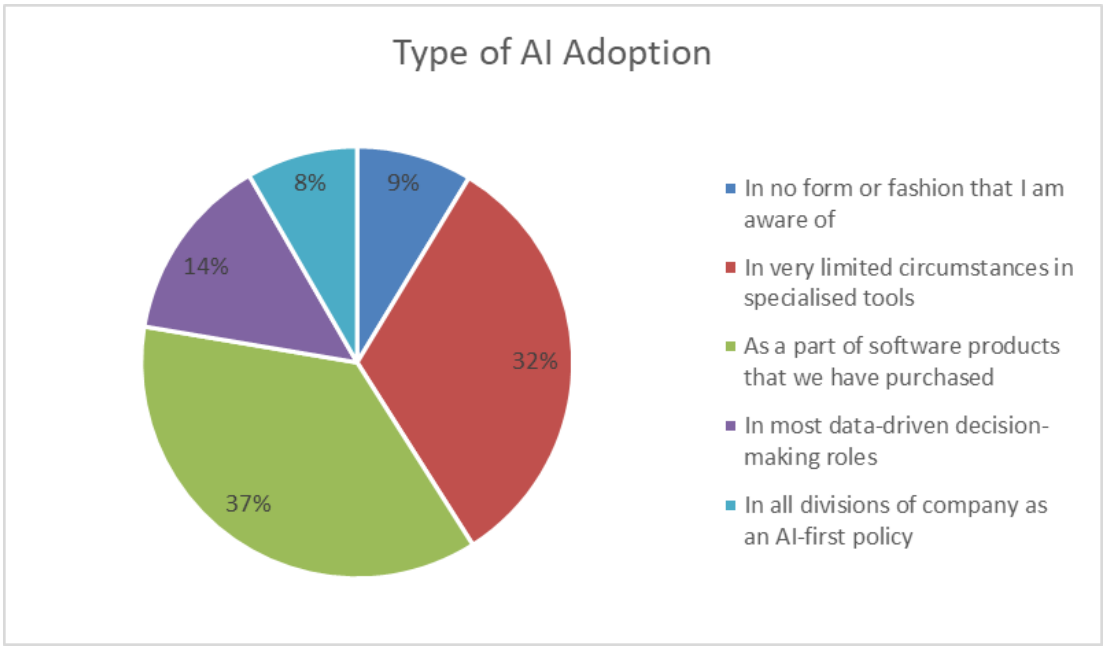
We achieved an equal distribution of organisations, with 123having fewer than 250 employees and 151 having more than 250 employees.

Summary of Findings

Use of AI by organisations

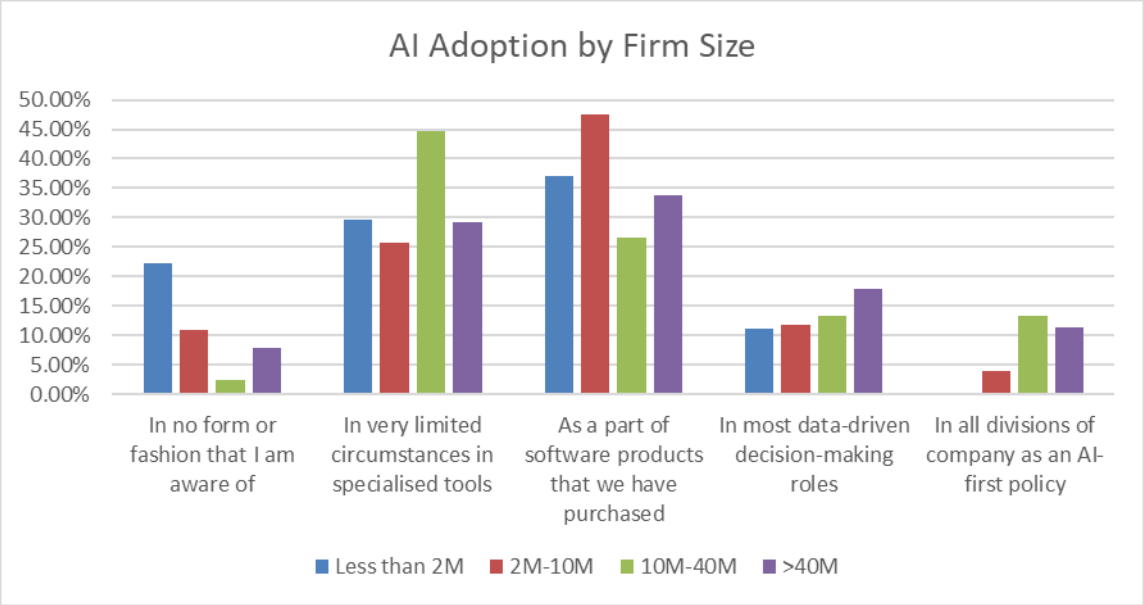
Points to note:

- **Significant Decline in AI Resistance:** Resistance to AI adoption has decreased substantially. In our latest data, only 9% of organisations reported that they do not use AI in any form, compared to 51% in the 2024 survey. This indicates a significant shift towards AI adoption within just one year.
- **Cautious AI Implementation:** While AI usage has increased, organisations adopting an AI-first approach - integrating AI across all divisions - have grown more modestly, from 1.81% in 2024 to 8%. This suggests that organisations are integrating AI gradually rather than fully restructuring around it.
- **AI as a Software Component:** The most common form of AI adoption remains AI integrated within acquired software, with 37% of organisations using AI this way - an increase from 28% in 2024. This highlights that while AI is becoming more prevalent, many organisations still rely on third-party solutions rather than developing in-house AI capabilities.



Diving deeper, we see that:

- **Smaller organisations are lagging behind larger ones in AI adoption.** While no small organisation reported having an AI-first policy, more than 10% of larger organisations now claim to be AI-first - up from 3% in last year's survey. This suggests that larger enterprises are leading the charge in fully integrating AI into their operations.
- Most smaller organisations (with revenue under €10M) are adopting AI primarily through broader software packages they purchase. This aligns with last year's findings, with one notable shift: **only 30% of smaller organisations had any AI adoption in the previous survey**, **whereas this figure has now surpassed 50%**. This sharp increase suggests one of two possibilities:
  1. Organisations are becoming increasingly AI-friendly and proactively integrating AI into their workflows.
  2. The widespread adoption of standard software packages with built-in AI is driving AI usage, meaning organisations may be adopting AI passively rather than through deliberate strategy.



Breaking it down by ownership, multinational organisations are leading in AI adoption, with 63% actively using AI. Notably, 30% of these organisations have integrated AI into most or all decision-making processes, showcasing a high level of commitment to AI-driven strategies.

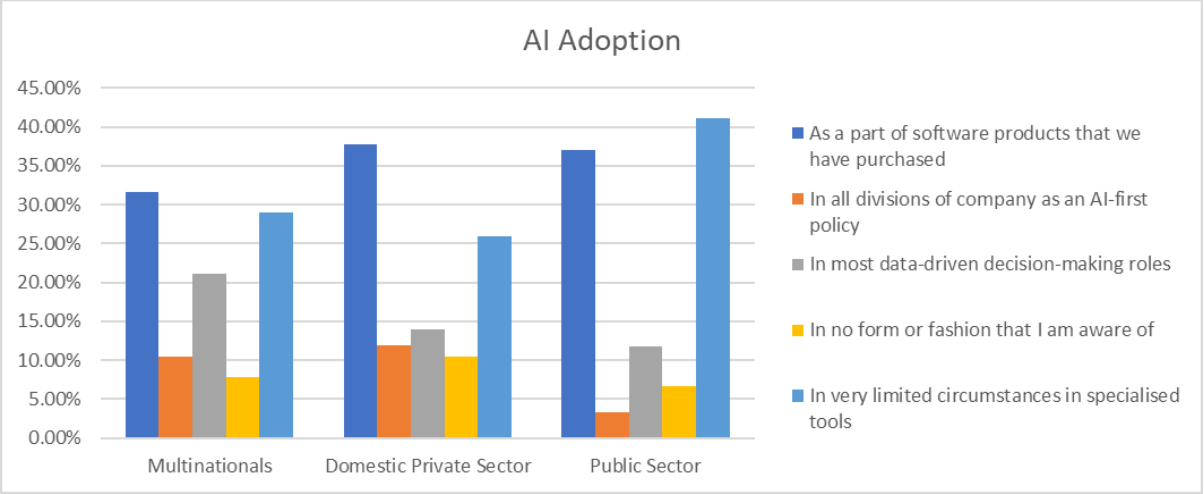
The domestic private sector also demonstrates strong adoption, with 60% of organisations leveraging AI. This indicates a healthy level of AI integration across Irish businesses, suggesting that domestic organisations are increasingly recognising AI's value in driving efficiency and innovation.

The public sector, while not far behind, shows a slightly lower adoption rate at 50%. However, the key difference lies in the mode of adoption. While 30% of multinational organisations use AI in most or all data-driven decisions, only 15% of public sector organisations do the same. Instead, public sector AI adoption is primarily driven by AI-integrated tools within broader software acquisitions, rather than through fully customized AI-driven decision-making frameworks.

Diving deeper into the differences between Ireland and Northern Ireland, we see notable variations in public sector AI adoption. In Northern Ireland, 24% of public sector organisations report using AI in most or all data-driven decision-making, whereas in Ireland, this figure stands at just 14%. This suggests that Northern Ireland's public sector is integrating AI more comprehensively into decision-making processes compared to its counterpart in Ireland.

However, when it comes to private sector organisations, the statistical difference between businesses in Ireland and Northern Ireland is negligible, indicating similar levels of AI adoption across private enterprises on both sides of the border.

In terms of year-on-year comparison, 2024 data for Northern Ireland was not available, so direct comparisons are limited. However, for Ireland, there has been a significant shift towards AI adoption across all sectors between 2024 and 2025. In 2024, AI adoption rates stood at just 17% in the domestic private sector and 12% in the public sector - substantially lower than current figures. While adoption has increased across the board, the private sector has significantly outpaced the public sector, with domestic private firms now generally matching the adoption rates of multinational organisations. Meanwhile, the public sector appears to be falling behind, suggesting a growing gap in AI integration between the two sectors.



AI Tools Preference

(Please note that the total adds up to more than 100% as organisations may use more than 1 tool)

We found there were increasing adoption of enterprise-grade tools which indicates a move towards more structured and secure AI implementations within organisations. However, public and free AI tools continue to dominate the overall landscape, with 80% of organisations still using at least one public or free tool.

Looking at AI adoption by organisation size, larger companies (with revenue over €250M) show a higher preference for enterprise-grade AI tools, with 55% using such tools and 17% developing customised in-house AI solutions. In contrast, only about 30% of organisations with revenue under €10M use either enterprise-grade or customised tools. This disparity presents a key opportunity for technology providers to expand within the SME sector. It also highlights the need for greater education and awareness among smaller organisations regarding the benefits and security advantages of enterprise-grade AI tools.

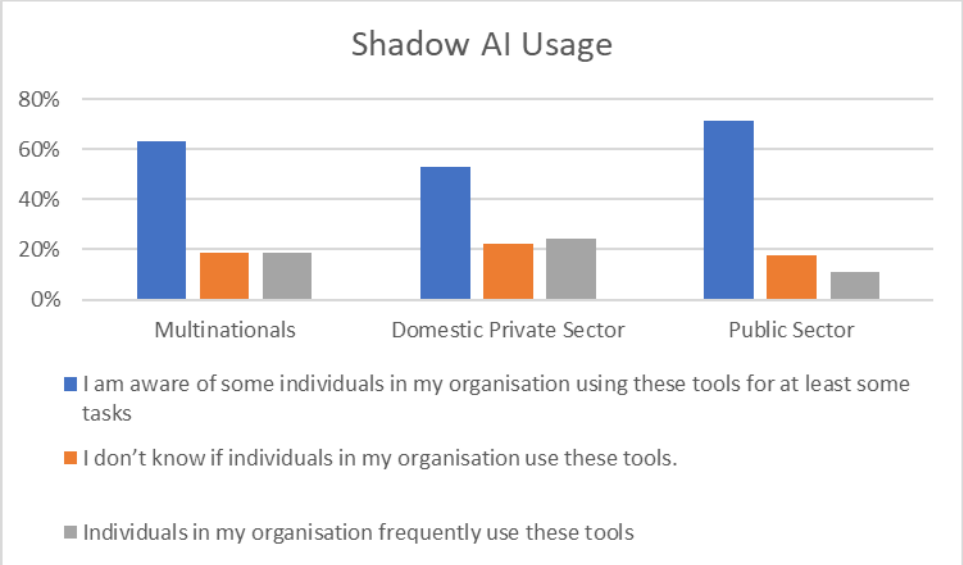
Shadow AI Culture

One of the most notable findings from our 2024 survey was the prevalence of shadow AI culture - where managers were aware that employees were using public or free AI tools, even when such tools were discouraged or explicitly prohibited by organisational policies.

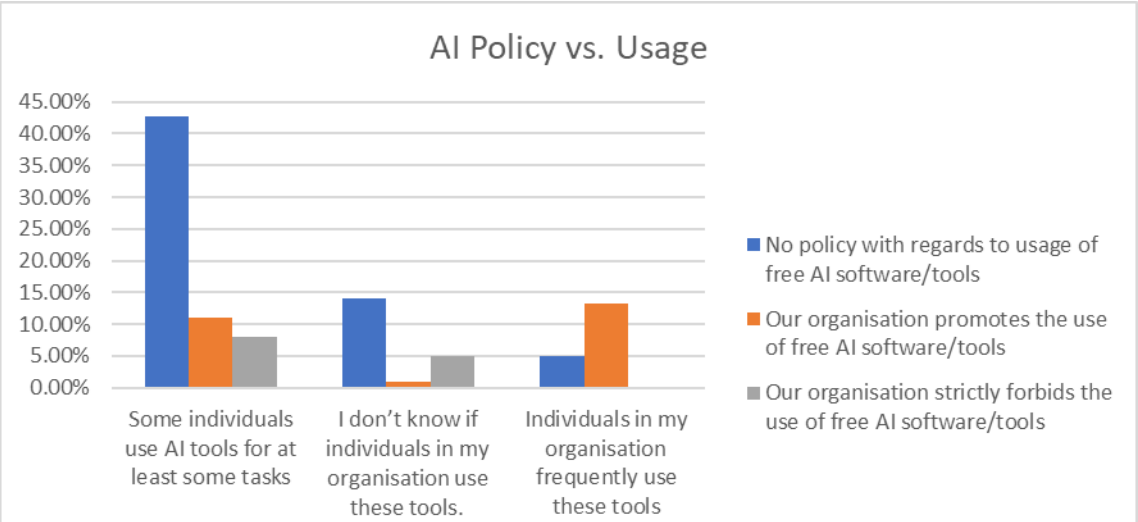
This year's data shows a shift in policy approaches. The number of organisations that strictly prohibit free or public AI tools has dropped to just 13% of surveyed organisations. However, among those that continue to prohibit such tools, 61% of managers report knowing that employees still use them. This suggests that shadow AI culture remains widespread and reinforces the idea that organisations would likely be better off managing AI usage rather than attempting to prohibit it outright.

Overall, 80% of managers report that free AI tools are being used within their organisations. Breaking this figure down by region, free AI tool usage is significantly higher in Northern Ireland, where 96% of managers report their use, compared to 75% in Ireland. This suggests that Ireland has a more mature and enterprise-driven AI culture, with a higher reliance on structured AI solutions.

The data also reveals notable trends in AI adoption by ownership type. Public sector organisations show higher usage of public and free AI tools, which may raise concerns given the sensitivity of government-related data. However, the overall high usage rates across all sectors highlight the widespread reliance on these tools, further emphasising the need for clear AI governance policies rather than outright bans.



By AI Policy (Compliance with policy)



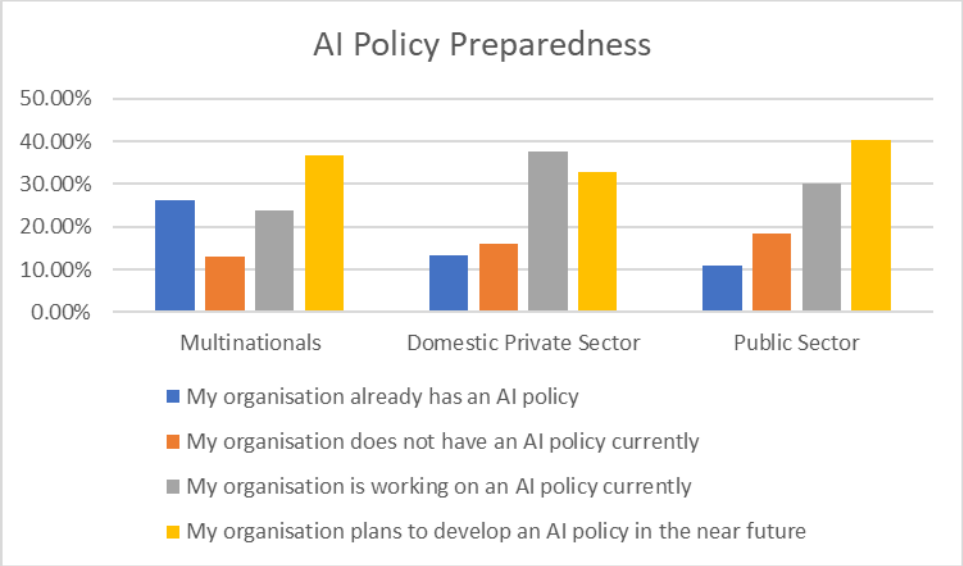
Organisations without a clear AI policy have the highest usage of free and public AI tools, underscoring the need for well-defined policy directives across all organisations.

AI Policy Preparedness

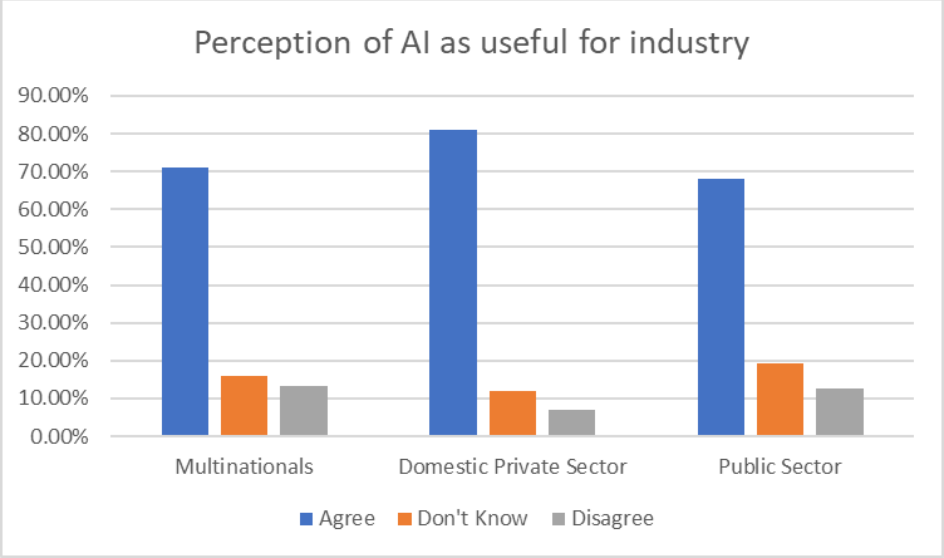
Multinational organisations are significantly ahead in AI policy preparedness, with 50% either having an AI policy in place or actively working on one. In comparison, 40% of public sector organisations are engaged in AI policy development, though only 10% currently have an established policy. Encouragingly, nearly 40% of public sector organisations have indicated plans to develop an AI policy in the near future.

There is no statistical difference in AI policy adoption between organisations in Northern Ireland and Ireland.

However, a clear difference emerges based on organisation size. Only 5% of organisations with revenue exceeding €40M reported having no AI policy, compared to 25% of organisations with revenue under €10M. This suggests that smaller organisations require more support and guidance in developing AI policies to ensure responsible and effective AI adoption.



Perception and Productivity of AI



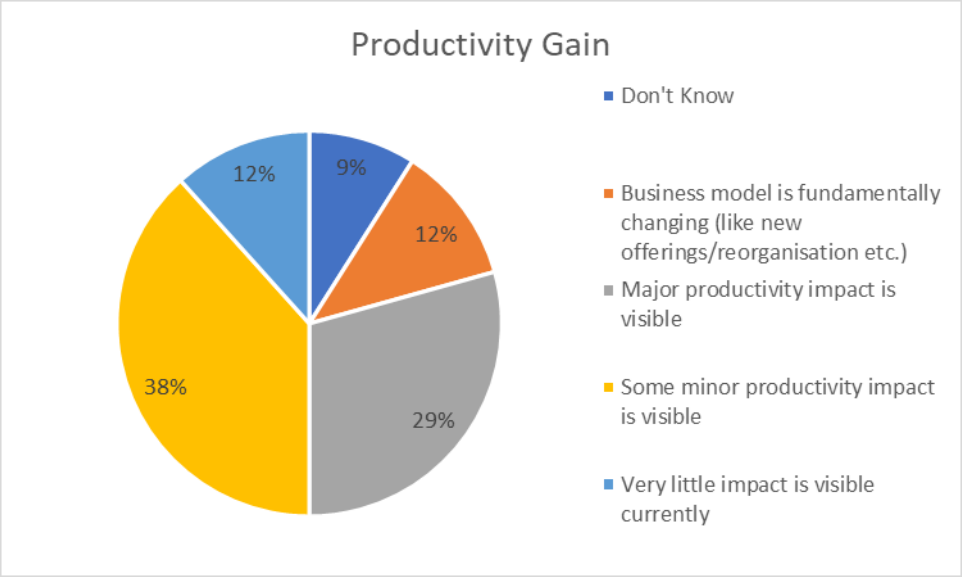
- The perception of AI's usefulness remains very high, with 75% of organisations recognising its value. Domestic private sector organisations exhibit the strongest belief in AI technologies. This positive sentiment has grown since 2024, when 65% of respondents viewed AI as beneficial.
- A notable difference exists based on organisation size. While 65% of small organisations believe in AI's usefulness, this figure rises to 85% among large

organisations (with revenue exceeding €40M), indicating that larger enterprises are more confident in AI's potential.

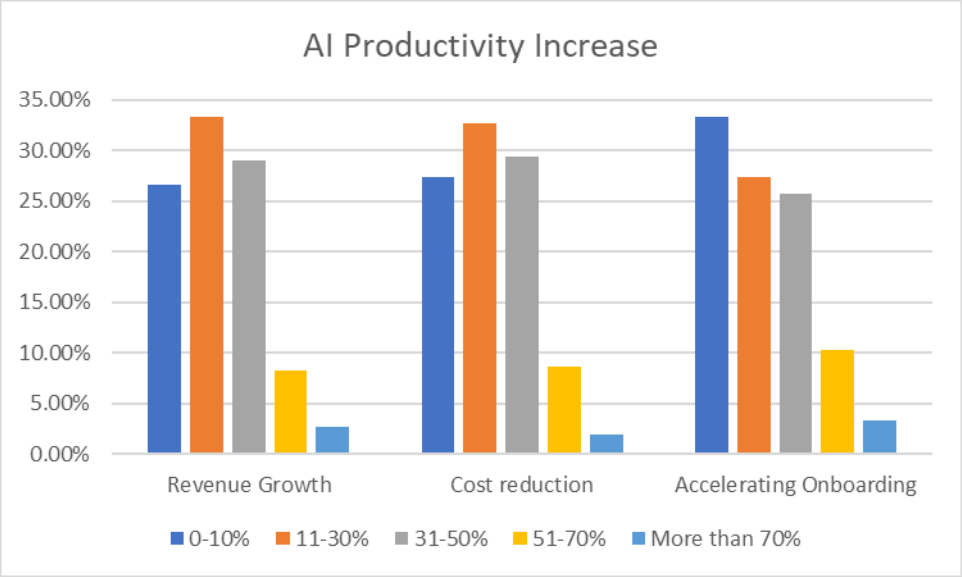
- Compared to 2024, belief in AI's usefulness within the public sector has increased significantly, rising from 42% to 65%. Meanwhile, sentiment among multinational organisations has remained relatively stable, suggesting that these organisations had already recognised AI's value in prior years.

Industry	AI is perceived to be useful	Don't know	AI is not perceived to be useful	Total
Banking, insurance, and other financial services	100.00%	0.00%	0.00%	100%
Central or Local Government	85.71%	14.29%	0.00%	100%
Construction	75.00%	25.00%	0.00%	100%
Education and Training	100.00%	0.00%	0.00%	100%
Health and social care	81.82%	18.18%	0.00%	100%
Hospitality and recreation	100.00%	0.00%	0.00%	100%
ICT and Telco products/services	100.00%	0.00%	0.00%	100%
Manufacturing	80.00%	20.00%	0.00%	100%
Other (please specify)	100.00%	0.00%	0.00%	100%
Professional services, consulting or other advisory services	70.00%	10.00%	20.00%	100%
Real estate	0.00%	100.00%	0.00%	100%
Retail or Wholesale	91.67%	0.00%	8.33%	100%
Technical and scientific services	75.00%	0.00%	25.00%	100%
Technology, Consumer-facing	100.00%	0.00%	0.00%	100%
Technology, Industrial	88.89%	0.00%	11.11%	100%
Transport, logistics and storage	100.00%	0.00%	0.00%	100%
Utilities	75.00%	0.00%	25.00%	100%
Grand Total	**85.39%**	**7.87%**	**6.74%**	100%

Productivity Analysis of AI Implementation



- About 12% of organisations have begun experiencing major organisational redesign due to AI implementation. However, 50% report little to no productivity gains, highlighting the need for more thoughtfully integrated, enterprise-grade AI tools to drive higher efficiency and transformation.
- Breaking this down by organisation size, only 6% of smaller organisations (with revenue under €10M) are undergoing significant business model changes, indicating that larger enterprises are seeing more structural shifts from AI adoption.
- When comparing by ownership type, 38% of multinational organisations report seeing none or only minor productivity gains from AI, while this figure rises to 51% for domestic public and private sector organisations. This suggests that multinational enterprises may be leveraging AI more effectively, potentially due to greater resources, expertise, or enterprise-wide AI strategies.
- Additionally, when examining manager perceptions, organisations largely expect AI implementation to generate new revenue streams and reduce costs. However, its impact on routine operational tasks, such as new hire onboarding, is perceived to be lower, indicating that organisations may currently view AI as more valuable for strategic transformation rather than day-to-day administrative functions.



An important aspect to highlight is AI's potential to support sustainability-related activities.

- Across all organisations, 71% agree that AI will play a role in advancing their sustainability efforts. Notably, Irish organisations (both public and private) show a stronger focus on sustainability through AI, with 73% believing in its potential, compared to 63% of non-domestic-organisations.
- Larger organisations (with revenue over €40M) are also more optimistic about AI's role in sustainability, with 74% recognising its potential, compared to 64% of smaller organisations (with revenue under €10M). This suggests that larger enterprises may have more resources to invest in AI-driven sustainability initiatives or a greater focus on ESG goals.
- ***Comparing these figures to 2024, there has been a significant increase in optimism about AI's role in sustainability. In the previous survey, only 47% of organisations saw AI as a meaningful tool for supporting sustainability efforts, highlighting a growing recognition of its impact in this space.***

Author's Note: One of the key drivers behind this increased optimism is the growing importance of sustainability as a core business priority across all sectors. As organisations increasingly integrate sustainability into their strategies, AI is being recognised as a valuable tool to enhance efficiency, optimise resource use, and drive meaningful environmental and

social impact[1]. AI is increasingly being seen (and sometimes marketed[2]) as a cost-effective way to enhance the sustainability credentials of an organisation[3]. Upcoming sustainability reporting standards are closely following the rise of AI, and many sustainability reporting tools already incorporate AI. As a result, sustainability reporting is becoming a mechanism for organisations to implement AI while also adhering to their sustainability commitments.

AI Readiness and Organisational Support

In this section, we examine AI policy development and senior management support within organisations.

- There is a high degree of reported support for AI implementation across organisations. 55% of organisations have a dedicated person or division responsible for AI implementation, while approximately 70% report financial resources and leadership buy-in for AI initiatives.
- However, while close to 70% of organisations report having financial resources available for AI implementation, only 60% have identified a clear business case for AI adoption. This underscores a strong willingness to implement AI but highlights the need for a deeper strategic focus on integrating AI into organisational processes to maximise its benefits.
- Diving deeper, a clear divide emerges between the public and private sectors in terms of organisational readiness. 70% of multinational organisations report having an AI-ready culture, whereas this figure falls below 50% in the public sector. A similar trend is observed in larger organisations (revenue >€40M), which are generally better equipped for AI adoption than smaller organisations (revenue <€10M).
- Additionally, the public sector lags behind both multinational and domestic private sector organisations in identifying clear business use cases for AI implementation. Only 45% of public sector organisations report having identified business cases for AI, compared to 65% of multinational organisations. This gap suggests that while AI

[1]https://www.epa.ie/who-we-are/our-services/monitoring--assessment/assessment/irelands-environment/sustainable-economy/whats-being-done-sustainable-economy/

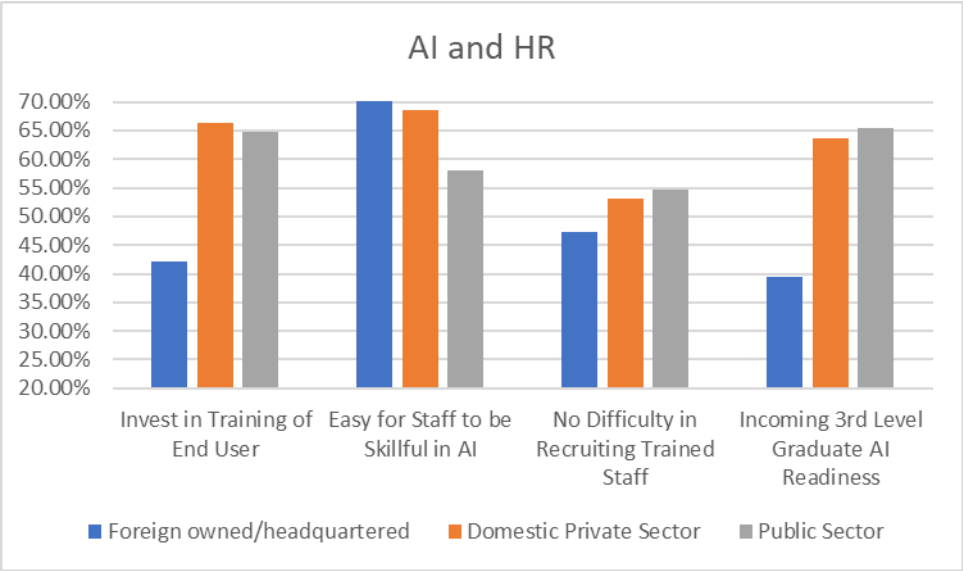
[2] https://www.ey.com/en_ie/insights/consulting/3-ways-ai-can-drive-your-sustainability-goals-in-2024

[3] Van Wynsberghe, A. (2021). Sustainable AI: AI for sustainability and the sustainability of AI. *AI and Ethics*, *1*(3), 213-218.

adoption is growing across sectors, the public sector may require additional support in defining and leveraging AI-driven opportunities.

- Comparing these findings to 2024, there has been a significant increase in organisational support and readiness for AI adoption, likely driven by growing optimism around AI's potential.
- In 2024, only 25% of organisations had a dedicated person or department to support AI implementation. This figure has more than doubled to 55% in 2025, reflecting a stronger institutional commitment to AI adoption.
- Similarly, financial support for AI initiatives has seen a dramatic rise. In 2024, only 30% of managers reported that their organisations had committed financial resources to AI adoption. By 2025, this figure has more than doubled, demonstrating a clear shift towards AI investment and strategic prioritisation.

Training and Human Resources



We also examined multiple aspects of training and workforce readiness, and the results are quite revealing.

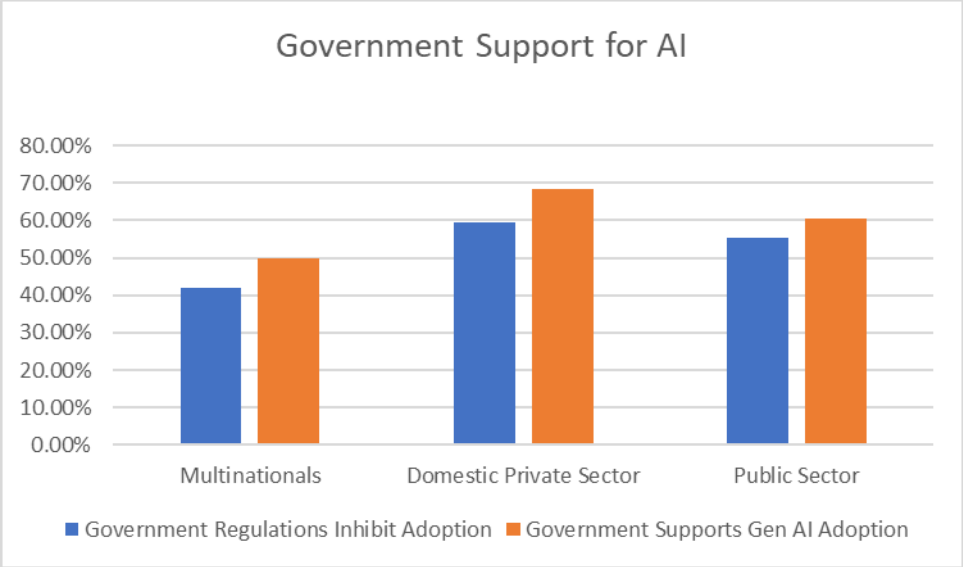
Multinational organisations report lower investment in end-user AI training compared to Irish-owned organisations. However, they also perceive their staff as more skilled and easier to train - with 70% of multinational organisations expressing confidence in their workforce's AI adaptability, compared to just 55% in the public sector.

Recruitment remains a challenge, though there are signs of improvement. Only 45% of multinational organisations report no difficulty in recruiting trained AI staff, and fewer than 40% believe Irish third-level graduates are AI-ready. Across all organisations, these figures stand at 50% and 55%, respectively. While these numbers highlight the ongoing need for investment in manpower training, curriculum updates, and reskilling initiatives, they also indicate that hiring challenges may be moderating compared to previous years.

Looking back at 2024, the proportion of managers reporting no major challenges in recruiting AI-trained staff has risen from 29% last year. This suggests that while talent shortages persist, the situation is gradually improving, potentially due to a combination of increased AI training efforts and a growing talent pool.

Innovation and Regulations

- Government regulations are widely perceived as a major inhibitor to AI adoption, with 56% of organisations stating that regulations in their sector create barriers to implementation. However, there is a notable regional difference - 50% of organisations in Ireland report regulatory challenges, compared to a significantly higher 80% in Northern Ireland.
- Smaller organisations (revenue <€10M) also report greater difficulties with government regulations compared to larger organisations (>€40M).
- Overall, 63% of organisations believe that the government supports AI adoption, with sentiment again being more positive in Ireland than in Northern Ireland.



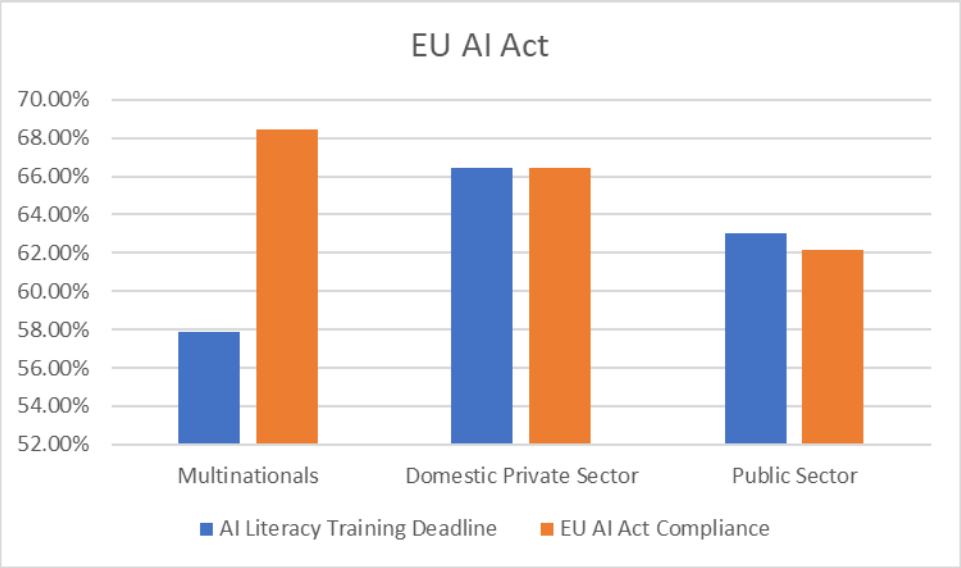
With the EU AI Act coming into force, it is notable that about 40% of organisations are uncertain about their ability to meet compliance and AI literacy deadlines. A deeper analysis reveals that smaller organisations (revenue <€10M) are struggling more than larger organisations in meeting the Act's obligations, highlighting a greater regulatory burden on SMEs.

Note from the Authors: These findings are particularly interesting. While our analysis did not pinpoint a specific regulation as the primary driver behind these concerns, the sentiment appears to be influenced by broader perceptions of the regulatory environment in Ireland and

Europe. Regulations such as GDPR and the EU AI Act are often viewed - particularly by smaller or multinational organisations - as barriers to innovation, a perspective that is reflected in our survey results.

Another contributing factor may be the perceived lack of proactive government investment and enthusiasm in AI education and AI-driven initiatives - especially when compared to countries like Singapore, where government-led AI investment has played a significant role in fostering adoption. Many organisations see this as a regulatory roadblock to AI adoption or as a lack of government support that needs to be addressed.

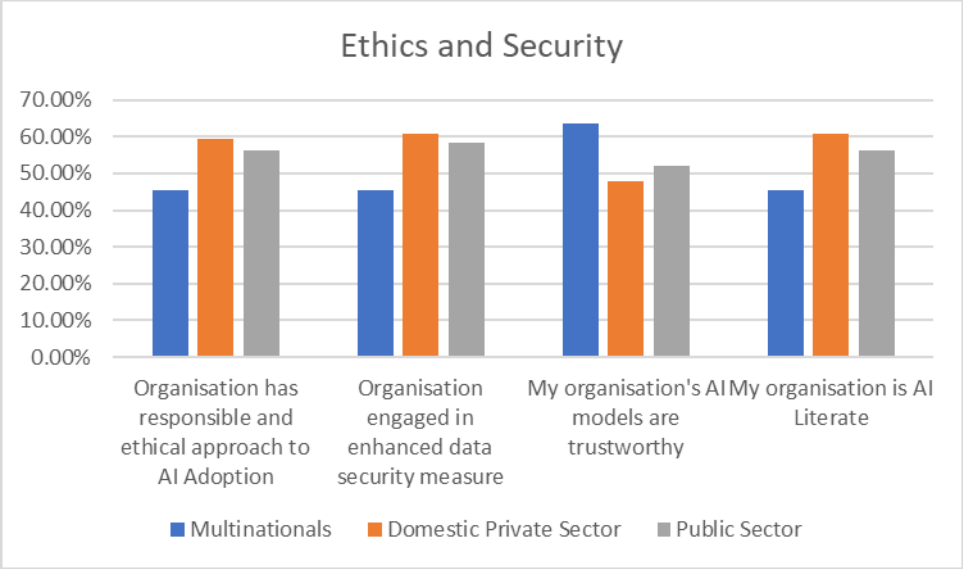
Similar sentiments around regulatory uncertainty were also observed in the authors' own previous research on Irish SMEs' perceptions of the EU AI Act, further reinforcing the need for greater clarity, guidance, and support to help organisations navigate the evolving AI regulatory landscape.



AI Ethics and Security

Given the growing focus on AI ethics and security considerations, this aspect has become critical in the current landscape. As AI adoption accelerates, ensuring responsible, transparent, and secure AI implementation is no longer just a best practice but a

fundamental necessity for organisations navigating regulatory and operational challenges.



- Only half of the senior managers surveyed believe that their organisation has a responsible or ethical approach to AI adoption. This sentiment varies across sectors, ranging from 45% in multinational organisations to 56% in the public sector. Notably, 44% of public sector respondents express a lack of trust in their organisation's ethical approach to AI, highlighting concerns around governance and accountability.
- Similarly, only 50% of respondents believe their organisation has implemented enhanced data security measures in response to AI adoption. This indicates a potential gap in security preparedness, emphasising the need for stronger frameworks to safeguard data and mitigate AI-related risks.

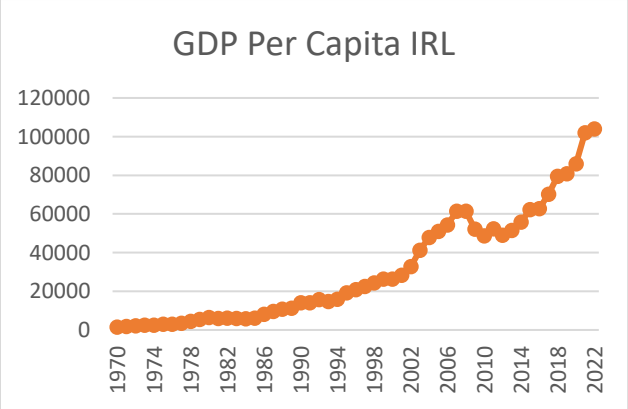
Part 2 - Analysis of AI's Impact on the Irish Economy [4]

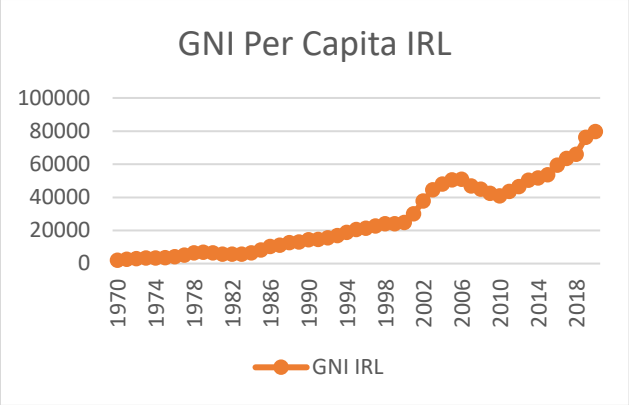
Description of Methodology

We base our economic analysis on two key variables: Gross Domestic Product (GDP) and Gross National Income (GNI). Most of our computations are conducted at a per capita level (i.e., GDP per capita and GNI per capita) to ensure international comparability. However, where relevant, we also reference total GDP and GNI figures to provide a sense of overall scale.

Data Source: We sourced the historical GDP and GNI data from World Bank Database. These can be publicly accessed at https://prosperitydata360.worldbank.org/en/economy/IRL

The figure below shows the per capita GDP and GNI of Ireland since 1970.





Ireland's economic growth over the years has been remarkable, with particularly notable periods in the 1990s and 2010s, where high growth rates propelled Ireland to become one of the highest GDP per capita nations in the world.

To assess the impact of AI on the economy, we employed a unique econometric approach that not only analyses the direct effects of AI adoption but also considers the role of government support and policies that foster technology adoption.

To achieve this, we followed a structured methodology involving the following key steps:

[4] Due to the challenges with region level data collection in UK (for Northern Ireland), the analysis in this section concerns just Ireland.

We analysed Ireland's economic growth by comparing two key periods: the 1990s to the pre-2008 financial crash and 2010 onwards. To better understand the factors driving growth, we compared Ireland's economic trajectory with other regional economies, including the UK, allowing us to isolate the organic global growth rate that was applicable across the EU and similar economies. By identifying the differential pace of Ireland's economic growth, we could attribute a portion of this acceleration to widespread technological adoption (particularly the internet era) and supportive government policies that encouraged organisations to embrace new technologies. This comparative analysis provides a foundation for understanding how AI adoption and policy support could similarly influence Ireland's future economic trajectory[5].

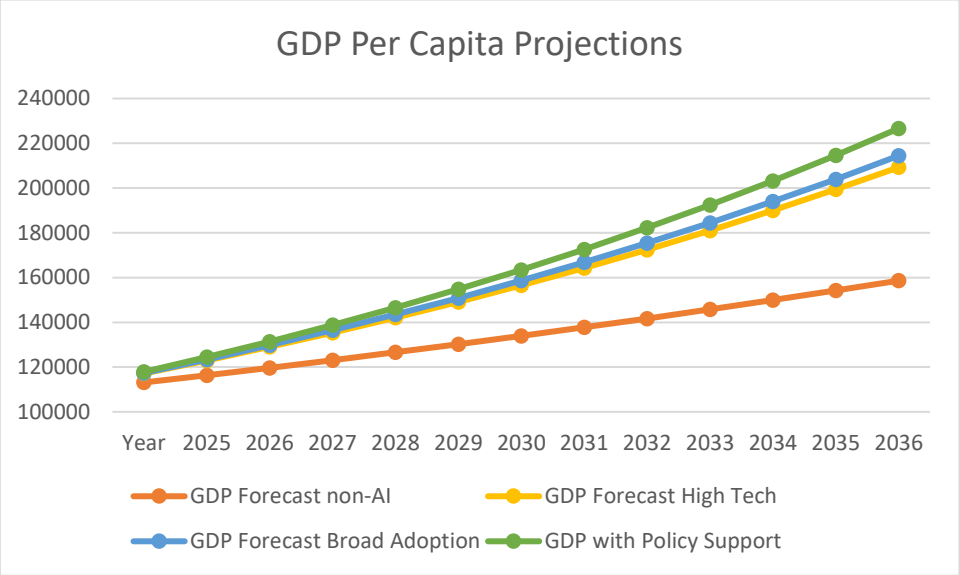
   a. The dependent variable was log transformed to make the variable stationary and comparable.
   b. Performing the analysis comparing the Irish economy and other regional economies, we identify 2.98% as the differential rate of growth on GNI and 5% on GDP that could be attributed to Ireland's policies and technology adoption in that period.

2. We also analysed the long-range growth rate of Ireland's economy to isolate the trend for GDP/GNI growth rate under normal circumstances. We isolate this factor at close to 2% over a 20-year period after accounting for the periods immediately before and after the 2008 crash and giving higher weights to the current growth trajectory owing to a higher base compared to the early 2000s. We have based this analysis on data up to 2022 to eliminate the influence of early AI adoption in certain sectors, ensuring a clearer assessment of long-term economic trends.
3. In the past few years, the Irish economy has experienced slower growth, with some contraction in 2023. However, when viewed over the long run, a 2% average growth rate emerges as a stable trend. This figure accounts for both rapid expansion periods driven by technological advancements and more moderate phases of economic activity, providing a balanced perspective on Ireland's economic trajectory.

[5] It must be noted here that there is no guarantee that AI will replicate past tech adoption but past tech adoption is the closest proxy to estimate AI's future impact and hence that has been chosen as the base in this report.

4. To establish a baseline for comparison, we first project the steady-state economic growth over the next 10-15 years, assuming a non-AI-driven trajectory. This projection helps us isolate the impact of AI adoption in subsequent scenarios.
5. We then model two AI adoption scenarios: one with fast AI uptake and another with slow AI uptake across the economy. These projections allow us to evaluate how varying speeds of AI integration could influence Ireland's long-term economic growth.
6. To analyse AI's impact on the economy, we adopt the methodology of Briggs and Kodnani (2023) to estimate the percentage of different industries exposed to automation. Their study finds an overall automation exposure of 25% across the Euro area. We apply this framework to Ireland's GDP by Industry data from the Central Statistics Office (CSO), mapping AI's potential impact across various sectors to provide a more granular view of AI-driven economic transformation.
7. One drawback with the above analysis is that it assumes productivity gains due to automation only and does not take into account new productivity gains, new industries and overall change in economic state of the nation due to positive or reinforcing economic environment. To achieve this, we combine all above analysis to reveal the following.
    i. Projection of GDP/GNI growth of Ireland in Steady state (non-AI) case (point 3 above).
    ii. Projection of GDP/GNI growth of Ireland with broader technology implementation in large high-tech sector of Irish economy.
    iii. Projection of GDP/GNI growth with broader AI implementation in economy.
    iv. Projection of GDP/GNI growth with supportive government policies and ecosystem approach reflective of early Irish growth.

Main Findings

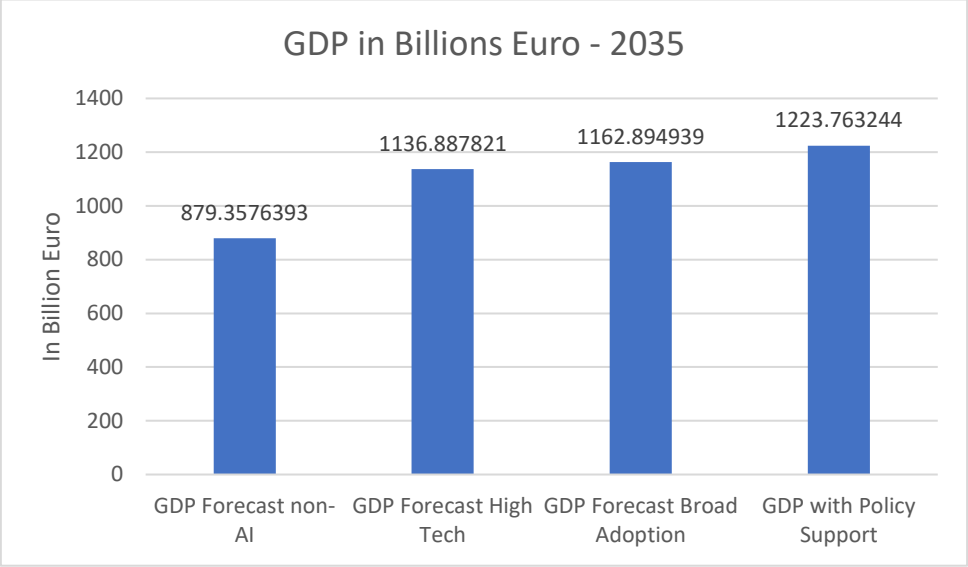


- Our analysis reveals that Ireland's per capita GDP would be 42% higher in a scenario of widespread AI adoption with supportive policies, compared to a scenario where AI adoption does not take place. This highlights the transformative economic potential of AI when integrated across industries with the right policy framework.
- In a more realistic scenario, where AI adoption is initially concentrated in the high-tech sector, followed by a delayed broader adoption, the impact remains significant. Under this scenario, per capita GDP with supportive policies would still be 8.3% higher compared to a slower adoption case. Over a 12-year period, even with phased adoption, AI integration would lead to a 31% increase in Ireland's total economic output, underscoring the long-term benefits of AI-driven growth.

We also compare our projections with the broader academic research conducted by Briggs and Kodnani (2023), which estimates the impact of AI on worker productivity to have a median effect of 2.6%, with a lower bound of 2.1% and an upper bound of 3.1%. When comparing our figures, we find that our projections for growth under a supportive policy environment closely mirror the upper bound suggested in their research, reinforcing the significant economic potential of AI adoption.

To translate our per capita analysis into national GDP figures, we apply median population growth projections from the Central Statistics Office (CSO) and multiply the per capita

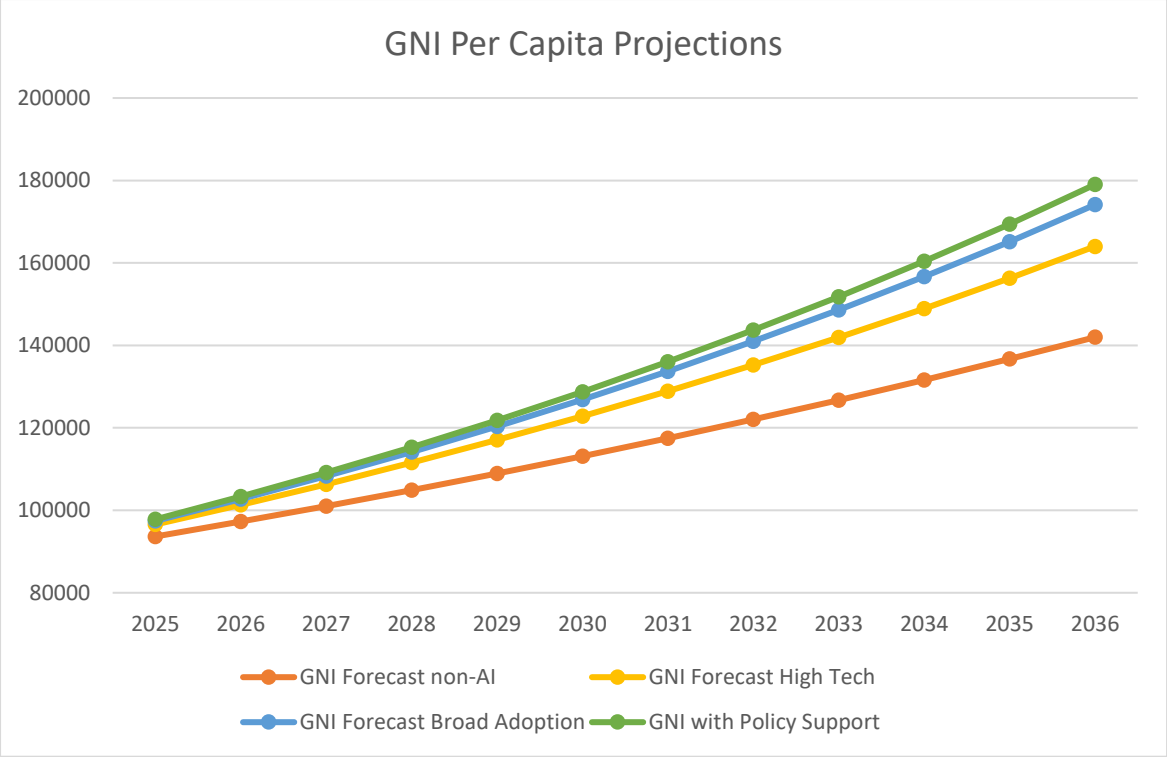
estimates by projected population figures. Our findings indicate that AI adoption will contribute at least €250 billion to the Irish economy over the next 10 years. Furthermore, with a supportive AI policy environment, this impact could increase by an additional €60 billion by 2035, underscoring the crucial role of policy and investment in maximising AI's economic benefits.

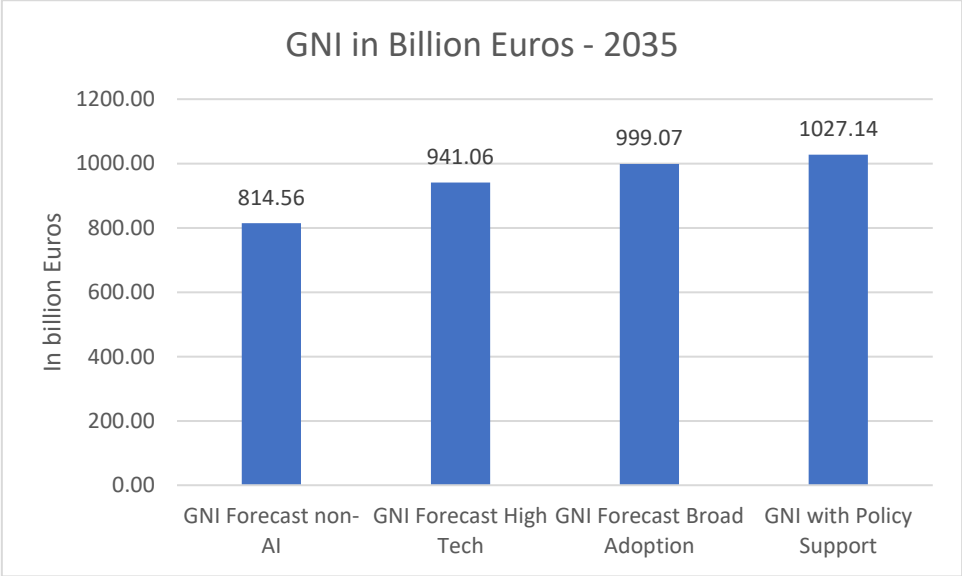


The figures below present the same analysis for Gross National Income (GNI). Our projections indicate that by 2035, Ireland's GNI would be at least €130 billion higher due to AI adoption. Additionally, supportive policies and a favourable environment could further boost GNI by at least €28 billion, with the total impact reaching up to €86 billion.

On a per capita basis, the average Irish GNI is projected to reach €148,000 by 2035 if AI adoption is primarily led by the high-tech sector. However, a faster and broader adoption of AI across industries would increase this figure to €156,000, and under optimal policy conditions, it could rise further to €160,000.

Compared to a non-AI baseline, these figures represent an increase of up to €30,000 per person, highlighting the substantial economic benefits of AI adoption. This underscores how both widespread AI integration and strong policy support could directly improve living standards and national economic prosperity.


GNI Per Capita Projections
200000
180000
160000
140000
120000
100000
80000
2025
2026
2027
2028
2029
2030
2031
2032
2033
2034
2035
2036
GNI Forecast non-AI
GNI Forecast High Tech
GNI Forecast Broad Adoption
GNI with Policy Support


GNI in Billion Euros - 2035
In billion Euros
1200.00
1000.00
800.00
600.00
400.00
200.00
0.00
814.56
941.06
999.07
1027.14
GNI Forecast non-AI
GNI Forecast High Tech
GNI Forecast Broad Adoption
GNI with Policy Support

Conclusion

This report provides an overview of Ireland's progress toward widespread AI adoption in organisations during 2024/25. It is evident that organisations increasingly recognise AI's potential, with a clear shift toward greater openness and optimism compared to our previous findings.

Our economic analysis strongly highlights the transformative potential of AI in enhancing national economic well-being. The multiple scenario analysis demonstrates the significant divergence in economic growth that could result from widespread AI adoption, coupled with supportive government policies and strategic investments.

This report serves as a foundation for discussion, encouraging provocative and forward-thinking conversations on how AI can be leveraged to enhance organisations across all sectors. Notably, the public sector has a unique opportunity to take the lead in AI adoption, setting the stage for productivity gains, innovation, and long-term economic growth. By embracing AI more proactively, public sector organisations could not only improve efficiency but also position themselves at the forefront of Ireland's AI-driven transformation.

Project Contributions

The following researchers contributed to this project through Trinity CDBA, and we thank them for their valued contributions. The project was led and coordinated by Ashish Jha and Nicholas Danks.

- Ashish Kumar Jha
- Nicholas Danks

Appendix

Biography of Contributors

Ashish Kumar Jha is an Associate Professor in the field of Business Analytics at Trinity Business School. He is the head of operations and analytics subject area in Trinity Business School. He is the founding director of M.Sc. Business Analytics (*Ranked 1st in Ireland and 24th Globally*). He is a co-director of Trinity *CDBA*. He is a funded Investigator at SFI Research Centre **ADAPT**. He is a member of EU Cost Action on Fintech and AI. Ashish holds a PhD in Information Systems, and his research revolves around the areas of fake news and social media analysis. Ashish uses statistical and analytical techniques to understand how organisations and consumers interact on social platforms and its effects for both organisations and their consumers. Ashish teaches courses at all levels from undergrad (Quantitative methods), M.Sc. (Social media Analysis, Data Visualisation), MBA (Leading with Big Data) to PhD (Theories on IS Research). He has also conducted executive training sessions in field of digital transformation and data visualisation. He was a member of numerous administrative and research committees throughout his career including recruitment committee, doctoral committee, and scientific committee at Rennes School of Business and Doctoral Committee at SP Jain Institute of Management and Research Ashish has lived and worked in multiple countries. He joined Trinity Business School in 2019. He was, earlier employed at Rennes School of Business in France wand in India (S.P. Jain Institute of Management and Research in Mumbai). He received his PhD from Indian Institute of Management in Calcutta in India in field of Management Information Systems. Ashish holds a bachelor's degree in Electronics and Communication Engineering. Ashish is an internationally recognised researcher in the field of Information Systems Research. He is a distinguished member of Association of Information Systems and is a committee member for AIS early career awards. His work utilises both secondary data based statistical analysis as well as controlled experiments. His papers have been published in many top journals of the field including Journal of MIS (listed in FT list of preferred journals), Information and Management, International Journal of Production Economics, Communications of AIS among others. He has also presented his work at numerous top conferences of field including International Conference on Information Systems, European Conference on Information Systems, Decision Sciences Institute Annual

Meeting, Informs Annual Meeting among others. Ashish serves as an Associate Editor for Information & Management and Information Systems Frontiers and also serves as ad-hoc reviewer and associate editor for various conferences and journals including International Conference on Information Systems, European Conference on Information Systems, European Journal of Information Systems, Decision Support Systems, Expert System with Applications, Decision Sciences, International Journal of Production Economics etc. Ashish has been a part of research groups working on robotic process automation in IT services industry and jointly holds multiple patents in the field of IT services management and optimisation. He has also worked closely with businesses and advised them as well as written teaching cases on organisations like Microsoft, Bosch, Wipro etc.

Nicholas Danks

Nicholas Danks is an Associate Professor at Trinity Business School and the current director of M.Sc. in Business Analytics. His primary research focus is on the rigorous and statistically correct use of SEM for scientific research. He is particularly interested in quantitative research methods and machine learning for explanatory models. To this end his work introduces predictive methodology to traditionally explanatory methods and finds opportunities for the intersection of these to supplement the scientific conclusions that can be drawn from research. He generates new statistical methods and refine existing methods in SEM (and in particular, Partial Least Squares - PLS). His research, therefore, lies at the intersection of methodology and practice. In addition, he also researches the use of computational statistics as a field and how these modern computational methods can be applied to solve imminent business and social challenges. This research is focused on ensuring that the progress in computational statistics is supported by the appropriate frameworks to ensure computational validity, reproducibility, and open access. He is a co-author and the primary maintainer of SEMinR, an open-source package for the R Statistical Environment for the estimation and evaluation of PLS path models. He has published in journals such as Management Science (ABS 4*, FT50), Human Resource Management Journal (ABS4*), Decision Science (ABS3), Journal of Business Research (ABS3), and The Database for ACM (ABS2).