

# AN INVESTIGATION OF THE GEOPOLITICAL AND ECONOMIC IMPACT RESULTING FROM THE DEVELOPMENT OF ARTIFICIAL GENERAL INTELLIGENCE (AGI)

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## Abstract

Artificial General Intelligence (AGI) represents the next step in the development of AI, a huge step in the quest for artificial intelligence. AGI aims to create machines capable of understanding, learning, and applying knowledge across various tasks, much like humans. This research proposal focuses on advancements and potential effects, to bridge the gap between narrow AI applications and the broader cognitive capabilities of AGI. This study explores the transformative potential of AGI while addressing the societal impacts. The research looks into the relationship between the development of AGI and geopolitical affairs.

Drawing on recent discoveries in mathematical and engineering applications, such as the Q\* Star and Bellman Equation, this study explores **what is needed to bring this amazing technology to life**, by investigating models that support the effective implementation of AGI. An examination will take place regarding the impact this upcoming technology has on economic markets and geopolitical affairs. This will be measured by determining if there is a correlation between the development of AGI and the impact it has on economic markets.

The future of AGI will have an impact on the world at large. The development of technology will influence not only our day-to-day lives but also geopolitical and economic stabilities. Through a comprehensive analysis of AGI's development, we will be able to better understand the global stabilities in both markets and political affairs.

## Introduction to the Study

We now know that Artificial General Intelligence (AGI), is the next step when it comes to AI technological evolution. This new tool will reshape our world fundamentally. AGI looks onto a new era of intelligent machines that can perform any cognitive task that a human being can. The effect AGI can have on global relationships or markets is therefore incredibly profound, offering both unparalleled opportunities for growth and complex challenges for geopolitical stability. Throughout this study we aim at investigating the relationship between the development of AGI and its impact on geopolitical affairs and economic markets. We look forward to receiving AGI's potential, but there are inherent difficulties in reaching an AGI level. To achieve this, we have to overcome significant technical, ethical, and safety difficulties.

## Research Questions

RQ 1: What is the relationship between the development of AGI and Geopolitical affairs?

RQ2: What is the correlation between the development of AGI and the impact it has on the economic markets?

## Keywords

AGI Developmental Frameworks, Geopolitical Dynamics of AGI, Economic Disruptions by AGI, Cognitive Functionality in AGI, Q\* Star Algorithm Impact, Bellman Equation in AGI Context, AGI Implementation Models, Global Stability and AGI Evolution, AGI-Market Correlation Analysis, Political Realignment due to AGI

## AI Evolution Timeline

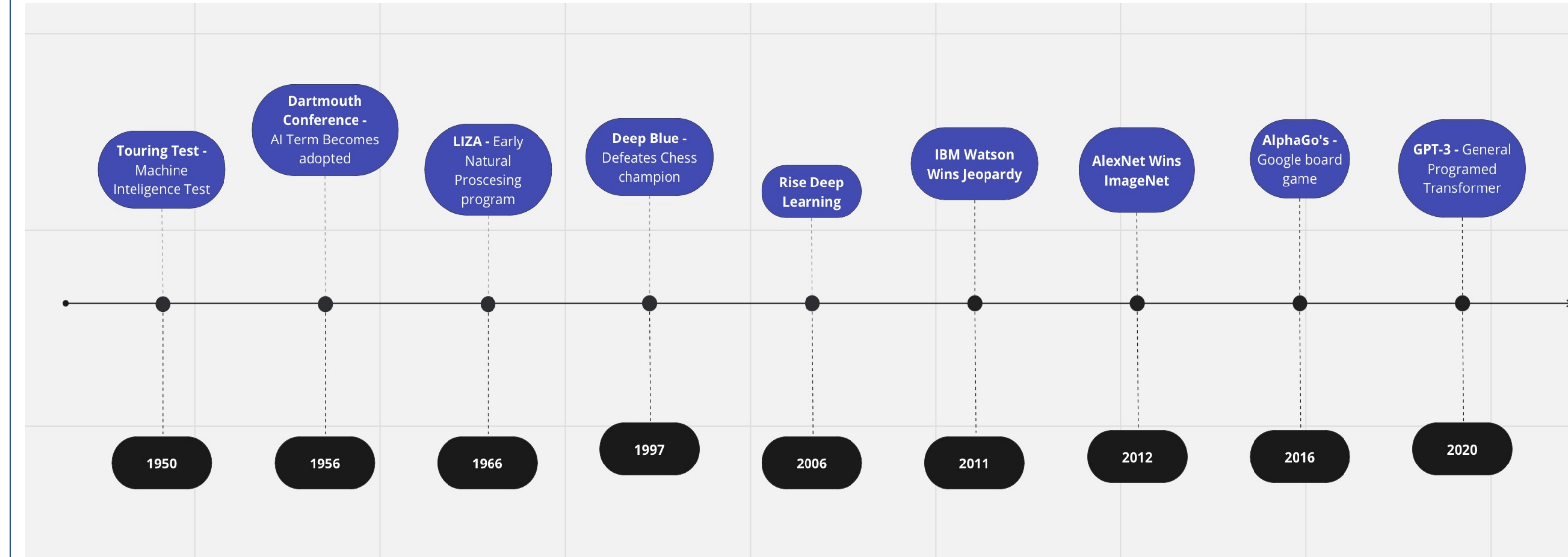


Figure 1. AI Evolution Timeline. Source: Tobia Donadon

## Conceptual Relationship

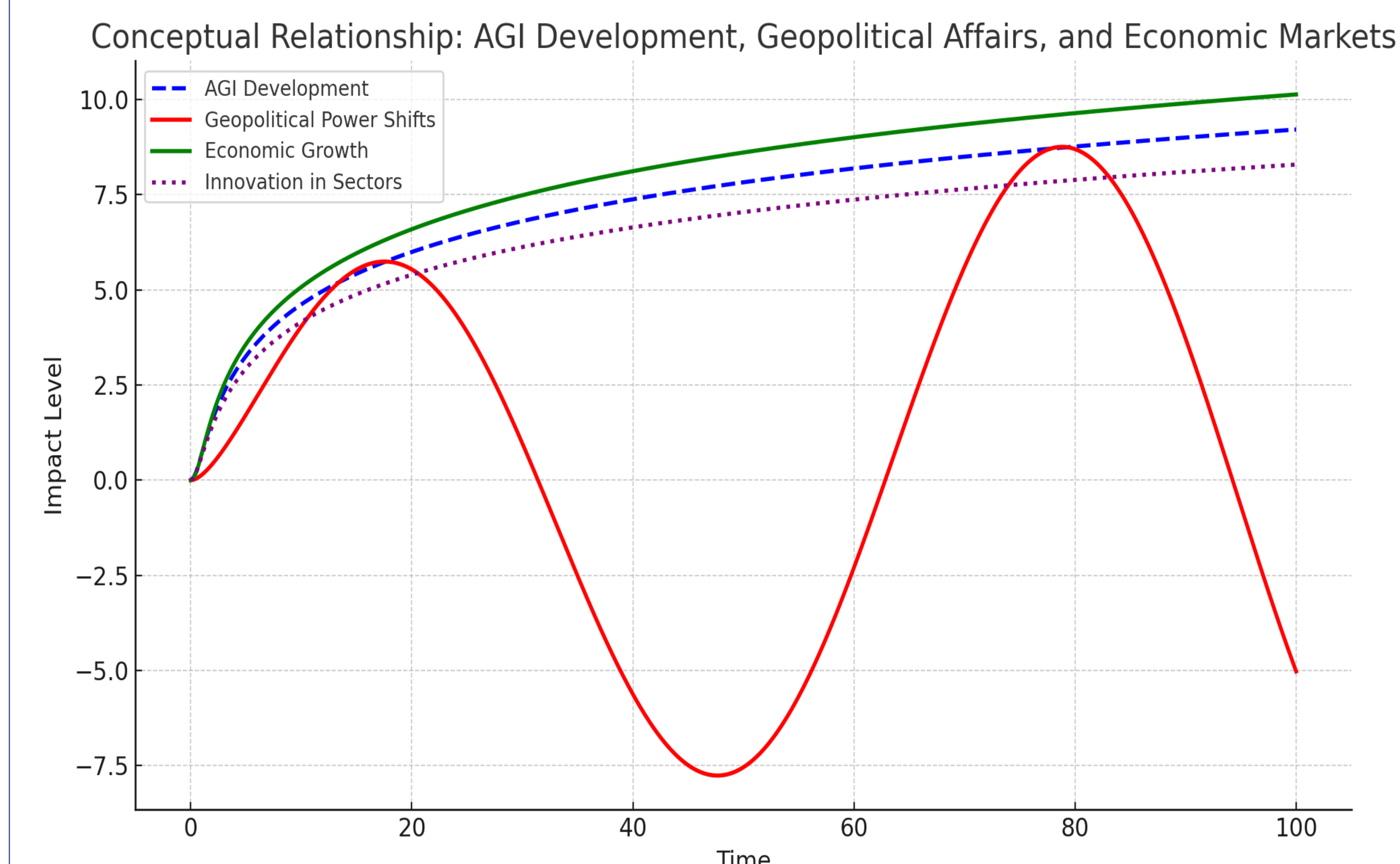


Figure 2. Conceptual Relationship. Source: OpenAI ChatGPT 4.0

•**AGI Development** (blue dashed line) shows exponential growth, indicating rapid advancements over time.

•**Geopolitical Power Shifts** (red line) demonstrate fluctuating impacts as nations adjust to technological changes, with significant shifts as AGI development accelerates.

•**Economic Growth** (green line) also follows an exponential trend, reflecting substantial economic opportunities and challenges that accompany AGI's evolution.

•**Innovation in Sectors** (purple dotted line) closely aligns with AGI development, suggesting that innovation across various fields is directly stimulated by advancements in AGI.

## Proposed Research Methods

This research will adopt the following methods:

- Literature Review:** Looking into the existing studies, theories, and frameworks related to AGI and its developments. The research will include a review of scholarly articles and credible online sources discussing AGI, its technological highlights, geopolitical intricacies, and economic disruptions.
- Expert Interviews:** Interviews will be conducted with market specialists and CEOs who operate in the market which can give valuable points of view on the subject.
- Scenario Analysis:** Multiple scenarios will be analyzed regarding AGI's impact on geopolitical and economic outcomes. Scenarios will be interpreted based on different assumptions about AGI's capabilities, adoption rates, regulatory environments, and international cooperation or conflict.

## Benefits of the Study

- Informed Policy-making:** Through conducting this research we can inform organizations, and institutions how and where the market will change in the following years. Adapting the correct policies.
- Enhanced Public Understanding and Engagement:** This research will demystify AGI, clarifying its potential benefits and challenges for the general public. Increased awareness and understanding can foster a more informed public discourse on AGI, its ethical implications, and societal impacts.
- Economic Opportunities and Risks:** Answering the research questions will allow us to highlight the important Opportunities and Risks that come with AGI in the fields of geopolitical affairs and economic markets.
- Acceleration of Technological Innovation:** This research will be able to inform more people about the advancements in technology, therefore probably collecting more individuals who could invest their resources in the technology.

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