

AI IN THE ENTERPRISE

Capability and Adoption

Brynjolfsson & McAfee · Agrawal, Gans & Goldfarb · Iansiti & Lakhani

PAPER 01 / 04

A Furtherance reference compendium on the intellectual traditions behind organisational design, leadership, execution, and culture.

IN THIS PAPER

This paper opens the AI in the Enterprise series in Furtherance's reference library. It frames what artificial intelligence actually *does* to firms, economically and operationally – before the later papers turn to safety, governance and implementation. The question it answers: where does AI create enterprise value, and what has to change for a firm to capture it?

The three contributions give complementary lenses. Brynjolfsson and McAfee treat AI as a general-purpose technology reshaping the economy. Agrawal, Gans and Goldfarb reduce it to a single economic effect – cheaper prediction. Iansiti and Lakhani show how it rewires the firm's operating model and competitive dynamics.

Erik Brynjolfsson & Andrew McAfee *The Second Machine Age*, 2014

Digital economics · MIT / Stanford

CORE THESIS

AI is the defining **general-purpose technology** of a “second machine age” – as consequential as steam or electricity, and, like them, slow to show up in the productivity figures until organisations make the complementary changes. Its gains bring both **bounty** (abundance) and **spread** (inequality), and the central design choice is **augmentation** versus mere automation.

FRAMEWORK

Concept	What it holds
General-purpose technology	A technology that transforms the whole economy over time
The productivity J-curve	GPTs depress measured output before they lift it
Complementary investment	Value needs new processes, skills and intangibles, not just tools
The Turing Trap	Over-focusing on human-imitating automation over augmentation

METHODOLOGY

Economic analysis and empirical productivity research, treating work as bundles of tasks some of which AI can perform.

SIGNIFICANCE AND CRITIQUE

The leading economic framing of AI's impact, and the source of the crucial augmentation-over-automation argument. The critique: it operates at a macro level, and its forecasts of pace and distribution remain uncertain.

Agrawal, Gans & Goldfarb *Prediction Machines*, 2018

Economics of AI · University of Toronto

CORE THESIS

Strip AI to its economics and it is one thing: a **drop in the cost of prediction**. When prediction becomes cheap, we use far more of it, and the value of its **complements** – human judgement, data and action – rises. The largest gains come not from point solutions but from **redesigning whole systems** around cheap prediction.

FRAMEWORK

Element	Role
Prediction	What AI makes cheap and abundant
Judgement	Deciding what to do with a prediction – rises in value
Data	The input that improves prediction – a strategic asset
Point vs system solutions	Biggest value comes from redesigning the system, not bolting AI on

METHODOLOGY

The economics of decision-making applied to AI, decomposing decisions into prediction plus judgement and reasoning about where value moves.

SIGNIFICANCE AND CRITIQUE

The clearest economic lens on what AI does to decisions and work, and unusually practical for strategy. The critique: the pure prediction framing captures analytical AI better than it does the generative wave, which the authors have since worked to extend.

Iansiti & Lakhani *Competing in the Age of AI, 2020*

Digital strategy and operations · Harvard Business School

CORE THESIS

AI changes the **operating model**, not just the strategy. Firms built around a data and AI core – running an “**AI factory**” that turns data into predictions and decisions – escape the traditional limits on **scale, scope and learning**, and collide across industry boundaries once thought separate.

FRAMEWORK

Idea	What it means
The AI factory	A pipeline: data, algorithms, experimentation, deployment
Digital operating model	Software and data, not people, sit in the critical path
Scale, scope, learning	Removed diminishing returns – growth without the usual bottlenecks
Collision	Data-centric firms cross into one another's industries

METHODOLOGY

Strategy and operations case research across digital-native firms and incumbents attempting transformation.

SIGNIFICANCE AND CRITIQUE

The strongest account of how AI rewires the operating model and reshapes competition. The critique: the exemplars are largely digital-native giants, and the path is far harder for established incumbents with legacy systems.

Synthesis

Contribution	Core lens	Key idea	Critique
Brynjolfsson & McAfee	Economy-wide	GPT; augmentation over automation	Macro; pace uncertain
Agrawal et al.	The decision	AI as cheap prediction	Fits analytical AI best
Iansiti & Lakhani	The firm	The AI factory and operating model	Hardest for incumbents

FOR THE OPERATOR

Capability and adoption frame AI economically: a general-purpose technology (Brynjolfsson & McAfee), a collapse in the cost of prediction (Agrawal et al.), and a new operating model built on an AI factory (Iansiti & Lakhani). For the operator, the through-line is decisive – the value is not the model but the redesign of work and systems around cheap prediction and augmentation, and advantage accrues to the complements: judgement, data and process. The next paper turns to the risks that arrive with the capability.