

AI, Robots, and the Post-Capitalist¹ Economy

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¹ Earlier versions of this whitepaper were titled *AI, Robots, and the Post-Labor Economy*. That title was misleading because although automation will largely eliminate *Wage-based Labor* (i.e., work performed to earn a living), it need not eliminate *Voluntary Labor* (i.e., work performed for enjoyment and a sense of accomplishment and self-worth). However, the title *AI, Robots, and the Post-Capitalist Economy* suffers from the unfortunate and undeserved belief that capitalism is the best economic system and the negative implication that has been attached to the concept of the word “socialism,” particularly in the United States.

Abstract:

As artificial intelligence (AI) and robotics advance at an unprecedented rate, they are rapidly automating both intellectual and physical tasks that were once only performed by humans. This shift, driven by economic incentives such as better quality, cost reduction, increased efficiency, and improved safety, will lead to widespread job displacement across nearly all industries. Without proactive intervention, mass unemployment could cause economic collapse, extreme wealth inequality, and violent social unrest.

This whitepaper examines the parallel rise of AI and robotics, their economic drivers, and the legal and regulatory challenges associated with widespread automation. It explores the types of jobs that are less susceptible to automation and evaluates potential Financial Support Systems (FSSs) designed to ensure economic stability in a post-capitalist society. These include a Civilian Labor Corps (SIS), Universal Basic Income (UBI), Universal High Income (UHI), Universal Productivity Dividends (UPD), Universal Sovereign Wealth Funds (USWF), Universal Basic Services (UBS), and Universal Investment Systems (UIS). The paper analyzes their benefits, challenges, and funding mechanisms, offering insights into how policymakers can create a sustainable economic model that ensures financial security, social stability, and equitable wealth distribution.

As societies transition from a neoliberal capitalist labor-based economy to one where AI and robotics generate nearly all economic value, the need for well-structured financial and social systems becomes imperative. This report advocates for a proactive and balanced approach to adapting to a post-capitalist economy, ensuring that technological progress benefits humanity rather than exacerbating inequality and instability.

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1 Executive Summary

1.1 The Challenge

AI and robots are rapidly replacing both intellectual and physical labor. Within 10 to 20 years, AI and robots will automate nearly all economically valuable intellectual and physical jobs. Without proactive action starting now, this shift will cause:

- **Mass Unemployment** across nearly all industries.
- **Extreme Wealth Concentration** as automation profits flow to corporations and the ultra-wealthy.
- **Economic Collapse** as unemployed consumers lose purchasing power.
- **Social Unrest and Instability** driven by economic despair and inequality.

1.2 The Core Risk

The **wage-based capitalist economy** cannot survive **mass automation** because of the rapid replacement of human employees with AIs and robots. Without wages, consumer spending collapses, businesses fail, and **governments face declining tax revenues**, undermining public services and stability. Without one or more financial support systems, the extreme gap that will exist between the tiny number of extremely wealthy oligarchs (and their supporters) and the vast majority of unemployed poor will lead to violent riots or revolutions.

1.3 The Solution: Financial Support Systems (FSSs)

Governments must replace wage-based income with universal financial support and essential services to ensure economic security and social stability. A portfolio approach is needed, including:

- **Social Investment Stipend (SIS).** Publicly funded jobs in education, care, and community services.
- **Universal Basic Income (UBI).** Regular universal income ensures every citizen's essential basic needs are met, raising everyone above the poverty line.
- **Universal Basic Services (UBS).** Free essential services (e.g., healthcare, housing, transport, education).
- **Universal High Income (UHI).** Regular universal income ensures comfortable living, not just survival.
- **Universal Productivity Dividends (UPD).** Regular universal payments are linked to national productivity growth because of automation by AIs and robots.
- **Universal Sovereign Wealth Fund (USWF).** Regular universal payments from government-owned investment funds.
- **Universal Investment System (UIS).** Citizen-controlled personal investment accounts at all levels, from multinational corporations to local businesses.

1.4 Funding Options

- **Automation Taxes** on companies using and producing AIs and robots.
- **Profit and Wealth Taxes** targeting ultra-profitable corporations and the wealthiest individuals.
- **Data Royalties** for personal and national data used in AI training.
- **Sovereign Wealth Funds** built from collective investments.
- **Luxury Goods and Inheritance Taxes** to reduce wealth concentration.
- **Redirected Spending** from outdated welfare programs or military budgets.

1.5 Key Benefits

- **Economic Security** for all citizens.
- **Poverty Elimination and Social Stability** in the face of mass unemployment.
- **Continued Consumer Spending** to sustain businesses and economic activity.
- **Fair Distribution** of automation wealth to all, not just corporate owners.
- **Improved Public Health and Well-being** with reduced financial stress.
- **Public Support for Technological Progress** when everyone shares its benefits.

1.6 Transition Risks

- **Political Resistance** from corporate and wealthy interests.
- **Public Distrust** of new systems if poorly explained or implemented.
- **Cultural Shifts** as work loses its central role in identity and purpose.
- **Legal Challenges** around liability, licensing, and worker protections in automated industries.

1.7 Policy Recommendations

- **Begin Pilot Programs Now:** Test UBI, UBS, and productivity dividends at the local or state level.
- **Phase In Automation Taxes:** Align corporate success with public good.
- **Invest in Public Wealth Funds:** Capture AI and robot productivity for all.
- **Prepare for Cultural Change:** Support lifelong learning, creative expression, and new paths to meaning in a post-work society.

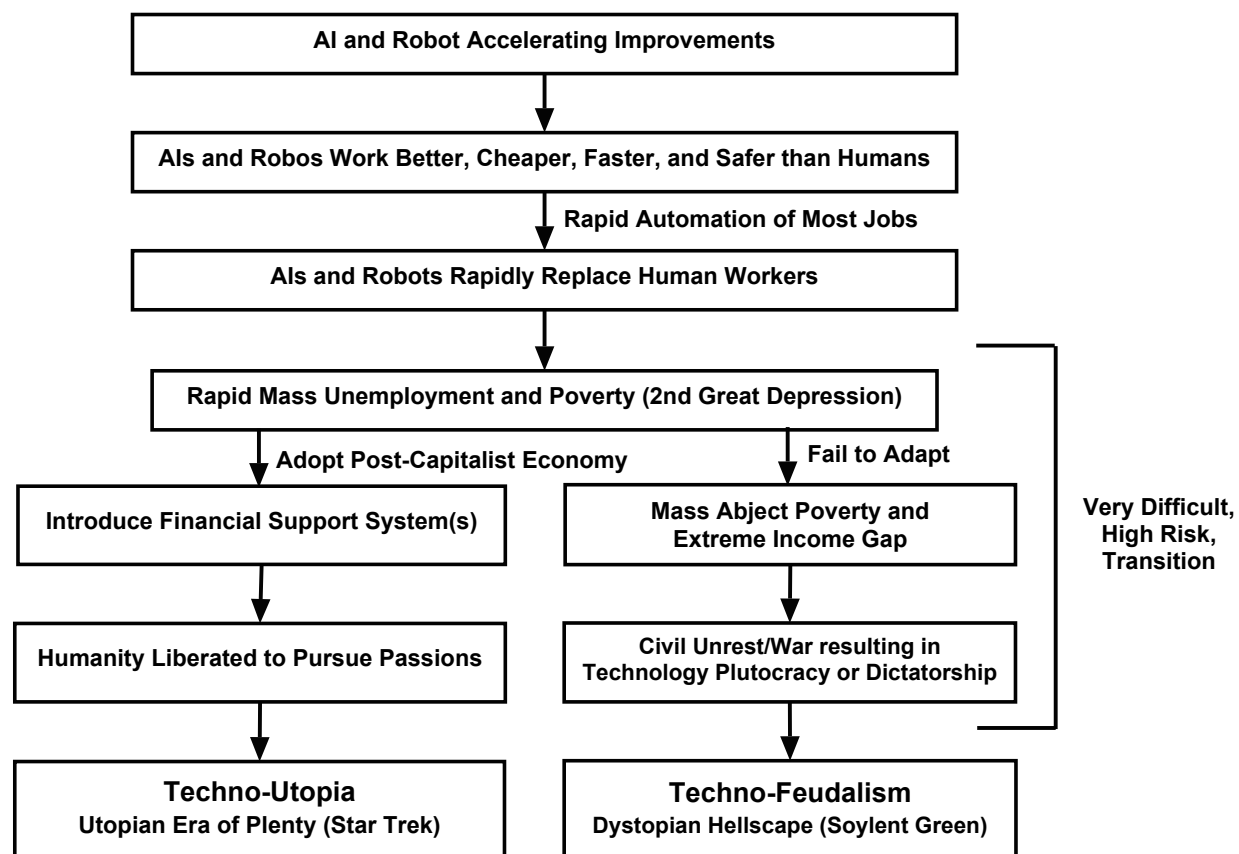
1.8 The Choice

A future of **shared prosperity** powered by automation — or **economic collapse and instability**. Governments must act now to design **a sustainable post-capitalist economic system** that works for all.

2 Introduction

Artificial intelligence (AI) and robotics have made enormous strides in the last five years, and their rate of improvement is accelerating, with major advancements occurring monthly. AI and robots have already automated many jobs, and this trend will accelerate. Within five to twenty years, AIs will be capable of performing all economically valuable intellectual tasks. Over the same time frame, AI-controlled robots will be able to perform all economically valuable physical tasks cheaper, better, faster, and safer than humans. Over the next ten to twenty years, economic forces, including capitalism and the profit motive, will lead to mass unemployment as AIs and robots replace human employees. We face a monumental choice between two futures:

- Humanity can adapt to a post-capitalist economy by instituting one or more financial support systems, liberating humans to pursue their passions and enjoy an era of plenty provided by the work of AIs and robots. A science fiction example of this future is the Star Trek universe.
- Humanity can fail to adapt, resulting in abject poverty of nearly 80-95% of the general population without the means to purchase even the most essential goods and services. This will cause an economic collapse. This poverty will also cause civil unrest, violence, and eventually, the revolution of the poor against the ultra-wealthy oligarchs. A science fiction example of this dystopian hellscape is the movie Soylent Green.



Unfortunately, politicians, regulators, and the public neither fully recognize nor understand the full impact of AIs and robots on the resulting transformation from capitalism to a post-capitalist economy.

Necessary legal, regulatory, and ethical adjustments are not being made to prepare for a society in which machines, rather than humans, increasingly perform all economically valuable labor.

This report provides an in-depth examination of the forces driving the shift toward automation, the impact of AI and robotics on various sectors, and the financial support systems needed to manage a post-capitalist future.

2.1 Types of AIs

Artificial Intelligence (AI) refers to computer software designed to perform tasks that typically require human intelligence. These tasks include reasoning, learning, perception, and problem-solving. AI systems use algorithms and computational models to process information, recognize patterns, and make decisions.

There are three main types of artificial intelligence:

- **Artificial Narrow Intelligence (ANI).** An AI is designed to perform a specific or narrow range of intellectual tasks. Also known as weak AI, ANI has the following characteristics:
 - *Limited Scope.* An ANI is optimized for its designated task and does not possess the versatility to perform unrelated tasks. Examples of ANIs include those used for language translation, facial recognition, or playing specific games.
 - *Inability to Generalize.* An ANI operates within predefined rules and parameters and lacks the capacity for generalization beyond its limited scope. It cannot apply knowledge gained through its operation to different contexts outside its specific programming.
 - *Expert Capability.* An ANI's specialization enables it to develop a deep understanding of its specific area, giving it capabilities equal or superior to those of a human expert.
- **Artificial General Intelligence (AGI).** An AI that possesses generalized intellectual abilities, enabling it to perform all tasks a human can. Although currently hypothetical, the first AGIs could well be developed and released within the next few years (e.g., 2025-2029), with many experts suggesting that 2027 is the most probable year. AGI is also known as strong AI, full AI, and human-level AI. AGI has the following characteristics:
 - *Human-Level Expertise.* An AGI possesses human-level intellectual abilities. Achieving AGI is a matter of degree, with its abilities varying from that of a child, high school student, college undergraduate, someone with a doctorate, to an expert. Another approach to assessing an AGI's intellectual abilities is to compare them to those of an *average* adult or the *most intelligent* human.
 - *Knowledge.* An AGI's knowledge base includes common sense, an understanding of the physical world, multiple academic subjects, and professional expertise.
 - *Reasoning.* AGIs can develop multistep plans and apply logic to perform human-level problem-solving.
 - *Agent.* AGIs can take actions independently from human instruction, autonomously performing a wide range of tasks across different domains without human input.
 - *Learning.* AGIs can acquire new knowledge and adapt to new situations.
 - *Generalization.* An AGI can generalize knowledge from one domain to another.
 - *Multimodal Communication.* An AGI can communicate in various formats, including written text, speech, images, video, and music.

- *Creativity.* An AGI can demonstrate creativity by formulating new ideas and processes not found in its training data.
- **Artificial Superintelligence (ASI).** A hypothetical AI that significantly or greatly outperforms humans in nearly every intellectual task. An ASI can do everything an AGI can, but with greater proficiency.

Another important way of distinguishing between different AIs is whether they operate in the physical world:

- **Embodied AI (also known as physical AI).** An AI that executes on a computer embedded in a physical form and controls its “body” by taking in information from its sensors and outputting commands to its actuators.
- **Disembodied AI (also known as virtual AI, software AI, or digital AI).** An AI that is neither embedded in nor controls a physical body.

2.2 Types of Robots

A **robot** is a machine with the following characteristics:

- **Sensors.** It obtains information about its environment from one or more sensors (e.g., cameras, radar, and lidar). It may also have internal sensors (e.g., for measuring battery power or torque).
- **Computer Memory.** A robot typically augments sensor data with data stored in its computer memory (e.g., map data) to create a model of its environment.
- **Software.** A robot uses software executing on an embedded computer to process this data and determine one or more actions to take. Most autonomous robots (e.g., humanoid robots and drones) are at least partially controlled by embodied AIs.
- **Motors/Actuators.** A robot executes these physical actions by sending control messages to its motors and actuators.

Several types of robots controlled by embedded AIs already automate economically valuable physical tasks previously performed by humans:²

- **Single-Purpose Robots.** These non-humanoid robots perform specific tasks or a narrow range of related tasks. Some typical examples of single-purpose robots controlled by narrow AIs that can replace human employees include:
 - *Agricultural Robots (Agri-bots).* These robots automate farming tasks such as planting, harvesting, watering, and soil monitoring. They increase productivity and reduce the physical labor required in agriculture.
 - *Autonomous Vehicles.* Personal cars, taxis, trucks, and aircraft.
 - *Domestic Robots.* Domestic robots are found in households and perform tasks like vacuuming and lawn mowing. Future humanoid domestic robots are expected to perform household chores such as cooking and cleaning.

² For this paper, we ignore tele-operated robots controlled by a human operator, as they do not replace human workers.

- *Exploration Robots.* Used in space, ocean, and deep-earth exploration, these robots gather data in extreme environments that are challenging or dangerous for humans.
- *Industrial Robots.* Primarily used in manufacturing, these robots typically consist of manipulator arms that perform tasks such as assembly, welding, painting, and material handling. They increase efficiency, reduce human error, and can work continuously in factories.
- *Medical Robots.* In healthcare settings, medical robots assist with surgeries, rehabilitation, and patient care. Surgical robots enable precision in procedures, while rehabilitation robots help patients recover physical abilities.
- *Military Robots.* Employed in defense, military robots perform tasks such as surveillance, bomb disposal, and unmanned transport. They enhance safety by performing dangerous tasks without risking human lives.
- *Warehouse and Logistics Robots.* Used in warehouses and distribution centers, these robots pick, pack, sort, and transport goods. They improve efficiency and accuracy in inventory management and order fulfillment.
- **Humanoid Robots.** These human-shaped robots are designed to perform multiple tasks previously performed by humans. Typical examples of multitasking humanoid robots controlled by embedded physical semi-ANIs or AGIs include:
 - *Companion Robots.* Designed to mimic human appearance and behavior, these robots will care for disabled individuals, older adults, and recovering patients needing companionship and help with mobility and medications. Owners even use some current companion robots as romantic or sexual partners.
 - *Educational Robots.* Currently used in schools and universities, these robots are used to teach robotics, programming, and STEM skills. In the future, they may also act as classroom teachers.
 - *Service Robots.* Found in customer service and hospitality industries, these robots assist with tasks such as greeting guests, providing directions, delivering room service, and even cleaning. They're designed to improve customer experience and streamline service operations.
- **Teleoperated Robots.** Humans or AIs operate these robots remotely. Examples include airborne, ground, and underwater drones.
- **AI-embedded Robots.** These robots have actions controlled by AI running on an embedded computer.

3 The Parallel Rise of AI and Robots

3.1 AI is Automating Economically Valuable Intellectual Tasks

AI has evolved to perform complex intellectual tasks like data analysis, medical diagnostics, and even creative content generation. AI systems currently support industries through natural language processing, predictive analytics, and decision-making processes that were once solely performed by humans. For example, in finance, AI models can now make informed trading decisions at lightning speed, while in healthcare, AI algorithms help identify disease markers in radiological scans with high accuracy.

3.2 Robots are Automating Economically Valuable Physical Tasks

Robots are also transforming industries that rely on physical labor. AI-directed robots now assist in assembly lines, precision agriculture, and even surgery, demonstrating capabilities that surpass human precision and endurance. Robots equipped with AI enable industries to operate continuously, reducing the need for human labor and expanding productivity and scalability.

3.3 Transitioning to Robots will Take Longer than Transitioning to AIs

Robot technology (with embedded AI) is rapidly advancing to where robots will soon be able to replace human workers. However, there are significant hurdles that will make transitioning from human workers to robots take longer than the transition from human workers to AIs.

Factor	AI (Software)	Robots (Hardware and Software)
Technology Maturity	2025-2027	2026-2028
Human Replacement	2025-2030	2027-2040
Scalability	Highly Largely uses existing digital systems.	Limited Requires manufacturing in new factories with expensive machines.
Cost of Implementation	Relatively Low Software subscription or licensing	Relatively High Requires manufacturing and testing hardware.
Hardware Constraints	Low Specialized or general-purpose computer chips for inference.	Significant Sensors, actuators, batteries. Actuators require expensive and limited, rare-earth elements for powerful magnets.

Speed of Deployment	Instantaneous Cloud-based deployment	Slow Requires manufacturing, physical delivery)
Regulatory Burden	Low to Moderate May require compliance with safety regulations.	High Requires compliance with safety and labor regulations.
Return on Investment (ROI)	Fast and Relatively Low Cost	Longer and Uncertain

3.4 Economic Drivers Behind AI and Robots Replacing Human Labor

AI and robots are rapidly advancing to where they can perform any economically valuable (cognitive and physical, respectively) task/job cheaper, better, faster, safer, and more secure than human employees.

3.4.1 Cheaper

The primary driver of automation by AI and robots is decreased costs, resulting in increased profits.

- Human labor incurs wages, benefits, training, and supervision, while AI and robotics provide a long-term solution that requires minimal maintenance and operational costs.
- Employers must pay payroll taxes on human employees but not on AIs and robots. Employers can also claim depreciation on.
- Replacing human labor with machines can drastically reduce expenses in industries with tight profit margins.

3.4.2 Better Quality

Unlike humans, AI and robots can produce better quality products than human employees. The promise of consistent high-quality drives many companies to consider automation over human labor.

- They can operate with near-perfect precision and consistency, eliminating human error.
- In manufacturing, robotics enhances quality by reducing defect rates.
- In service industries, AI-driven customer service solutions offer immediate, accurate responses.

3.4.3 Faster

AI and robotics increase productivity by accomplishing tasks faster than human employees:

- Performing individual tasks faster (and sometimes many times faster) than human workers.
- They can also work around the clock without fatigue, enabling businesses to boost overall productivity.
- Companies can deploy AIs and robots across multiple tasks or locations without needing retraining.

- AIs and robots offer unparalleled scalability, enabling rapid responses to market changes.

3.4.4 More Secure

Systems developed by AIs and robots will be more secure (cyber and physical security, respectively) than human employees for the following example reasons:

- AIs and robots can be programmed and updated with the latest cybersecurity measures (e.g., antivirus and firewalls). Similarly, they can incorporate the newest cybersecurity measures and security policies in any software-intensive system they develop.
- They will not be subject to insider threats (e.g., malicious human employees).
- They will not be subject to accidental security mishaps (e.g., subject to phishing attacks).

3.4.5 Safer

As AI and AI-driven robot technologies advance, they will increasingly replace humans by automating inherently dangerous tasks and professions. Reasons that AIs and robots enhance safety compared to human workers include:

- **Resistance to Hazardous Conditions:** Robots can operate in extreme temperatures, toxic environments, and high-radiation areas without health risks.
- **Hazard Detection:** Equipped with sensors, robots can detect environmental hazards, such as gas leaks or structural weaknesses, more effectively than humans.
- **Rapid Response:** AI-driven robots can assess and respond to hazardous situations faster than humans, potentially preventing escalation and mitigating risks.
- **Quality:** AI and robots consistently execute tasks with high accuracy and precision, reducing the errors that could lead to accidents.
- **Fatigue Elimination:** Unlike humans, AIs and robots do not experience fatigue, maintaining consistent performance over extended periods.
- **Elimination of Operation Under the Influence:** AIs and robots are not subject to operating under the influence of alcohol, medications, or legal or illegal drugs.

Some key professions and tasks where AI and robots are replacing humans because of safety concerns include:

- **Driving:** Trained on millions of miles of simulated and actual driving, autonomous vehicles will soon cause significantly fewer accidents than human drivers.
- **Farming:** Robots can replace humans in hazardous situations, such as applying pesticides and harvesting during dangerously high temperatures.
- **Mining Operations:** Robots are used for drilling, blasting, ore extraction, and tunnel inspections, minimizing human exposure to cave-ins, toxic gases, and explosions.
- **Firefighting:** AI-driven robots reduce the risk of firefighters entering burning structures to assess conditions and locate individuals.
- **Policing:** AI and robots are increasingly integrated into law enforcement to enhance operational safety (as well as efficiency and effectiveness). Their applications include:
 - **Facial Recognition:** Police can use facial recognition to identify and locate suspects.

- **Bomb Disposal and Hazardous Material Handling:** Police use robots equipped with cameras and manipulators to safely inspect and neutralize explosive devices and potentially hazardous materials, minimizing risk to human officers.
- **Tactical Support:** During high-risk operations, such as hostage situations or armed standoffs, robots can enter and assess environments, relay information, and even deliver negotiation devices, reducing danger to officers.
- **Surveillance and Reconnaissance:** Robotics, including drones and ground-based units, conduct surveillance in dangerous or inaccessible areas, providing real-time intelligence during police operations.
- **Search and Rescue Operations:** In disaster scenarios, robots help locate and rescue individuals trapped in hazardous environments, such as collapsed buildings or areas with chemical spills.
- **Crowd Monitoring and Control:** Police can deploy robots to monitor large gatherings, using sensors and cameras to detect potential threats and manage crowd dynamics.
- **Traffic Enforcement:** Some jurisdictions employ robots to conduct traffic stops and issue citations, reducing the risk of confrontations between officers and motorists.
- **Military Operations:** The integration of AI and robots in military operations aims to enhance efficiency, reduce human risk, and provide strategic advantages in complex environments.
 - Unmanned Aerial Vehicles (UAVs):
 - *Surveillance and Reconnaissance:* Drones equipped with AI analyze vast data sets to identify threats and monitor enemy movements.
 - *Combat Missions:* Armed UAVs execute precision strikes with minimal risk to personnel.
 - Unmanned Ground Vehicles (UGVs):
 - *Explosive Ordnance Disposal (EOD):* Robots safely detect and neutralize explosives, reducing the risk to human bomb disposal experts.
 - *Logistics and Supply:* Autonomous vehicles transport supplies in combat zones, ensuring efficient resupply.
 - Unmanned Underwater Vehicles (UUVs):
 - *Mine Countermeasures:* Robotic submarines detect and neutralize naval mines, safeguarding maritime routes.
 - *Surveillance:* UUVs conduct underwater reconnaissance, gathering intelligence on enemy naval activities.
 - Autonomous Weapon Systems:
 - *Target Identification:* AI systems process sensor data to identify and prioritize targets.
 - *Fire Control:* Automated systems manage weapon targeting and firing, enhancing accuracy and response times.
 - Cyber Warfare:
 - *Threat Detection:* AI algorithms identify and counter cyber threats in real-time.
 - *Offensive Operations:* AI tools develop and deploy cyber-attacks against adversary networks.
 - Intelligence Analysis:

- *Data Processing:* AI analyzes intelligence data to uncover patterns and predict enemy actions.
- *Decision Support:* AI provides commanders with actionable insights for strategic planning.
- Training and Simulation:
 - *Virtual Reality (VR) Training:* AI-driven simulations offer realistic training environments for soldiers.
 - *War Games:* AI models simulate complex scenarios to test strategies and tactics.
- Logistics and Supply Chain Management:
 - *Predictive Maintenance:* AI forecasts equipment failures, optimizing maintenance schedules.
 - *Supply Optimization:* AI manages inventory and distribution, ensuring timely delivery of resources.
- Medical Support:
 - *Evacuation:* Autonomous vehicles transport casualties from the battlefield to medical facilities.
 - *Telemedicine:* Robotic systems provide remote medical assistance to injured personnel.
- Human-Machine Teaming:
 - *Enhanced Decision-Making:* AI collaborates with human operators to improve situational awareness.
 - *Force Multiplication:* Robotic units augment human forces, increasing operational effectiveness.
- **Nuclear Facility Maintenance.** Robots perform inspections and maintenance in radioactive environments, protecting workers from radiation exposure.
- **Chemical and Biological Hazard Handling.** Robots manage hazardous materials, including chemical spills and biohazard containment, limiting human contact with dangerous substances.
- **Deep-Sea Exploration.** Remotely operated vehicles (ROVs) conduct underwater inspections and repairs, eliminating the need for human divers in high-pressure, low-visibility conditions.
- **Space Exploration.** Robotic rovers and probes explore extraterrestrial terrains, conducting scientific research without endangering human astronauts.
- **High-Risk Construction Tasks.** Robots can perform tasks such as high-rise building inspections and demolitions, reducing the risk of falls and structural failures.

4 Capitalism and Two Kinds of Labor

For centuries, capitalism has been the dominant economic system:

- **Capitalism** is an economic system in which *capitalists* own and control *capital* with the goal of generating profits.
- Some common forms of capitalism include:
 - **Laissez-faire Capitalism** is capitalism in which markets operate freely and there is minimal or no government intervention.

- **Corporate Capitalism** is capitalism in which large multinational corporations dominate the economy.
- **Crony Capitalism** is the corrupt form of capitalism in which business success depends on close relationships with government officials rather than competition between businesses based on profits.
- **Technocratic Capitalism** is capitalism where technology-driven companies dominate the economy. The rise of AI and robots drives the economy toward this form of capitalism.
- **Capitalists** are the private individuals and businesses that own and control capital.
- **Capital** is the wealth and assets that provide the means of production, trade, and industry. Examples of capital include *financial capital* (e.g., money, stocks, and bonds), *physical capital* (e.g., buildings, factories, and equipment), and *natural capital* (e.g., land, oil, minerals, and forests).
- **Wage-based labor** occurs when people sell their labor to capitalists for wages (and potentially other benefits) to earn the money they need and desire.
- **Voluntary labor** occurs when people work, not to earn money, but because they want to. Voluntary work brings them happiness because it can give them a sense of purpose, meaning, and fulfillment. If people receive guaranteed income and services without the need to earn a living, they can still perform voluntary labor if they choose to.

As AI and robots increasingly replace human employees, the resulting mass unemployment will make wage-based labor increasingly unattainable:

- Capitalism is based on:
 - Private ownership and control of capital.
 - Competition between capitalists to maximize profits.
 - Using wage-based labor to generate products and services.
- Capitalism that is founded on wage-based labor cannot survive the nearly complete loss of wage-based labor without leading to a dystopia in which a tiny percentage of the population are ultra-wealthy individuals and businesses that rule over the vast population of the unemployed living in (potentially abject) poverty. To avoid this dystopia and the violence it would generate, a new economic system must replace capitalism: Socialism.
- **Socialism** is an economic system in which the major means of production (such as industries, businesses, and resources) are collectively owned and controlled by the public and regulated by the government.
 - Major industries are owned collectively by the public.
 - Private ownership still exists, but governments heavily regulate major industries to avoid monopolies, limit excessive wealth inequality, and ensure the benefits of AI and robots benefit everyone.
 - The government provides social welfare benefits, such as universal income and universal services funded by high taxation on wealthy individuals and businesses (e.g., those benefiting from AIs and robots).

Feature	Capitalism	Socialism	Communism
Ownership of major industries	Private and stockholder	Public or collective	State or commune
Ownership of small businesses	Private	Private or collective	State or commune
Economic Control	Free-market competition ³	Regulated competition, Public/collective control	State control
Prioritizes	Profit for private owners and stockholders	Social needs and well-being	Classless society, Elimination of wage labor, Government control
Income/Wealth Distribution	Profit-driven, Accepts excessive income gap	Fair wealth distribution to reduce inequality, Limited profit-driven	Equal distribution
Role of Government	Minimal intervention	Heavily regulates major industries (e.g., limits monopolies), Provides social welfare	Controls all economic planning and production
Examples	USA, Japan	Nordic countries, Germany, and Canada	Soviet Union, Maoist China, North Korea ⁴

Note that socialism is primarily an economic system, not a system of government, such as democracy, oligarchy, fascism, and dictatorship. While democratic socialism seems most beneficial, there are signs that several forms of oligarchy may take increasing power during the difficult transition to AI and robot automation:

- **Oligarchy** is a system of government where a small group of people controls a nation. This ruling class exercises disproportionate power, often at the expense of the broader population. Oligarchies can take many forms depending on who holds power and how they maintain it.
 - *Plutocracy* exists when the wealthy elite use their financial power to increase their wealth by selecting politicians and controlling government departments, policies, and regulations. Examples include billionaires funding and lobbying politicians in return for political power (during America's Gilded Age and today).
 - *Corporate Oligarchy* exists when large corporations and business elites hold power in order to prioritize corporate interests through lobbying, selecting the political leadership, regulatory capture, and monopolization. Examples include Big Tech, Big Carbon, and Big Pharma.
 - *Kleptocracy* exists when a small group of corrupt leaders use political power for personal financial gain by bribery, fraud, embezzlement, and crony capitalism. Examples include Russian oligarchs.

³ Markets can be protected by tariffs, regulations, and laws.

⁴ Communism suffers from excessive top-down government planning and control, typically fails to achieve its stated benefits, and has a strong tendency to devolve into dictatorships.

- *Ethnocratic Oligarchy* exists when a dominant ethnic or racial group holds political power over others.
- *Bureaucratic Oligarchy* exists when an entrenched bureaucratic elite, often within government agencies or institutions, holds power.⁵

⁵ Communism suffers from excessive top-down government planning and control, typically fails to achieve its stated benefits, and has a strong tendency to devolve into dictatorships. Instead of eliminating power hierarchies, government elites replaced capitalist elites, leading to a bureaucratic oligarchy rather than true collective ownership.

5 Legal and Regulatory Challenges of Widespread Automation

Many existing laws and regulations assume that humans perform certain tasks and require licensing and certification. These include medical licensing for doctors, legal certifications for lawyers, and driver's licenses for transportation workers. As AI and robots take on these roles, legal systems will need to:

- **Reevaluate Licensing Requirements:** Should robots need to be licensed to perform medical procedures, and if so, who assumes liability for errors — manufacturers, operators, or the AI itself?
- **Establish Liability Protocols:** New laws and regulations must address accountability when AI or robots accidentally cause harm.
- **Update Employment and Labor Laws:** Workers' rights, safety standards, and fair compensation structures may need reconsideration in a world with far fewer human jobs.

6 Jobs Unlikely to Be Automated

The transition from wage labor to automation via AIs and robots need not be total. Despite advancements in AI and robotics, certain jobs are unlikely to be automated by AI and robots, at least for the foreseeable future.⁶ These jobs rely on human qualities such as empathy, creativity, moral or ethical judgment, emotional intelligence, adaptability, and the desire for human relationships. These include:

- **Politicians:** Governance and representation may require empathy and decision-making that stem from human experience. Conversely, AIs could develop more intelligent policies and laws and be less susceptible to bribery and ideological influences.
- **Military Commander:** Many consider it unethical for an AI or robot to order human soldiers into combat.
- **Diplomat:** Diplomacy requires negotiation, cultural sensitivity, adaptability, and an understanding of geopolitical dynamics. Diplomats build personal relationships and interpret nuanced communications that cannot easily be quantified. Human diplomacy involves empathy, historical context, and strategic subtlety that are beyond the capabilities of AI.
- **Judge:** Judges require critical thinking, ethical reasoning, and the ability to interpret nuanced situations. The justice system is founded on human morality, contextual understanding, and discretion in the application of the law. AI may assist in legal research, but decisions that impact human lives require insight and moral judgment that are uniquely human. Note that judges and parole boards can use AI tools that predict recidivism.⁷
- **Ethicist:** Ethicists examine moral questions and dilemmas that often have no obvious right or wrong answer. This job requires the capacity for moral reasoning, intuition, and empathy. AI cannot fully grasp the subjective and evolving nature of human ethics, making it difficult for machines to perform ethical evaluations with the necessary depth.
- **Clergy/Spiritual Leader:** Spiritual leadership involves profound human insight, compassion, and spiritual understanding. Religious and spiritual roles rely on moral discernment, personal connection, and the ability to provide comfort in times of need — qualities inherently human and challenging for AI to replicate.
- **Childcare Provider:** Childcare providers play a crucial role in nurturing, emotionally supporting, and guiding young children. This job involves not just supervision but genuine care, patience, and developing personal bonds with children. The unique intuition and adaptive communication skills required to respond to children's needs make full automation unlikely.
- **Babysitter:** Most parents would feel uncomfortable leaving a baby in the care of a robot, regardless of its ability to perform the required tasks.
- **Teacher/Educator:** While AI can assist in education, teachers offer much more than content delivery. They inspire, mentor, and adapt their teaching styles based on individual students' needs,

⁶ The rapid advances in AI may well automate some of these jobs in the near future because of the unprecedented amount of human-generated data their models are trained on.

⁷ This is dangerous because the resulting AIs can provide unfair outputs if it has been trained on historical data incorporating racial, ethnic, religious, and gender discrimination. The same problem can also exist regarding the issuance of loans by banks.

strengths, and weaknesses. Teaching requires emotional intelligence, adaptability, and a human connection that fosters learning, qualities that are very difficult for robots to replicate.

- **Social Worker:** Social work demands a deep understanding of human behavior, empathy, and the ability to advocate for vulnerable individuals. Social workers must navigate complex social systems and respond to unique, sensitive situations. Building rapport with clients and assessing their specific needs are skills that extend beyond the capabilities of AI.
- **Mental Health Counselor:** Mental health counseling requires empathy, intuition, and a deep emotional connection. AI lacks the human capacity to genuinely connect with and understand clients' complex emotions, traumas, and personal histories. Human counselors excel at adapting therapeutic approaches in response to subtle cues, something AI may struggle with indefinitely.
- **Crisis Intervention Specialist:** Crisis intervention involves an immediate and empathetic response to individuals in distress, often requiring physical presence, intuition, and comfort. Humans can quickly assess emotional states and provide personalized responses, which is essential in high-stress situations requiring trust and assurance beyond algorithmic solutions.
- **Mediator or Conflict Resolution Specialist:** Mediators need advanced people skills, empathy, and understanding and navigating complex social dynamics and emotions. Conflict resolution is often situational and relies on interpreting subtle human cues, making it difficult to automate. Effective mediation involves building trust, a challenge for non-human entities.
- **Funeral Director:** Funeral directors provide compassionate, empathetic support to grieving families. They must navigate sensitive, emotional landscapes and offer personal comfort during one of life's most challenging moments. The respect, empathy, and human touch required to perform this job far exceed what robots or AI can achieve.
- **Live Performer (e.g., Actor, Dancer, Musician, and Singer):** Audiences value the authenticity of live music, stage plays, and other art forms performed by humans.
 - **Actor:** While generative AI may eventually replace actors in movies, there is something special about watching plays performed by live actors.
 - **Athlete:** The athletic achievements of, and physical challenges faced by, human athletes resonate deeply with audiences in ways unlikely to be replicated by robots.
 - **Comedian:** Comedy relies on understanding cultural nuances, human emotions, and timing. Comedians adapt their humor to audience reactions and often incorporate personal insights or real-time observations. The creativity and spontaneity needed for humor make this job difficult for AI to master, as humor is closely tied to human experience.
 - **Dancer:** No matter how agile and graceful robots become, they will never replace live dance performances. However, AI-generated videos of dancing avatars that are indistinguishable from humans may become popular.
 - **Musician:** Although one can stream countless works of music, it will never completely replace live music.
 - **Singer:** While one can stream countless songs, some sung by world-renowned singers, people will always want the option to hear live performances. However, AI-generated videos of singing avatars that are indistinguishable from humans may become popular.
- **Artist (e.g., Painter, Sculptor, Ceramicist, and Photographer):** While AI can create art, human artists provide unique perspectives, emotions, and creativity rooted in their personal experiences. True artistry involves a complex blend of emotional expression, cultural context, and individuality

that AI lacks. As a medium of human expression, art is deeply tied to personal insight and emotional depth. Therefore, while AI may replace most artists, there will still be a place for human-created art.

- **Author (Fiction and Creative Non-Fiction):** Writing, especially fiction and personal narratives, can be a profoundly human craft that involves creativity, self-expression, and unique perspectives. Writers draw from their personal experiences and emotions, creating works that resonate with readers emotionally. While AI can generate text, it currently lacks the human experience necessary for authentic storytelling.

7 Financial Support Systems (FSSs) for a Post-Capitalist Society

7.1 Seven Proposed Financial Support Systems

Definition: For the purposes of this paper, an FSS is a governmental economic policy that unconditionally provides all citizens with either regular cash payments or essential services.

As AIs and robots automate a rapidly increasing percentage of jobs, it is critically important for the government⁸ to institute one or more FSSs to ensure that automation does not drive most people into abject poverty. These FSSs are *universal* (i.e., provided to all citizens), *unconditional* (i.e., provided regardless of employment status, income level, or personal circumstances), and *regular* (to enable the unemployed to pay for their living expenses).

This paper describes seven proposed FSSs designed to address mass unemployment, including their potential funding sources, benefits, and the associated challenges that must be addressed:

1. Social Investment Stipend (SIS)
2. Universal Basic Income (UBI)
3. Universal Basic Services (UBS)
4. Universal High Income (UHI)
5. Universal Productivity Dividends (UPD)
6. Universal Sovereign Wealth Fund (USWF)
7. Universal Investment System (UIS)

7.1.1 Social Investment Stipend (SIS)

Definition: A Social Investment Stipend⁹ (also known as a Civilian Labor Corp) is a government-funded program that provides *socially beneficial* jobs paying a decent government salary to citizens who want to work but have been unemployed because artificial intelligence or robotics has automated their jobs. The jobs within the SIS focus on public welfare, environmental sustainability, and cultural enrichment — areas that do not generate private profit but are essential for society's well-being. The

⁸ There are significant risks as well as benefits with applying these financial support systems at the Governmental level, and certain well-respected AI thought leaders strongly recommend a decentralized approach to addressing mass unemployment due to automation by AIs and robots. The main reasons I have a hard time accepting this approach with regard to preventing widespread abject poverty are (1) the problem is fundamentally widespread — national and eventually global — affecting over 95 percent of all employees within a decade or two, (2) the required funding is very high and will require putting adequate pressure on companies producing and using AIs and robots to obtain that funding, and (3) to minimize violent rebellion against these companies, everyone needs to be covered, not just limited number of people in a few lucky locations.

⁹ *AI Superpowers* by Kai -Fu Lee

SIS is highly reminiscent of the Work Project Administration set up by Franklin Delano Roosevelt (FDR) during the Great Depression.¹⁰

The goals and primary benefits of implementing SIS are to:

- **Reduce Unemployment.** SIS provides jobs for people who are unemployed because of automation by AI and robots.
- **Strengthen Local Communities.** SIS jobs enable people to contribute meaningfully to their communities and reduce social isolation by creating jobs in community-oriented fields and promoting cultural and artistic enrichment.
- **Boost Mental Health and Well-Being.** Work provides structure, social interaction, and a sense of *purpose*, reducing unemployment-related mental health issues like depression and anxiety.

Examples of jobs that could be offered as part of an SIS include:

- Social Services and Community Support.
 - *Childcare.* Provide affordable, high-quality childcare. This could include caring for one's family members or providing childcare for unrelated people.
 - *Youth Guidance.* Acting as a youth leader or sports coach.
 - *Elder Care and Home Assistance.* Support seniors with companionship, mobility assistance, and daily needs.
 - *Physical Health Support.* Assist people with illnesses (e.g., home health care, transportation to and from doctors' offices and hospitals).
 - *Mental Health and Peer Support Counseling.* Provide emotional support and crisis intervention.
 - *Social Support.* Provide crisis line counseling, domestic violence support, immigrant support, civil rights advocacy, and pro bono legal work.
 - *Disability Assistance.* Assist individuals with physical and mental disabilities in achieving independence and living their lives to the fullest.
- Environmental Protection and Sustainability.
 - *Ecological Restoration Workers.* Restore degraded ecosystems, plant trees, and maintain biodiversity.
 - *Public Green Space Maintenance.* Maintain parks, gardens, and urban green spaces. Maintain state and national parks.
 - *Wildlife Conservation.* Help protect endangered species and manage habitats.
 - *Renewable Energy Infrastructure Assistants.* Support the development of wind, solar, and hydro energy projects.

¹⁰ The Works Progress Administration (WPA) was a large-scale federal jobs program created by President Franklin D. Roosevelt (FDR) during the Great Depression as part of his New Deal. Established in 1935, the WPA aimed to combat mass unemployment by providing millions of Americans with government-funded jobs in public works, infrastructure, and cultural projects. At its peak, the WPA employed over 8.5 million people and remained active until 1943, when World War II-driven economic recovery reduced the need for large-scale job programs. The WPA reduced unemployment from 25% in 1933 to under 10% by the early 1940s.

- Infrastructure and Public Services.
 - *Public Transit Expansion and Maintenance.* Help build and maintain public transportation networks.
 - *Affordable Housing and Homelessness Support.* Build and maintain shelters and transitional housing.
 - *Disaster Relief and Emergency Response.* Provide aid during and after natural disasters (e.g., wildfires, floods, and earthquakes).
- Education and Public Engagement.
 - *Education.* Teach at public and private schools (e.g., kindergarten, grade schools, high schools, colleges, and universities). Tutor children and adults to improve reading, writing, and math skills.
 - *Research.* Perform medical and scientific research.
 - *Library and Museum Workers.* Enhance public access to knowledge and culture.
 - *Historical Preservation Specialists.* Restore and maintain historical sites.
- Cultural Enhancement.
 - *Art.* Hire artists, muralists, and sculptors to create works of art that enhance community spaces.
 - *Live Entertainment.* Hire musicians, singers, songwriters, actors, and dancers to bring free music, theater, and dance to the public.
 - *Writing.* Hire authors and poets to write novels, short stories, and poetry for public enjoyment. Hire documentarians to record and preserve local histories and cultural stories.

7.1.2 Universal Basic Income (UBI)

Definition: UBI is a governmental economic program that unconditionally provides all citizens with regular cash payments sufficient to ensure a *basic standard of living* (i.e., to meet essential subsistence needs).

The purpose of UBI is to ensure that every individual has a minimum income that covers essential living expenses (such as food, housing, clothing, utilities, and healthcare). UBI payments must be adjusted based on factors such as inflation and the local cost of living.

While better than a complete absence of income, UBI by itself will maintain most people at the poverty level without the possibility of advancement to the middle class. Because of the resulting immense wealth gap between the unemployed poor and extremely profitable corporations and the ultra-wealthy will cause social unrest or violent revolution unless UBI is augmented (e.g., by universal basic services) or replaced by an FSS that offers more than poverty-level subsistence (e.g., universal high income). This problem will increase over time as fewer people have secondary sources of income (e.g., retirement accounts).

7.1.3 Universal Basic Services (UBS)

Definition: UBS is a governmental economic program that unconditionally provides each citizen with all essential services, including:

- Basic Housing.
- Basic Food, possibly paid for with payments (e.g., UBI, UDP, or UHI)

- Public Education (early childcare through university)
- Public Transportation (e.g., bus, subway, and train)
- Basic Legal Services.
- Universal Health Care including:
 - Preventive Care
 - Primary Care
 - Specialist Care
 - Hospitals and Long-term Care
 - Emergency Medical Services
 - Mental Health Services (e.g., psychiatric, counseling, therapy sessions, and substance abuse treatment)
 - Rehabilitative Services
 - Palliative (End-of-Life) Care, including hospice care
 - Hospitals and Long-Term Care
 - Prescription Medicines
 - Medical Devices and Equipment
 - Dental Coverage
 - Hearing Aids
 - Vision Coverage (physical, mental, and therapy)
- Utilities:
 - Water
 - Electricity
 - Heating
 - Sewage
 - Basic Internet

UBS presents a comprehensive approach to ensuring all individuals have access to the essential services necessary for a dignified life. UBS's feasibility and desirability continue to be debated among policymakers, economists, and the public.

7.1.4 Universal High Income (UHI)

Definition: UHI is a governmental economic program that unconditionally provides all citizens with regular cash payments sufficient to ensure a *dignified and comfortable standard of living*, enabling participation in broader economic and social activities.

Because UHI's regular payments are significantly higher than those of UBI, it requires substantially greater funding. It also assumes that the profits due to automation have risen sufficiently to cover its cost. UHI addresses income inequality more robustly than UBI and provides a more substantial economic buffer against financial instability.

7.1.5 Universal Productivity Dividends (UPD)

Definition: UPD is a governmental economic program that unconditionally provides all citizens with regular dividends equivalent to an appropriate fraction of the wealth generated from the nation's productivity gains because of automation by AI and robots.

Unlike UBI and UHI, which provide a fixed income regardless of economic performance, UPD ties payments directly to the nation's productivity levels. As productivity increases, so do the dividends distributed to individuals, ensuring that the benefits of technological progress are shared fairly across society.

Note that UPD could be limited to a single corporation or a large state within a country.

7.1.6 Universal Sovereign Wealth Fund (USWF)

Definition: USWF is a governmental economic program that unconditionally provides all citizens with regular payments derived from a government-owned investment fund that generates returns from assets such as stocks, bonds, real estate, and natural resources.

7.1.7 Universal Investment System (UIS)¹¹

Definition: A UIS is a state-owned investment fund designed to manage and invest in national assets for the benefit of all citizens, often to provide universal income or public services. Several countries have established such funds to harness national wealth for the public good.

UIS private investment approach in which (1) all businesses, regardless of size, that need funding should be open to private investments and (2) an individual's AGI should do the investing (i.e., identifying the businesses and investing) on behalf of the individual based on the individual's preferences (e.g., risk and support for local businesses).

While intriguing, there are two significant challenges with this approach. First, if large numbers of people depend on UBI (which only covers essential needs), they will not have any money left to invest. Second, investments may fail to deliver a minimum regular income.

7.2 Selecting Financial Support Systems

Transitioning from a neoliberal capitalist economy to a post-capitalist economy is an enormous change, one that will be extremely challenging and will face a great deal of opposition from those who benefit from the current system. Although significant automation and resulting unemployment have already begun, total automation and unemployment will happen incrementally and at an accelerating rate over the next ten to twenty years. Therefore, the transition to a post-capitalist economy will only begin once sufficient economic pain and pressure from the unemployed make the transition inevitable. Until then, governments will fight a losing battle to maintain full employment.

Each of the preceding eight financial support systems has pros and cons, and their applicability will probably change over time. The optimum solution likely will consist of some combination of FSSs, and at least initially, they will probably be tailored.

¹¹ David Shapiro

- To save money and make the transition more politically palatable, these support systems will probably start out being conditioned on means testing rather than being universal.
- Universal basic income (UBI) payment only covers the essential costs of living and risks, creating a permanent majority underclass that barely scrapes by with no realistic hope for advancement. The gross inequality between the wealthy and this underclass is unhealthy and probably not sustainable. For this reason, UBI should be replaced with a combination of other financial support systems as soon as it is practical.
- Universal high income (UHI) will not replace universal basic income (UBI) until the increased profits from automation justify the larger payments.
- Combining UBI with universal basic services (UBS) may be more politically acceptable because the UBI cash payments can be smaller (due to no longer needing to cover the costs of essential services).
- The number of essential services covered by UBS will probably start small and increase over time.
- Instead of relying solely on universal productivity dividends (UPD), which vary over time and may not be adequate, UPD might be combined with UBI to ensure that individuals receive enough to meet their essential needs.

7.3 Funding Sources

Funding for the Financial Support Systems in a post-capitalist society can come from one or more of the following sources:

- **Automation Productivity Taxes:**
 - **Definition:** Taxes on (1) companies that produce AIs and robots and (2) those that use AIs and robots to automate jobs formerly performed by humans.
 - **Purpose:** As companies increase productivity and profitability through automation, this tax captures some of those gains to fund public support programs.
 - **Rationale:** This tax incentivizes ethical automation practices and provides a public revenue stream tied to the productivity benefits of AI and robotics.
- **Automation Profit Taxes:**
 - **Definition:** Taxes on corporate profits, especially for companies with high profit margins because of automation.
 - **Purpose:** Since corporations will benefit from reduced labor costs, increased profit taxes can redistribute these gains to the broader population.
 - **Rationale:** This tax helps align corporate interests with societal well-being, ensuring that profits generated by automation benefit society as a whole.
- **Wealth Taxes:**
 - **Definition:** Taxes on net wealth, particularly targeting the ultra-wealthy.
 - **Purpose:** A progressive wealth tax can help redistribute wealth from individuals who benefit most from a highly automated economy.
 - **Rationale:** In a post-capitalist society, wealth inequalities may increase, making wealth taxes a crucial tool for funding social programs and reducing economic disparities.

- **Digital Services Taxes:**
 - **Definition:** Taxes on digital services provided by large tech companies, such as social media platforms, search engines, and e-commerce.
 - **Purpose:** Digital services taxes ensure that highly profitable tech companies contribute to funding the societal infrastructure they benefit from.
 - **Rationale:** This tax acknowledges the economic dominance of tech giants and leverages their revenue to support social welfare programs.
- **Intellectual Property and Data Royalties:**
 - **Definition:** Royalties or licensing fees on intellectual property and data collected by AI and tech companies.
 - **Purpose:** This tax captures revenue from data, a valuable resource society generates, often without individual compensation.
 - **Rationale:** Since data is a primary input for AI, and its value is derived from people's digital activities, data royalties ensure that the benefits of data utilization are shared with the public.
- **Sovereign Wealth Fund (SWF) Investments:**
 - **Definition:** Investment income from a government-owned SWF, which holds assets such as stocks, bonds, real estate, precious metals, commodities, and other financial instruments.
 - **Purpose:** SWF earnings provide a sustainable, long-term revenue stream that can be distributed to citizens or used to fund essential services.
 - **Rationale:** Sovereign wealth funds diversify national income sources, creating stable, non-tax-based revenue streams to support a post-capitalist society.
- **Sales Tax on Luxury Goods and Services:**
 - **Definition:** A sales or value-added tax (VAT) on non-essential luxury goods and services.
 - **Purpose:** This tax generates revenue from high-end consumption, particularly from wealthier individuals who benefit most from an automated economy.
 - **Rationale:** Luxury taxes ensure that discretionary spending by wealthier individuals contributes to social support systems in a way that is less burdensome for those with lower incomes.
- **Inheritance and Estate Taxes:**
 - **Definition:** Taxes on inherited wealth and large estates.
 - **Purpose:** These taxes can reduce wealth concentration over generations and help fund social programs.
 - **Rationale:** In an economy where wealth tends to accumulate in fewer hands, estate taxes help prevent extreme wealth concentration and provide an additional revenue source for public services.
- **Resource and Land Taxes:**
 - **Definition:** Taxes on natural resource extraction and land ownership, particularly for commercial and industrial use.
 - **Purpose:** This tax taps into the value of resources and land, especially as automation increases the efficiency of resource extraction.

- **Rationale:** Resource and land taxes help reduce speculative hoarding of natural resources and ensure that profits from resource use are shared with society.
- **Dividend Income from State-Owned Enterprises (SOEs):**
 - **Definition:** Earnings and dividends from publicly owned enterprises, such as utilities, telecommunications, or energy companies.
 - **Purpose:** The government can distribute profits from SOEs directly to citizens or reinvest them in public welfare programs.
 - **Rationale:** SOEs ensure that critical services and industries remain in the hands of the public, generating revenue that can fund social programs and reduce dependency on the private sector.
- **Redirected Spending:**
 - **Definition:** Redirection of a portion of the federal and state budgets allocated to existing social welfare programs¹² that are being replaced by the FSSs. This could also include reallocating portions of the budgets from less critical programs, such as the military.
 - **Purpose:** Savings from reduced military expenditures can be reallocated to fund financial support systems.
 - **Rationale:** In a post-capitalist economy, where social welfare takes precedence, rebalancing government spending toward public well-being rather than defense may become increasingly viable.
- **Social Bond Issuance:**
 - **Definition:** Government-issued bonds specifically earmarked for social initiatives that investors can purchase.
 - **Purpose:** Social bonds generate upfront capital to fund social support mechanisms.
 - **Rationale:** These bonds tap into capital markets to fund initiatives that align with societal goals, such as the FSSs, while providing returns to investors interested in ethical investments.

7.4 Benefits of Providing Regular Financial Support

The benefits of implementing one or more Financial Support Systems (FSSs) to address mass unemployment in a post-capitalist society include:

- **Poverty Elimination:** An FSS directly addresses poverty by providing at least a baseline income that covers essential living costs like food, housing, and healthcare. By ensuring a minimum standard of living, the FSS raises people out of poverty and prevents people from slipping into poverty, particularly as jobs become increasingly scarce. With basic needs met, individuals can maintain a sense of security and stability, which is crucial as automation displaces many traditional

¹² A potentially more acceptable alternative would be to expand existing programs. For example, in the United States, universal healthcare as part of UBS could be implemented as Medicare for All with no copays for service and run by the US Department of Health and Human Services. Similarly, UBI and UHI could be implemented as Social Security for All and run by the US Social Security Administration. Ultimately, however, it would probably make more sense to have a single Government Agency handle the entire financial support system(s).

forms of employment. An FSS has the potential to create a safety net that lifts society's most vulnerable out of poverty and fosters greater economic equality.

By universally providing a regular guaranteed income (UBI, UHI, UPD, and SWF) and universal basic services (UBS), an FSS significantly reduces or eliminates extreme poverty by raising the standard of living to a sufficient level for:

- Essential living expenses (UBI).
 - A good life (UHI).
 - An *improved* life (UPD and SWF), depending on total profit value and market conditions, respectively.
 - Essential services (UBS).
- **Financial Security and Stability:** A primary benefit of a financial support system is its ability to provide financial security and stability. As automation leads to widespread unemployment, individuals without traditional income sources would still receive guaranteed financial support. This financial buffer reduces anxiety about meeting basic needs, offering a safety net for those affected by job loss because of automation. With the regular payments provided by Universal Basic Income (UBI) and Universal High Income (UHI) along with essential services provided by Universal Basic Services (UBS), individuals and families can plan and budget their expenses without the constant fear of economic instability, thereby creating a more resilient society. Note, however, that payments from Universal Productivity Dividends (UPD) and Sovereign Wealth Funds (SWF) can vary in amount both upward and downward based on fluctuations in productivity and market conditions.

An FSS provides a safety net for individuals who lose employment because of automation by AIs and robots. Access to essential services (UBS) can stabilize household finances, allowing individuals to allocate resources more effectively and contribute to economic growth.

- **Reduction in Homelessness:** A steady income increases home ownership and enables people to rent homes and apartments. Thus, it eliminates the adverse effects of homelessness (e.g., people living on the street, susceptibility to violence, police harassment, and begging).
- **Reduction in Crime Rates:** Economic insecurity often correlates with higher crime rates, as individuals without a stable income may resort to crime to meet their needs. Studies have shown that an FSS provides a legal and stable income source, reducing the need for survival-driven criminal behavior. Less stress leads to decreases in domestic violence. By offering a basic income, an FSS can promote safer communities, lower the crime rate, and decrease the associated costs of policing, trials, and incarceration.
- **Increased Income Equality:** An FSS promotes income equality by unconditionally providing the same income to all citizens. Thus, the FSS narrows the wealth gap between (1) individuals who, before unemployment because of automation by AIs and robots, relied solely on their earnings from employment and (2) individuals who have other sources of income (e.g., stocks,

bonds, annuities, and pensions).¹³ By promoting a fairer distribution of wealth generated by this automation, the FSS improves:

- *Support for Transition to a Post-capitalist Economy:* By providing income or services, an FSS helps citizens transition from a traditional capitalist economy to a post-capitalist economy.
- *Fair Distribution of Wealth:* AIs are trained on data produced by everyone with a digital footprint, which includes nearly the entire population. An FSS ensures all citizens benefit from the economic gains produced by automation.
- *Alignment:* An FSS aligns citizens' incomes with national and corporate productivity gains resulting from automation, thereby ensuring that citizens benefit from technological advances in AI and robotics.
- *Public Support:* By sharing the benefits of increased productivity, an FSS encourages public support for technological innovation and automation.
- *Encouragement of Civic Participation:* When essential needs are met, individuals are more likely to engage in civic activities, contributing to a vibrant and participatory democracy.
- *Promotion of Social Cohesion:* Sharing the benefits of national productivity from job automation can foster a sense of collective ownership and social solidarity. By reducing economic disparities (through UBI, UHI, and UPD) and providing access to essential services (via UBS), an FSS can create a sense of shared prosperity and social cohesion, potentially decreasing social tensions caused by economic inequality.
- *Social Stability:* Without a guaranteed regular income and essential services, the enormous number of unemployed people are likely to stage mass protests, some of which will escalate into violent riots. Worse, it could even lead to the rise of demagogues promising relief but forming dictatorships instead.

The transition from human wage labor to automation by AIs and robots need not be complete to require financial support systems to address unemployment and poverty. Unemployment during the Great Depression of the 1930s peaked at 25%, and the resulting societal pressure led to the election of President Franklin D. Roosevelt and the establishment of the social safety nets of the New Deal, such as Social Security, Unemployment Insurance, and Aid to Families with Dependent Children.

- *Support for Vulnerable Populations:* An FSS promotes inclusivity and equal opportunities for members of marginalized groups, ensuring they can afford essential living expenses and access necessary services.
- **Reduced Stress:** An FSS eliminates or reduces:
 - *Financial Stress.* By providing a steady income, the FSS eases financial stress for many individuals and families.

¹³ However, by being limited to the minimum amount required to pay for essential needs, the gap between the ultra-wealthy and people and those surviving on the FSS alone would still be dangerously great.

- *Job-Related Stress.* Up to 70% of workers are unhappy with their jobs because of their tasks, responsibilities, and interactions with managers and coworkers. Many feel compelled to work strictly to “earn a living.” The FSS reduces this job-related stress.¹⁴
- *Reduced Stress-Related Health Issues.* The FSS promotes improved mental health and overall well-being by alleviating financial and job-related stress and anxiety.
- **Improved Physical and Mental Health:** Many studies of financial support systems providing universal incomes and services are associated with:
 - *Improved Physical Health.* People have improved access to healthcare, better nutrition, less adult and childhood hunger and malnutrition, and exercise.
 - *Improved Mental Health.* Financial security produces decreased financial stress and anxiety, less burnout, higher scores on cognitive tests, better school attendance, reduced school dropout rates, less bullying, better long-term thinking, and decreased depression, alcoholism, and drug addiction.
 - *Lower Health Costs.* Universal access to healthcare services leads to better public and individual health outcomes, reducing the prevalence of preventable diseases, reducing hospitalizations, and lowering overall healthcare costs.
- **Promotion of Personal Fulfillment and Life Satisfaction:** With an FSS providing financial security, individuals can seek meaning, fulfillment, and happiness by discovering and pursuing their passions instead of working out of economic necessity. This financial security enables people to focus their time on other, more human-centered pursuits:
 - *Relationships.* People can devote more time to their families, spend quality time with spouses or significant others, and care for their children or elderly relatives. They can also spend more time with friends and cultivate romantic relationships. They can join clubs and discussion groups (such as book clubs) with people who share their interests.
 - *Learning.* People can invest time in learning new subjects and skills by taking free or low-cost online classes. This leads to a better educated citizenry and ensures that all individuals have the opportunity to develop skills and knowledge, resulting in a more informed and capable populace.
 - *Creativity.* An FSS frees up time for creative individuals to pursue artistic interests that may not be financially lucrative. This includes such activities as drawing, painting, sculpting, or crafting handmade objects. They can also write fiction and nonfiction books, short stories, and poetry. They can compose music, play musical instruments, sing, or take part in plays.
 - *Mission.* People can dedicate themselves to worthy causes, such as volunteer work, community service, addressing the climate crisis, wildlife conservation in a changing environment, and advocating for racial, ethnic, sex, and gender equality.
 - *Experiences.* People can spend their extra time having meaningful experiences and creating happy memories. For example, they can travel to experience diverse cultures and visit locations of scenic beauty.
 - *Entertainment.* Some individuals will use their extra time to engage in low-cost and free entertainment.

¹⁴ Note that this is a double-edged sword. Many people derive much of their self-image and pride from their work. Work is also where many friendships and valued relationships form.

- **Simplified Welfare System.** The FSS could streamline social welfare programs by reducing complexity and eliminating the need for means-testing, leading to administrative savings and a more cost-effective system.
 - *Increased Administrative Efficiency.* A universal approach simplifies the delivery of payments (UBI, UHI, UDP, and SWF) and services (UBS), reducing the bureaucratic overhead associated with existing welfare programs that involve means-testing and eligibility assessments.
 - *Long-Term Savings.* Investing in preventive services (UBS), such as healthcare and education, can lead to long-term savings by decreasing the need for remedial interventions.
 - *Reduced Fraud.* Since all citizens receive payments or services unconditionally, the FSS reduces the potential for fraud associated with means-tested welfare programs.
- **Supports the Economy:** Without regular income to replace losses caused by automation-induced unemployment, most of the population cannot afford to buy goods and services.
 - *Economic Stability.* Providing consumers with disposable income helps prevent the collapse of the entire economy.
 - *Stimulating Economic Growth.* With increased disposable income, individuals will probably spend more on goods and services, stimulating demand and potentially boosting economic growth.
- **Social Benefits.** A steady income and decreased wealth gap reduce social and political unrest and violence. These improve trust in governmental agencies and programs. They also enhance participation in governance (e.g., voting participation).
- **Environmental Benefits.** Publicly funded services (UBS), such as power generation and mass transportation, can promote more sustainable practices and reduce environmental impact.

7.5 Challenges with Regular Financial Support

Using an FSS to successfully transition from a capitalist to a post-capitalist economy will require addressing many significant challenges:

- **Very High Fiscal Cost.** Funding a large-scale FSS (1) is highly expensive, (2) requires massive tax increases, (3) may greatly increase government debt, (4) requires the reallocation of government budgets, and (5) requires new funding mechanisms.
- **Decrease in Government Revenue.** As automation by AIs and robots increases unemployment, the Government loses revenues from employee income taxes as the need for an FSS increases. This decreases the government's available funds to pay for all its programs. The resulting competition for government funds makes it far more difficult for the Government to fund an FSS.
- **Political Resistance.** The ultra-wealthy and the highly profitable corporations that produce and use AIs and robots will actively resist becoming the source of funding. Armies of lobbyists will flood politicians with campaign contributions and work to thwart, dilute, and insert loopholes into any necessary laws and regulations. They will employ armies of lawyers to use the courts to obstruct the implementation of these laws and regulations. They will spread anti-AI and anti-robot misinformation and propaganda aimed at generating public resistance to the use of AIs and robots, labeling them as threats (e.g., "Robots will take your jobs.") rather than as the benefit of freeing human employees from the necessity to "earn a living."

- *Resistance from Wealthy Elites:* Many oligarchs, wealthy individuals, and others with large incomes from sources other than wages (e.g., stocks and bonds) will resist paying higher taxes, such as wealth taxes or highly progressive income taxes.
- *Resistance from Corporations:* Corporations (including management and shareholders) will resist automation taxes on corporate profits stemming from increased productivity caused by automation by AI and robots. To avoid these taxes, corporations may:
 - Move to countries with little or no taxes on automation.
 - Use lobbying and their immense political power to influence governments to create tax loopholes.
- *Ideological Resistance from Politicians and the Public:* Implementing an FSS may encounter ideological opposition from those who:
 - Believe that income and wealth should be earned or based on merit.
 - Are concerned that it challenges the flawed traditional belief that self-worth is solely tied to work.
 - Worry about the expansion of “wasteful” government welfare programs. Studies show that giving people a regular income and services actually saves money spent on shelters, policing, court and incarceration costs, and emergency medicine.
 - Promote *Classical Liberalism*, *Neoliberalism*, or *Libertarian Liberalism (Libertarianism)*, emphasizing limited/minimal government and regulations, reliance on private solutions, and limiting/rejecting welfare programs. A post-capitalist economy is far more consistent with *Social/Modern Liberalism*, *Egalitarian Liberalism*, *Democratic Socialism*, and *Social Democracy*, which emphasize social welfare programs, prioritizing the least advantaged members of society, progressive taxation, and universal access to health care and public education, etc.
- *Propaganda and Misinformation:* Many wealthy companies, technological oligarchs, and other elites controlling production and use of AIs and robots will attempt to maintain and increase their financial advantage by spreading propaganda and misinformation in new media and political discourse.
 - The poor deserve to be poor because of their insufficient work ethic or laziness. For centuries, many wealthy elites have used this mistaken belief to justify extreme wealth inequality, their greed, and their lack of empathy. The unemployed cannot pull themselves up by their bootstraps when they have no boots¹⁵.
 - Feel that providing unconditional income fosters laziness and an undeserved sense of entitlement.
 - Think that individuals will spend their money irresponsibly on frivolous or harmful activities. However, numerous UBI trials have shown just the opposite. Recipients primarily spend their money on basic necessities (e.g., food, housing, clothing, and health care), debt repayment, savings, education, and small-scale entrepreneurship.
 - UBI (and similar financial support systems) must be extensively proven to work in small local settings before being applied at a state or national level. This ignores the many

¹⁵ Note that the number of new AI and robot-related jobs are orders of magnitude smaller than the number of existing jobs that will be lost because of automation. Even these jobs will likely be lost as AI and robot capabilities advance.

- successful trials that have already occurred and is likely to be used primarily as an excuse to postpone implementing a comprehensive solution.
- Current social welfare programs are adequate to meet the needs of mass unemployment.
 - **Challenges in Achieving Adequate Funding.** Securing sustainable, long-term funding is difficult, as funding sources may resist:
 - Providing sufficient funds to meet the FSS's goals and benefits.
 - Linking payment amounts to the local cost of living and inflation rate.
 - **AI Governance.** Several issues regarding the governance of AI must be successfully addressed.
 - Who owns the wealth created by the increased productivity caused by automation: relevant corporations, the stockholders of these corporations, governments, or collective ownership?
 - How will AI and robot safety be ensured (i.e., how will AIs and robots be aligned to act consistently with human values)?
 - How will corporations that benefit from automation (e.g., AI and robot manufacturers and users of AI and robots) be taxed?
 - **Lack of Guaranteed Income.** With UPD and SWF, individuals cannot rely on a guaranteed regular fixed payment.
 - *Universal Productivity Dividend:* The profits and productivity resulting from automation by AI and robots will vary over time (e.g., as the number of companies and their profits and productivity fluctuate), making it difficult to guarantee a fixed payment that people can depend on.
 - *Social Wealth Fund:* The income from sovereign wealth funds will vary over time (e.g., as stock prices rise and fall), making it challenging to guarantee a fixed payment that people can rely on.
 - **Economic Sustainability Concerns.** The long-term sustainability of an FSS is questionable, especially during economic downturns when government revenues or corporate profits decline, preventing consistent funding levels.
 - **Difficult Implementation.** Implementing a Financial Support System (FSS) will require addressing the following challenges:
 - *Legal Challenges:* Changes in laws and regulations will be necessary.
 - *Political Challenges:* Implementation will face stiff political resistance.
 - *Funding Challenges:* Sustainable funding will be required.
 - *Replacement Challenges:* It will replace most currently existing welfare programs.
 - *Adjustment Challenges:* Payments must be adjusted based on factors such as inflation, local cost of living, and tailored support for vulnerable populations with specific needs. Individuals who derive their identity and sense of self-worth from their jobs may need counseling and therapy to ease the transition from employment to becoming permanently “retired.”
 - **Increased Inequality:** By providing only the minimum amount to meet the essential necessities of life, Universal Basic Income (UBI) by itself will create a vast underclass doomed to endless poverty. Even when taxed to supply funds for the UBI, the major corporations, the associated oligarchs, and the ultra-wealthy will keep sufficient profits from automation to retain or even increase their immense wealth. Such a vast, ever-widening wealth gap will eventually lead to a

violent uprising of the poor against the ruling class, like what occurred during the French Revolution against the nobility. Worse, it could lead to the rise of demagogues and dictatorships.

- **Limited Application to Developed Countries.** The impact of automation will hit underdeveloped countries the hardest because:
 - *Heavy Dependence on Low-Skilled Labor.* Many underdeveloped economies rely on cheap, low-skilled labor for industries like textiles, agriculture, call centers, and basic manufacturing. Many jobs will be relatively easy to automate, leading to rapid unemployment with few alternative opportunities.
 - *Lack of Social Security Nets.* Most poorer countries lack the funding, institutions, and infrastructure to implement financial support systems.
 - *Loss of Foreign Investment and Global Trade.* If developed countries use AI- and robot-driven factories and agriculture, they will no longer need to outsource production to low-wage countries.
 - *Limited Ability to Transition to Automation.* Underdeveloped countries lack the capital and infrastructure to adopt automation technologies at the same pace as developed countries.
 - *Limited Access to Automation-driven Profits.* The profits of automation will primarily go to the major international corporations (and associated oligarchs) developing and using automation to increase productivity.
 - *Economic Colonialism.* Developed nations may monopolize AI and robot productivity gains, causing poorer countries in the global south to fall behind.
- **Potential Reductions in Other Governmental Services.** Some worry that introducing an FSS will lead to cuts in:
 - Other essential social welfare programs, which may reduce support for specific vulnerable groups who need targeted assistance.
 - Important governmental programs, such as military readiness, climate crisis initiatives, and space exploration.
- **Possibility of Short-Term Economic Disruption.** Implementing an FSS could disrupt existing markets and employment patterns, leading to unpredictable economic consequences in the short term.
- **Increased Inflation.** Universal High Income (UHI) could increase disposable income, leading to higher demand for goods and services, potentially driving up prices and causing inflation, particularly in housing and essential commodities.
- **Risk of Government Mismanagement.** The scale and complexity of implementing an FSS could lead to issues of mismanagement or inefficient allocation of resources if not carefully planned and executed.
- **Transitioning to a Post-capitalist Economy.** Moving from the current capitalist economy to a post-capitalist economy will be difficult and probably take several years.
- **Risk of Government Abuse.** During the difficult transition to adopt one or more FSSs, an authoritarian leader might abuse them by threatening to withdraw or actually withdrawing the regular payments to coerce or punish members of the public that they consider a political threat to their authority.

8 Transitioning to a Post-Capitalist Economy

Automation of nearly all jobs by AI and robots will not occur overnight; it will take incrementally over ten to twenty years. The rate of this transition to almost complete automation will increase as technology advances and manufacturing costs decrease. The usage of AI and robots will transition through the following highly overlapping stages:

1. **Tools.** Human employees use AIs and robots as intelligent tools.
2. **Assistants.** Human employees use AIs and robots as assistants.
3. **Co-workers.** AIs and robots work autonomously alongside human employees as coworkers.
4. **Replacements.** AIs and robots replace human employees.

AI automation will probably happen slightly faster than robot automation because:

- AI technology is slightly more advanced than robotics. AI.
- Copying AIs is far faster and less expensive than manufacturing robots.
- It will take a relatively long time to manufacture tens or hundreds of millions of different types of robots.

Although the rise of AIs and robots will generate some new jobs:

- Jobs performed by humans using AI will be temporary and eventually replaced by more powerful AIs.
- New jobs created by AI and robotics (e.g., AI ethics auditors and robot repair) will be orders of magnitude less common than the jobs lost because of automation.

The transition to full automation will be difficult and slowed by the many challenges listed in section 7.5 Challenges with Regular Financial Support. Because of these challenges, the transition period will be dangerous in terms of civil unrest and political stability.

Initially, when AIs and robots automate only a small percentage of jobs, the public's limited demand for financial support will likely be ineffective against the powerful financial and lobbying resistance they will face from those who benefit the most from the current economy. It is likely that transitioning to an appropriate financial support system will not be possible until the level of unemployment reaches a sufficient level that the unemployed can successfully demand it.

The following is a rough estimated timeline for the adoption of humanoid robots by businesses in the developed world:

Years	Period	
2025-2026	Initial Launch of Humanoid Robots	Early business adopters of humanoid robots. Minimal unemployment because of automation by robots.
2027-2030	Mass Adoption of Humanoid Robots	Early majority of business adopters of humanoid robots. Significant unemployment because of automation by robots.

2031-2034	Dual Integration of Humanoid Robots and AI	Late majority of business adopters. Mass unemployment because of automation by humanoid robots.
2035-2038	Economic Transition	Business laggards convert to humanoid robots. Extreme levels of unemployment.
2039+	New Normal	Humanoid robots are better, faster, cheaper, and safer than human laborers. Humanoid robots are ubiquitous.

The transition will not take place everywhere at the same rate. Specifically, developed countries with advanced economies have businesses that can afford to automate economically valuable intellectual jobs (AI) and physical jobs (robots). In countries where labor costs (e.g., wages, benefits) are very low, the economic incentive to transition will be less.

8.1 Transition Scenarios: How Governments May Respond to Mass Automation

The transition to a post-capitalist economy driven by large-scale automation will not unfold uniformly across all nations, and governments' responses will vary based on political systems, economic structures, cultural values, and historical legacies.

In **Scandinavian countries**, with their strong traditions of social democracy and robust welfare states, the transition is likely to follow a proactive, consensus-driven path, where governments preemptively expand social safety nets, experiment with universal basic income programs, and gradually shift taxation models to capture automation wealth. Public trust in government institutions, combined with existing support for wealth redistribution, could allow these countries to adopt comprehensive financial support systems (FSSs) before unemployment reaches crisis levels.

In **the United States**, where corporate influence over policymaking is entrenched and social safety nets are weaker, the transition will probably be reactive and politically contentious. Policymakers may initially resist large-scale financial support programs, instead prioritizing corporate tax incentives and limited retraining programs. However, as unemployment and economic precarity grow, grassroots movements, mass protests, and rising populism from both the left and right could force policymakers to adopt more sweeping redistributive policies. However, these changes will probably come in fragmented, crisis-driven bursts rather than through deliberate long-term planning.

In **China**, with its state-capitalist model and centralized political control, the government is likely to embrace automation aggressively to enhance national productivity and global competitiveness. The Chinese government could expand existing social credit and digital governance systems to monitor and manage the transition, combining targeted financial support programs with strict behavioral controls to maintain social stability. China's authoritarian governance structure may allow for rapid deployment of automation taxes, sovereign wealth funds, and productivity dividends, but at the cost of individual freedoms and worker agency.

These contrasting national trajectories illustrate that the path to a post-capitalist economy will be shaped as much by each country's political culture and power dynamics as by technological progress. Rather than assuming governments will act rationally and preemptively to mitigate the harms of automation, policymakers should expect waves of economic and social disruption, followed by reactive, uneven policy adjustments shaped by crises, protests, and elite negotiations.

8.2 Phased Adoption and Interaction of Financial Support Systems (FSSs)

The transition to a post-capitalist economy will probably unfold in distinct phases, with governments responding to mounting economic pressures, rising unemployment, and increasing public unrest in incremental and reactive ways, rather than through a single, well-planned rollout of financial support systems (FSSs). At early stages, when automation eliminates only a fraction of jobs, policymakers will probably resist comprehensive changes, favoring modest expansions of existing welfare programs and targeted workforce retraining initiatives. However, as job losses accelerate and large segments of the population are permanently unemployed, governments will face escalating public pressure, including mass protests, political movements, and demands for more direct economic support. In this climate, Financial Support Systems (FSSs) will not emerge simultaneously as a unified solution, but instead in layers, with specific programs introduced as temporary stopgaps and others gradually institutionalized as long-term components of a new economic model.

- **Phase one of FSS adoption** will probably consist of means-tested or narrowly targeted programs for displaced workers in high-automation industries, particularly manufacturing, transportation, and retail. These programs might begin as expanded unemployment benefits, wage subsidies, or publicly funded retraining stipends. However, as technological displacement spreads into white-collar professions, healthcare, and creative industries, the inadequacy of traditional welfare approaches will become increasingly clear.
- **Phase two** will bring broader, partially universal programs, such as pilot projects for Universal Basic Income (UBI) or Universal Basic Services (UBS), initially targeted at regions or demographics experiencing the most severe economic shocks. These pilots, particularly in progressive cities or smaller nations with strong social safety net traditions, could serve as models for national or even multinational scaling, particularly in countries like the Nordic nations, Canada, or Germany.
- **Phase three** occurs when mass unemployment becomes structural rather than cyclical. Governments will face a choice between deepening economic instability and embracing universal, unconditional support systems. At this point, the combined approach — where UBI ensures every citizen a baseline income, UBS guarantees essential services, and Universal Productivity Dividends (UPD) or Universal Sovereign Wealth Funds (USWF) distribute automation-generated wealth — becomes not only politically viable but economically essential. Public demands for fairness and wealth redistribution will drive this transition, with policies framed not merely as economic support but as a rebalancing of wealth and productivity gains generated by automation. Countries with stronger traditions of wealth redistribution may embrace UBI and UBS as permanent pillars, while more market-oriented nations may rely more heavily on UPD, USWF, and private Universal Investment Systems (UIS) to channel automation wealth back to citizens.

- **Phase four** is the final phase and will probably emerge after a prolonged period of experimentation, conflict, and adaptation, where governments blend and optimize multiple FSS programs into a cohesive post-capitalist economic architecture. Rather than choosing a single system, governments will recognize that different systems serve complementary roles: UBI/UHI ensures universal liquidity, UBS provides critical in-kind services insulated from market fluctuations, UPD and USWF link citizen incomes to national prosperity, and UIS fosters personal agency in wealth creation. This multi-pronged approach will allow governments to adjust the balance between cash payments, services, and investment returns based on economic conditions, technological progress, and shifting public preferences.

The following table summarizes these four phases. Different nations may progress at varying speeds based on political will, public pressure, and economic resilience. Developed nations with strong social safety net traditions (e.g., Scandinavian countries) may reach Phase 4 sooner. In contrast, nations with entrenched corporate influence or weak governance may stall in Phase 2 or adopt emergency measures reluctantly. Each phase builds upon the last, but crises and political shifts may accelerate or delay progress, particularly if economic instability triggers broader political realignments. Flexibility and adaptability will be critical, as governments may need to blend multiple FSS approaches to suit their unique economic and political circumstances.

Phase and Timeline	Automation Impact	Public Pressure	Government Response	FSS Introduced
Phase 1: Early Disruption (2025-2028)	Automation eliminates targeted jobs in sectors like manufacturing, retail, and transportation.	Local protests and early debates in progressive regions.	Targeted relief programs. Workforce retraining, expanded unemployment benefits, and tax incentives for displaced workers.	None (expansion of existing safety nets).
Phase 2: Structural Unemployment (2028-2032)	Mass layoffs spread to professional and white-collar jobs.	Growing organized protests, strikes, and populist political movements demanding economic security.	Pilot programs for UBI and UBS in progressive cities and smaller nations. Automation taxes are introduced in some jurisdictions.	Pilot UBI, UBS, and Experimental Productivity Dividends (UPD) in high-automation sectors.
Phase 3:	The majority of jobs have been automated	Widespread protests, populist	National rollout of hybrid FSS systems in	National UBI or UHI, UBS, UPD, and

Economic Crisis and National Adoption (2032-2036)	across most sectors, triggering a collapse in consumer spending.	electoral victories, and corporate pushback.	multiple nations. Wealth taxes, sovereign wealth funds, and automation profits are earmarked for public redistribution.	USWF in wealthier countries. Emergency UBI in resistant countries.
Phase 4: Post-Capitalist Institutionalization (2036-2040+)	Full automation across all sectors; wage labor becomes rare.	Shift from protest to demand for permanent, fair economic structures.	Integration of multiple FSS into cohesive post-capitalist frameworks. New constitutional amendments or social contracts.	Fully universal and permanent UBI/UHI, comprehensive UBS, robust UPD, publicly managed USWF, and personal UIS systems.

Importantly, this phased approach underscores the path to a post-capitalist economy will be non-linear and politically turbulent. Governments will not adopt FSSs purely as a matter of enlightened policymaking, but in response to economic collapse, political upheaval, and organized pressure from displaced workers and emergent social movements. Countries with powerful labor unions, organized civil society groups, and robust democratic institutions may transition relatively smoothly through incremental expansions of social investment stipends (SIS), public works programs, and universal entitlements. In contrast, countries with stronger corporate oligarchies and plutocracies may resist FSS implementation until economic desperation triggers destabilizing unrest, forcing governments to adopt emergency UBI programs or wealth taxes as crisis mitigation rather than proactive reform. Therefore, the sequencing, speed, and scope of FSS adoption will vary significantly across different political, economic, and cultural contexts, reinforcing the need for adaptive, country-specific strategies for navigating the post-capitalist transition.

Region	Adoption		Unemployment Speed	Transitioning Difficulty
	AI	Robots		
Japan	Fast	Fast	Fast	Low
Western Europe	Fast	Fast	Fast	Low
Nordic Countries	Fast	Moderate	Fast	Low
USA Cities	Fast	Fast	Fast	Moderate
USA Rural	Fast	Moderate	Moderate	High
Canada	Fast	Fast	Fast	Low
Australia	Fast	Fast	Moderate	Moderate

China	Fast	Fast	Fast/Moderate	Low
Middle East	Fast	Moderate	Moderate	Moderate
Southeast Asia	Moderate	Slow	Slow	High
Africa	Moderate	Slow	Slow	High
South America	Slow	Slow	Slow	High
Central America	Slow	Slow	Slow	High
Mexico	Slow	Slow	Slow	High
Russia	Slow	Slow	Slow	High

8.2.1 Global Coordination and Competition

The global transition to a post-labor economy will not happen in isolation; it will be shaped by international economic competition, global governance challenges, and widening inequality between high-tech and low-tech nations. Wealthier nations with advanced automation capabilities may rapidly transition to post-labor economies, capturing most of the economic gains from AI, robotics, and data monetization. In contrast, Global South nations — particularly those reliant on low-wage manufacturing, resource extraction, and service exports — will probably face economic marginalization as global supply chains automate and offshoring becomes obsolete.

International economic institutions, such as the IMF, World Bank, WTO, and the UN, could be crucial in coordinating global responses to automation-driven displacement. These organizations could facilitate global agreements on automation taxes, corporate data royalties, and wealth redistribution mechanisms to ensure that the benefits of automation are shared across borders, rather than concentrated in a handful of technologically dominant economies. One possible framework could involve a global data dividend, where companies that train AI models on global data sets pay into a global sovereign wealth fund, which is then redistributed to nations based on population or economic need.

However, global cooperation will probably be uneven, particularly because powerful nations see geopolitical or economic advantages in monopolizing automation-driven wealth. Countries that automate faster will probably attempt to leverage their technological dominance to undercut slower-adopting nations in trade, driving further economic polarization between high-tech economies and labor-dependent regions. This dynamic could trigger “automation trade wars,” where nations that still rely heavily on human labor impose tariffs or regulatory barriers to protect domestic employment from automated imports.

For nations with limited technological infrastructure, adapting to a post-labor economy will require international aid, technology transfers, and capacity-building programs. A global framework for technology-sharing agreements, paired with financial assistance for developing robust financial support systems (FSSs), could prevent the emergence of a two-tier global economy in which automation enriches some nations. In contrast, others suffer from permanent economic exclusion.

Ultimately, the post-capitalist transition will be a global balancing act requiring both national innovation and international cooperation. Countries that work together to align automation profits

with human welfare — through fair taxation, data governance, and wealth redistribution — will be far better positioned to navigate the economic and social upheavals of the coming decades.

8.3 Therapeutic Support for the Transition to a Post-Capitalist Society

The mass displacement of human workers by AI and robotics represents not just an economic shift, but an existential one. As traditional employment vanishes, millions will face a profound identity crisis. For generations, “What do you do?” has been synonymous with “Who are you?” This conflation of employment with identity means job loss often triggers not just financial anxiety but a fundamental questioning of one’s worth, purpose, and place in society.

Specialized therapeutic approaches will be essential to help individuals navigate this transition. Therapy can create safe spaces for processing grief over lost careers while facilitating the challenging psychological work of reimagining one’s identity and purpose beyond employment. Existential therapy approaches may be particularly valuable, helping people explore fundamental questions about meaning, purpose, and authentic living in a world where traditional career paths no longer exist.

For those who have built their self-worth around professional achievements and productivity, therapy must address deep-seated beliefs about human value. Many will need support deconstructing internalized capitalist metrics of worth — where one’s value is measured by economic output — and constructing new frameworks where human dignity is inherent rather than earned through labor. This requires not just cognitive restructuring but emotional processing of shame, inadequacy, and disorientation that can accompany the loss of work-based identity.

Importantly, the end of wage labor doesn’t signify the end of meaningful human activity. Therapy can help individuals rediscover intrinsic motivation — doing things because they are inherently rewarding rather than financially compensated. Through guided exploration, people can identify activities that provide flow states, connection, mastery, and purpose. These might include artistic creation, community service, relationship building, mentoring, environmental stewardship, or pursuit of knowledge — all valuable forms of “work” that exist outside market logic.

Group therapeutic modalities may prove especially effective, creating communities where people collectively reimagine meaning and witness each other’s transformation. As individuals share their struggles and discoveries, they can build new cultural narratives about human purpose in a post-capitalist world. These emerging communities might themselves become sources of belonging and identity that fill voids left by workplace affiliations.

The therapeutic challenge is ultimately one of cultural evolution — helping people reimagine what makes a life well-lived when traditional careers no longer anchor personal narratives. By supporting this profound transition in human self-conception, therapists become essential guides in the journey toward a society where human flourishing is not tied to economic productivity but to deeper expressions of our uniquely human capacities for creativity, connection, care, and contribution.

This job loss transition therapy must be adequately funded and free to the unemployed to be effective. For example, funding can be provided through a financial support system such as Universal Basic Services (UBS), as part of a more traditional unemployment program, or by corporations replacing human workers with AIs and robots.

8.4 Education

In a society where AIs and robots perform nearly all economically valuable tasks, education must undergo a paradigm shift. Education should foster human flourishing in its broadest sense rather than preparing people for increasingly scarce employment opportunities. Here's an expanded and refined vision for education in this new era:

8.4.1 Beyond Vocational Training: Education for Human Flourishing

When AIs and robots perform the vast majority of jobs, leading to the end of wage labor, retraining people for the ever-decreasing number of remaining jobs will be futile. Education must transition away from teaching children and young adults the knowledge and skills needed by the job market. Instead, free personalized, self-directed, and adaptive lifelong public education should prepare people to live happy, healthy, and fulfilling lives by focusing on their well-being, personal growth, and contribution to society.

Four key principles should guide this educational transformation:

1. **Self-directed learning:** Empowering individuals to pursue their genuine interests and passions.
2. **Lifelong accessibility:** Education as an ongoing process throughout all life stages.
3. **Holistic development:** Addressing intellectual, emotional, physical, social, and spiritual dimensions.
4. **Community integration:** Learning as a collaborative endeavor that strengthens social bonds.

Beyond the basics of language and mathematics, this education should concentrate on the following expanded subject areas:

- **Personal Well-Being and Fulfillment:**

Purpose: Equip individuals with the skills to lead fulfilling, healthy, and emotionally balanced lives.

- Emotional Intelligence and Psychology
 - Self-awareness and emotional regulation
 - Developing healthy relationships and communication skills
 - Understanding cognitive biases and psychological well-being
 - Mindfulness and contemplative practices
 - Resilience and adaptability in changing circumstances
- Health and Well-Being
 - Personalized nutrition and metabolic health
 - Physical fitness across the lifespan
 - Mental health literacy and preventative practices
 - Sleep science and optimization
 - Aging well and longevity practices
- Arts and Creativity
 - Visual arts, music, literature, and performance
 - Creative process exploration and personal expression

- Cultural appreciation and interpretation
- Digital arts and new media creation
- Improvisational thinking and creative problem-solving
- Meaning and Purpose
 - Exploration of personal values and life philosophies
 - Identifying and developing personal strengths and talents
 - Setting meaningful goals beyond employment
 - Finding purpose through contribution and community
 - Spiritual exploration (religious or secular)
- Knowledge, Exploration, and Innovation:
 - Purpose:* Encourage curiosity, lifelong learning, and an understanding of emerging technologies.
 - Science
 - Curiosity-driven exploration in natural sciences
 - Astronomy and cosmology: understanding our place in the universe
 - Biological sciences: ecology, evolution, genetics, and systems biology
 - Chemistry and materials science: understanding matter and its applications
 - Medicine and human physiology: understanding our bodies and health
 - Physics and quantum mechanics: fundamental laws governing reality
 - Engineering and Technology
 - AI literacy: collaborating with, directing, and understanding limitations of AI systems
 - Robotics fundamentals and human-machine interaction
 - Biotechnology and its ethical implications
 - Information literacy and digital fluency
 - Design thinking and human-centered technology
 - Maker culture and personal fabrication
 - Critical Thinking and Knowledge Integration
 - Epistemology: understanding how we know what we know
 - Systems thinking and complexity theory
 - Interdisciplinary approaches to problem-solving
 - Information evaluation and source criticism
 - Metacognition and learning how to learn effectively
- Ethics, Society, and Culture:
 - Purpose:* Foster wisdom, moral reasoning, and an appreciation of human heritage to shape a just society.
 - Philosophy and Ethics
 - Ethical frameworks for decision-making in an automated world
 - Existential questions of meaning and purpose post-employment
 - Justice and fairness in resource distribution
 - Rights and responsibilities in human-AI societies

- Applied ethics for emerging technologies
- History and Cultural Heritage
 - Historical perspective on societal transformations
 - Understanding humanity's diverse cultural achievements
 - Indigenous knowledge systems and practices
 - Cultural evolution and social change dynamics
 - Preservation and evolution of cultural traditions
- Global Studies and Cultural Intelligence
 - Comparative cultural systems and worldviews
 - Intercultural communication and understanding
 - Global interconnectedness and mutual dependencies
 - Languages and linguistic diversity
 - Migration, cultural exchange, and integration
- Governance and Civic Engagement
 - Participatory democracy and decision-making processes
 - Understanding rights, laws, and governance structures
 - Community organizing and collective action
 - Conflict resolution and peacebuilding
 - Public discourse and deliberative democracy
- Community and Social Skills
 - Collaborative project development
 - Interpersonal communication and active listening
 - Leadership and facilitation techniques
 - Empathy cultivation and perspective-taking
 - Care ethics and mutual support networks
- Sustainability and Human-Nature Harmony:

Purpose: Teach responsible environmental practices and foster a regenerative relationship with natural systems.

 - Ecological Literacy
 - Understanding ecosystems and biodiversity
 - Bioregional awareness and local ecological knowledge
 - Climate systems and planetary boundaries
 - Conservation biology and restoration ecology
 - Human impacts on natural systems
 - Sustainable Living Practices
 - Regenerative agriculture and food systems
 - Energy literacy and renewable technologies
 - Circular economy principles and zero-waste living
 - Sustainable building and community design

- Ethical consumption and product lifecycles
- Biophilia and Nature Connection
 - Direct experience with natural environments
 - Wilderness skills and outdoor competence
 - Nature-based mindfulness and contemplative practices
 - Biomimicry and learning from natural systems
 - Interspecies ethics and animal welfare

8.4.2 Implementation Approaches

This transformed educational model would employ diverse learning environments:

- **Traditional Schools:** Early learning classes, elementary schools, high schools, colleges, and universities with AI and robot teachers or teacher assistants
- **Virtual Learning Environments:** Online AI-assisted personalized learning platforms
- **Community Learning Centers:** Physical spaces with innovative resources accessible to all ages
- **Mentorship Networks:** Connecting individuals with expertise to share
- **Project-Based Learning Communities:** Collaborative spaces for applying knowledge to real-world challenges
- **Nature Immersion Programs:** Direct engagement with the natural world
- **Cultural Preservation and Exchange Initiatives:** Intergenerational knowledge transfer
- **Contemplative Retreats:** Spaces for deep reflection and discovering one's purpose in life

By embracing this comprehensive educational vision, a post-capitalist society can nurture generations of individuals who find meaning, purpose, and fulfillment beyond traditional employment, contributing to human flourishing and cultural evolution in profound new ways.

9 Conclusion: Financial Support Mechanisms for Surviving the Post-Capitalist Economy

As artificial intelligence and robotics advance at an unprecedented pace, society is on the cusp of a post-capitalist economy, where AI and robots will perform almost all economically valuable tasks. This transformation brings both remarkable benefits, such as increased productivity and safety, and significant challenges, including mass unemployment and rising economic inequality. To navigate these shifts, it is essential to proactively implement financial support mechanisms like the civilian labor corps, universal basic income, universal high income, universal productivity dividends, sovereign wealth funds, universal basic services, and universal investment system.

These mechanisms provide a safety net, ensuring that individuals affected by automation have financial stability, access to essential services, and opportunities for lifelong learning and personal growth. Funding these programs through a combination of progressive taxation, corporate contributions, and sovereign wealth investments will foster an economy that equitably distributes the benefits of technological progress.

With a balanced and forward-looking approach, society can ensure that AI and robotics are tools for shared prosperity, creating a future where economic security and opportunity are available to all. This strategic adaptation is crucial for achieving a stable and inclusive society in the post-capitalist age.

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Elon Musk predicts that advancements in artificial intelligence will lead to the automation of most jobs, enabling a shift from universal basic income to a “universal high income” to ensure financial security in a world where work becomes optional. He emphasizes that while AI could provide material abundance, it also raises concerns about human purpose and fulfillment without traditional employment.

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