

Quality as an Economic Imperative



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How will “Managing for Quality” change?

How will quality change in the emerging future?

Developing a concept of Macro-Quality for Humanity!

Session 1 Quality as an Environmental Mandate

Session 2 Quality as an Economic Imperative

Session 3 Quality as a Social Responsibility

Session 4 Quality as a Human Right

Session 5 Quality as a Political Policy

Session 6 Quality for our Manifest Destiny

Extending the lessons we have learned from Micro-Quality work to work effectively at a global level for the benefit of humanity.

Abstract of Session #14:

This webinar discusses how the economic indicators of national performance are encouraging poor quality in nations. The webinar will be enlightening for non-economists as it dissects how a national economy is measured using classical economic indicators and how its measurement system masks a lack the quality in many national social systems.

In this webinar, you will:

- Understand the macroeconomic role of quality.**
- Discover the quality imperative in macroeconomics**
- Macro-Quality initiatives can influence industrial economic policy.**
- Recognize what you can do to encourage change.**
- Consider what you can do to advance the economy of your nation.**

What do we mean by an “Imperative”?

MANDATORY

Something that is:

- **VITALLY IMPORTANT:** requires a sense of urgency to address.
- **ESSENTIAL ELEMENT:** indispensable component of the whole.
- **COMPULSORY ACTIVITY:** an obligatory action that is necessary.
- **ABSOLUTELY CRITICAL:** a necessary response not to be avoided.

[illegible]

- **Production, distribution, and consumption of goods and services.**
- **Generation of income or revenue, savings, and investments.**
- **System of production and consumption of resources.**

What do we mean by “Quality”?

“Quality is the relentless pursuit of goodness coupled tightly with the persistent avoidance of badness.”

Core Principles:

- **Respect people in their diversity of race, religion, and nationality.**
- **Respect scientific gains of those who have walked before us.**
- **Protect the environment which sustains all of us.**
- **Abstain from all intentional wrong-doing and harm.**
- **Practice two things in all activities ... either help or do no harm.**



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Goodness that is careful not to create “unintended consequences” as it improves our lives.

The “Broken Window Fallacy” in Economics:

Frédéric Bastiat (1850):

“That Which We See and That Which We Do Not See”

A little boy broke a window, and the cost of repair is considered to be an economic benefit to society.

But what if the glazier hired him to break it?



In this parable one part of society benefits from the loss another.

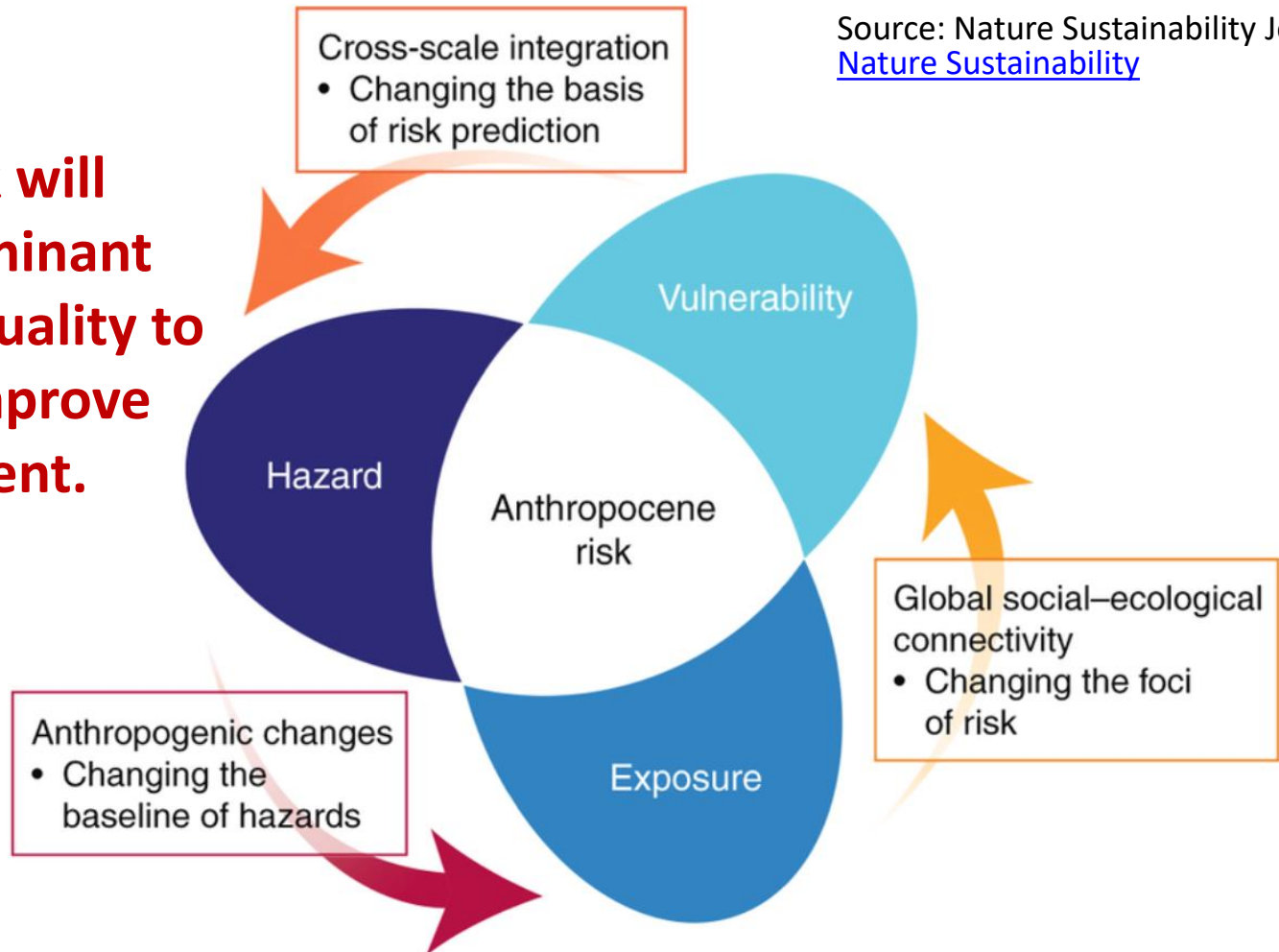
If someone burned down a city; how would the loss be calculated? How does this economic loss balance against the gains from reconstruction?

Morale: Society loses the value of things which are uselessly destroyed! In other words, destruction should not result in profit or economic gain.

Humans Must Learn to Manage the Risks!

Source: Nature Sustainability Journal
[Nature Sustainability](#)

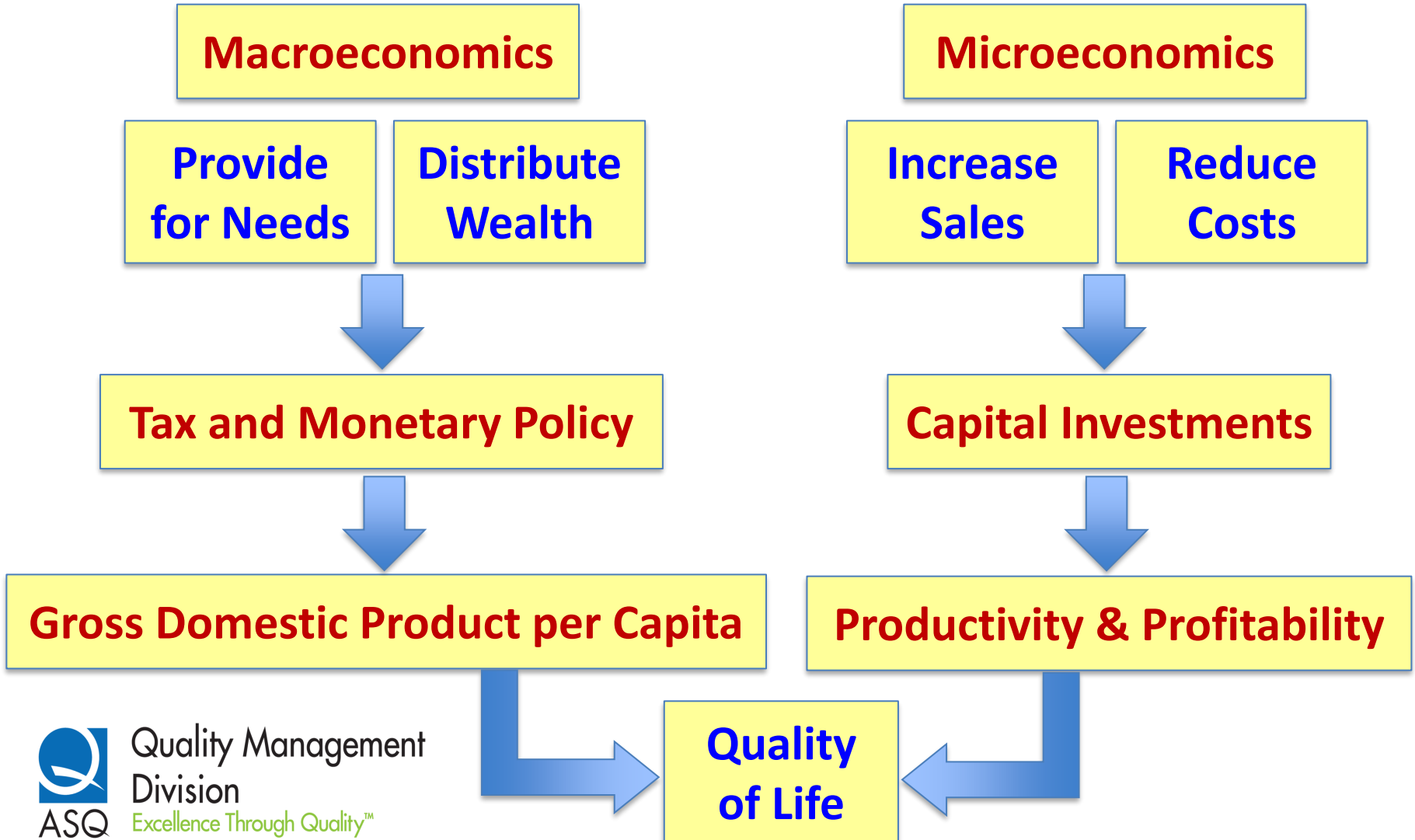
Managing risk will become a dominant emphasis in quality to continually improve the environment.



Quantum physicist Richard Feynman said: “If we want to solve a problem that we have never solved before, we must leave the door to the unknown ajar.”

Connecting Quality to the Economy:

How does quality relate to economics, accounting and finance?



Inequality

Pollution

Insecurity

illiteracy

Unemployment

Prejudice

War

Increase the level of “social goodness”
Decrease the level of “social badness”

Accounting principles require subtracting expenditures and losses from revenue in order to determine gross returns.

Economic theory must be extended to include Macro-Quality as a supplement to the way it applies Micro-Quality in the nature of a firm.

Quality as an Economic Imperative

Part 1:

Understanding Macroeconomics

Adam Smith: Classical Economic Theory

The “father” of classical economic theory is Adam Smith who wrote “The Wealth of Nations” which was published in 1777 and characterized the mechanisms that govern modern economics.

Principal Theories in Smith’s pioneering book:

The division of labor between the “working class” – those who “do” the work and the “masters” – those who “plan” the economic activity.

If everyone does what is best for themselves, then it is best for society.

Economics are governed by the “invisible hand” of free market forces in a way that implies government must act in a “laissez-faire” manner – or “hands-off” making interventions that upset natural market forces.

The 1929 Great Depression obliterated confidence in classical economic theory for macroeconomics that was based on “laissez-faire” economics and stimulated revisionist thinking about how economics operates in the broad applications for broad national policy.

What is Macroeconomic Theory?

Economic concern with large-scale, general factors such as interest rates and national productivity.

Macroeconomics developed in 1936 with John Maynard Keynes book on *The General Theory of Employment, Interest, and Money*. The Keynesian economic philosophy advanced thinking beyond the level of a company or firm to discuss consolidated issues of supply and demand. It held that aggregate demand will not always match the supply produced. A laissez-faire economic policy may require intervention through either the fiscal or monetary policy of governments.

Fiscal Policy: Government policy that attempts to influence the direction of an economy through changes in government spending or taxing.

Monetary Policy: The central banking process of controlling the supply of money and interest rates on lending in an economy.

John Maynard Keynes: Theory of Economics

Keynesian economics is the foundation of modern economic theory.

Markets are imperfect mechanisms and will not always self-correct. He challenged the classical economic theory that free markets would, in the short term, automatically provide for full employment if the workers were to be flexible in their labor demands.

Wage reduction in recessions and excessive saving are economic threats.

Government fiscal policy must off-set business cycle fluctuations.

Government spending can create a “multiplier effect” that will cause an economy to “spiral upwards” – investment in infrastructure assures the capital to invest in highways, bridges, trains, and airports, which places money in the hands of investors and drives job markets for individuals.

Economic equilibrium is a balance between the dimensions of savings and investments and the liquidity preference and money supply. This will require government intervention, not a “laissez-faire” approach.



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“The difficulty lies not in the new ideas, but in escaping from the old ones.”

~ John Maynard Keynes 14

Milton Friedman: Monetary Theory

Theory of Monetary Supply and Spending:

More money in an economy results in higher spending and vice versa.

Monetary policy, managing an economy's money supply is governed by its central bank. This plays a critical role in the management of a national economy as governments spend money on projects to benefit society (fiscal policy). These tools must be balanced for economic stability.

Postulated a “demand-driven” concept of monetary supply as the means to stabilize prices and reduce unwanted effects of inflation on reduction of the socially-distributed wealth.

The shortage of money supply is a key driver in recession as it limits the consumerism of individuals.

While controlling supply and demand may have a controlling influence on the internal economic structure, this may have an unintended effect on global trade and international economic exchange.

Milton Friedman quotations:

- “The government solution to a problem is usually as bad as the problem.”
- “Inflation is taxation without legislation.”
- “There is no such thing as a free lunch.”

Robert Lucas, Jr.: Rational Economic Theory

Rational expectations drive economics and economics drives history.

Framed his economic performance expectations based upon available information to form predictions about future prices and quantities and how they act to develop an expected lifetime utility.

In the long-term there is a neutrality of money as explained by a correlation between economic output and inflation.

Built a macroeconomic model based on an aggregated version of microeconomic models. Lucas believed that people can be deceived in their economic thinking by an unsystematic monetary supply.

Lucas critiqued economic policy-making and the relationship between inflation and unemployment and that this could change as a result of changes in a government's economic policy.

He drove the move toward establishing the microeconomic foundations of macroeconomic theory.

“Rational Expectations” are assumptions that are consistent within an economic model. It manages uncertainty to ensure that a model operates in a consistent way, on average.

Neo-Classical Synthesis – DSGE Models:

DSGE: the Dynamic Stochastic General Equilibrium Model

The Real Business Cycle (RBC), represented by variation in stock market prices, is an “efficient response” to external influences that change the national economy.

National economic output maximizes expected utility (economic choice based on risk tolerance and personal preference).

RBC, in combination with Keynesian economics produces a model that is called DSGE – which integrates demand and supply components with the monetary policy as micro-foundations of economic behavior.

This probability model is dynamic and incorporates frictions from tax distortions, presence of consumer habits, adjusted costs of investments and adjustments to labor costs based on changes in employment.

These models are currently applied by Central Banks and are thought to track more clearly the shocks of change to a stabilized economy.

Robert M. Solow: Economic Growth Theory

Solow's model determines economic growth based on inputs of supply, demand, and technical progress. The model also calculates growth based on different "vintages of capital investment where new capital is thought to be more valuable than old capital because new capital is produced from known technology while there is more risk inherent in old capital as it was invested under greater technological uncertainty.

Solow's model assumes that known technology is constantly improving.

Decline in price of capital goods estimates technological progress.

The economic question posed by the model relates to the ability of an economy to produce sufficient capital to replace aging invested capital.

This model is used to measure technological progress as an aggregate of the production function of society.

This model aligned with Joseph A. Schumpeter's emphasis on technology as a force for "planned abandonment" of legacy systems by innovation as force for creative destruction.

Joseph E. Stiglitz: Information Economic Theory

Changes the focus of economics to consider the price of inequality.

In the presence of increasing profitability as a function of investment, the entry of firms into a market is too small and that when consumers prefer increased diversity, the size of markets is too large.

Incomplete information inhibits markets from achieving social efficiency.

Development must not just transform economies, but also people's lives.

Two observations support his evaluation that "unemployment is driven by the information structure of employment:" (1) unlike other forms of capital, humans can choose their level of effort, and (2) it is costly for firms to determine how much effort workers are exerting.

Wages do not fall during a recessionary period as there is a probability that the work force will shrink because workers can choose their level of effort. Firms cannot cut wages until unemployment rises sufficiently.

The macroeconomic effect of these fiscal aspects of microeconomics will change as a function of information fidelity and quality.



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"Rather than justice for all, we are evolving into a system of justice for those who can afford it. We have banks that are not only too big to fail, but too big to be held accountable."

Exploring Uncertainties in Macroeconomics:

Limitations and uncertainties:

Importance is not assigned to individual economic units (statistically, this is an analytic perspective) but to collective effects of enumerative units.

Collective economic pronouncements may over-estimate some factors while under-estimating others, even if generally correct in the aggregate.

Data representing macroeconomic conditions is difficult to obtain in the format of raw data and economic indices assign subjective weights in order to determine the relative significance of the sub-factors.

No attention is given to the sub-structures of economic groups; findings are expressed only for the total population.

Macroeconomic theory is based on general correlations and is not able to process specific causes as the enumerative data is insufficient to find a root cause. Thus, the reasons behind macro-level changes remain only in a theoretical viewpoint – expressed as Bayesian dynamic probabilities.

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Part 2:

Adapting Macro-Quality Principles to Macroeconomic Theory

Social Badness Counts as Economic Goodness:

Gross Domestic Product (GDP) is the sum of all goods and services that are produced by a nation.

Weakness in the structure of GDP calculations:

- Genichi Taguchi's Quality as Loss: the loss that is caused to society after a product has been produced or service has been delivered.

Costs of Badness Counted as Goodness (i.e., "broken window" fallacy):

- Cost of correcting pollution are counted as economic goodness and are not recouped from the cost of production.
- Costs of war are counted as positive economic goods produced.
- Production of "inferior goods" counted as a good use of resources.
- Treatment of hospital-induced infection counted as "health" care.

Misallocation of costs results in the improper assignment of value in the microeconomic environment as the "true costs" of failure or corrective action are not borne by the producer of failure but by society in total.

Conceptualizing Macro-Quality:

Distinguishing between “Macro-Quality” and “Micro-Quality” domains.

Microeconomics is sometimes called the “theory of the firm” as it has a focus on the way that organizations operate. It is frequently reduced to Price Theory.

Traditionally, the key emphasis of quality has been on creating stability in production operations, eliminating waste, and reducing defects – all of which concentrates on the cost reduction component of pricing theory.

Macroeconomics refers to large scale systems – economic operations of an industry, specific society or nation, or global interrelations between them.

Macro-Quality elevates the concentration of quality to socio-technical systems that influence quality-of-life for humanity and of those factors that affect this condition. A shift from Micro-Quality will greatly increase the breadth and depth of quality activities.

United Nations Sustainable Development Goals:

The UN SDG's define transcendental quality for all of humanity!



W. Edwards Deming: Theory of Knowledge

Social systems have not been structured to capture and learn their cost.

Deming's comment on quality cost:

“The cost of quality may be unknown and unknowable!”

How can we count these costs?

- **What is the cost of loss in the “joy of work” or “pride in production?”**
- **What is the cost of resources spent for decision alternatives that are not in the best interest of society as a whole?**
- **What is the cost of obsolescence that is not borne by producers, but is borne by society to dispose of durable goods?**
- **What is the cost of providing unresponsive end-of-life healthcare?**
- **What is the cost of providing sub-standard education?**
- **What is the cost of loss of youthful optimism or enthusiasm with life?**
- **What is the cost of “unintended consequence” of human activity?**

Challenges in Implementing Macro-Quality:

What innovation must occur to make Macro-Quality become reality?

Macro-Quality must address weaknesses inherent in macroeconomics.

Macro-Quality must define metrics that fit the financial dilemma that is defined by the “broken window fallacy” – how to address repairs based on poor quality and how to address correction of social costs?

Macro-Quality must define an interface between the quality of the firm and the quality of society.

Macro-Quality must develop a “meta-standard” for quality of life that is suitable for all humanity that is based on sustainability and austerity, not on the model of conspicuous consumption which has fueled a consumer-based society and individual financial objectives.

Macro-Quality theory needs to be developed so it is coherent and to fit the modern concept – doing good while doing no harm – all goodness that is coupled with no badness.

Macro-Quality is the pioneering boundary for all modern developments of quality methods. It will require a systems approach to meet the current socio-technical challenges facing humanity.

Take-away Lessons Learned

“Our wretched species is so made that those who walk on the well-trodden path always throw stones at those who are showing a new road.”

~ Voltaire

[François-Marie Arouet]

Philosophical Dictionary (1764)

Enlightenment Philosopher

Critical take-away observations:

How should society account for investments that are intended to correct unintended consequences of its poorly executed activities across its various economic sectors?

Summary statement:

The historical system for calculation of GDP does not discourage society from eliminating the negative “drivers” of economic loss. It is time to develop a new economic structure that includes the consideration of quality as a motivator of all economic systems.

This webinar addressed the following learning objectives to help you discover the challenges your career will face in the future:

- **Understand the macroeconomic role of Quality.**
- **Discover the quality imperative in macroeconomics.**
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- **Recognize what you can do to encourage change.**
- **Consider what can advance the economy of your nation.**



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Mandate: We must get the “big numbers” about social costs right and assure economic equity.



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Thank you

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Future QMD Webinars:

Managing for Quality ASQ QMD Webinar Series by Dr Gregory H. Watson:

- No. 15: "Quality as a Social Responsibility" February 11, 2021; 1500 ET
- No. 16: "Quality as a Human Right" March 11, 2021; 1500 ET
- No. 17: "Quality as a Political Policy" April 15, 2021; 1500 ET
- No. 18: "Quality as our Manifest Destiny" May 6, 2021; 1500 ET

ASQ QMD Webinars:

- "Management 2.0 for Practitioners and Managers" January 28, 2021; 1800 ET by Forrest W. Breyfogle III
- "Applying Leading Indicators in CoQ and Quality space using technology monitoring and data gathering" March 18, 2021; 1800 ET by Guillermo Ciudad

Vital Questions series by Ann-Marie Flinn:

1. "Where are you putting your focus? Shifting problems to outcomes" June 2, 2021; 1800 ET
2. "How are you relating? Shifting drama to empowerment" June 16, 2021; 1800 ET
3. "What actions are you taking? Shifting from reacting to creating" July 21, 2021; 1800 ET

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