

CULTURE AND CHINA'S ECONOMIC DEVELOPMENT

Len-Kuo Hu^{1*} 

¹ National Chengchi University, Taipei, Taiwan (Republic of China), lkhu@nccu.edu.tw.

**Corresponding Author*

Abstract. This study examines the economic implications of long-standing Confucian values and the principles of socialism with Chinese characteristics for China's economic development, particularly in the context of growing tensions between the United States and China. By incorporating an individual's propensity for cooperation and its influence on subjective value formation, together with an internal welfare adjustment mechanism inspired by prospect theory, the proposed model provides a framework for explaining the cyclical dynamics of cooperative behaviours. This analysis suggests that trade alone is not sufficient to bridge cultural differences between nations. Greater mutual understanding and appreciation of diverse cultural traditions may instead be fostered through educational and cultural exchanges, including international tourism. The study also advocates a prudent industrial policy that balances economic development with social welfare, thereby helping to ensure that the benefits of economic growth ultimately contribute to the well-being of the broader population.

Keywords: Chinese Culture, Confucianism, Socialism with Chinese Characteristics, Income Inequality, Prospect Theory, US-China Relations, China's Economic Development.

JEL: A10, C71, F10

1. Introduction

Throughout history, the interplay between individual freedom of choice and governmental authority has been both persistent and consequential. In modern times, bottom-up democracy and capitalism appear to have gained an advantage over top-down systems such as totalitarianism or communism, although the latter has gradually evolved towards forms of socialism or what might be described as "capitalism from above." Over a longer historical horizon, however, these political and economic arrangements may continue to change and evolve. Douglass North (2005) argues that the key to human evolutionary change lies in the intentions of the players. Accordingly, changes in political and economic systems are largely shaped by human agency and by individuals' perceptions of the consequences of their actions.

For much of human history, individuals who challenged inherited norms, beliefs, and preferences faced considerable difficulties in developing more efficient alternatives. Cultural wisdom and established traditions were valued for their contribution to social survival, while limited knowledge of their underlying benefits made questioning them appear evolutionarily risky. Consequently, societies have often been resistant to rapid cultural change associated with major technological, philosophical, and scientific advances, instead maintaining a strong attachment to the wisdom of their ancestors, sometimes with considerable nostalgia and idealization (Oded Galor, 2022). In contemporary China, the Chinese Communist Party's effort to "build a harmonious socialist society" under the framework of "Socialism with Chinese characteristics" seeks to integrate traditional Confucian values, contemporary New Confucian thought, and officially defined socialist values that have evolved since the reform and opening-up period, "harmony" has emerged as an important organizing concept in twenty-first-century China.

The historical oscillation between socialism and capitalism has posed persistent challenges to domestic social cohesion and global stability. The relationship between the United States and China is particularly complex, shaped by cultural misunderstandings, historical grievances, and ideological differences. Rudd (2022) argues that unless two powerhouses can develop a framework for coexistence that respects their respective core values--Socialism with Chinese characteristics on one hand and market capitalism underpinned by liberal democracy on the other--within a framework of managed strategic competition, their relationship could move toward conflict with far-reaching consequences for both countries and the broader international order.

This paper explores the economic consequences of interactions, particularly trade, between individuals or countries with differing cultural backgrounds. It begins by outlining key elements of Chinese culture, with particular attention to the interaction between traditional Confucian values, contemporary New Confucian thought, and socialism with Chinese characteristics. It then examines how these cultural characteristics may influence economic behavior, cooperation, and the stability of economic relationships.

1.1. Essence of Chinese Culture from a Confucian Perspective

Chinese culture is deeply rooted in the Confucian ideal of "ren (仁)" (see Wei-ming Tu, 1968). Confucius himself described it succinctly: "to conquer oneself (ke-ji (克己)) and to return to propriety (fu-li (復禮)) embodies ren." The notion of ke-ji relates directly to self-improvement (xiu-shen (修身)), while fu-li involves aligning oneself with li (禮), which represents the ideal social norms endorsed by the state and accepted by the populace. Although the concepts of ke-ji and fu-li may appear abstract, ren is arguably even more challenging to comprehend. While it has been variously translated as benevolence, charity, humanity, love, human-heartedness, and goodness, none of these terms fully encapsulate its essence. The most effective way to understand ren is to view it as the paramount virtue within the Confucian value system, providing "meaning" to all other ethical standards that facilitate integration within Confucian society.

Confucianism fundamentally serves as a secular social theory aimed at fostering a harmonious society. Various interpretations of Confucian social and individual theory exist. Much of the literature presents Confucianism as a social theory and force that shapes Chinese people into beings oriented towards groups or families and dependent on social structures. This perspective holds significant sociological validity, supported by empirical research to this day. The Confucian model of humanity promotes the development of individuals who are not only socially aware and reliant but also capable of playing an active role in shaping their social environment.

The debate around Confucianism's role in economic development, particularly in the context of China, is multifaceted and involves complex interplays between culture, economy, and political ideologies. The shift from viewing Confucianism as an impediment to economic development to a stimulant reflects broader changes in the understanding of the relationship between cultural values and economic performance.

In the immediate post-World War II era, modernization theory dominated the discourse on development. Scholars like Talcott Parsons (1971) and John K. Fairbank (1982) viewed cultural factors, including Confucianism, as barriers to economic and political modernization, attributing the slow economic development of China in comparison to the West to the conservative, anti-commercial, and hierarchical nature of Confucian values.

However, the remarkable economic growth of East Asian economies in the late 20th century, often referred to as the "East Asian Miracle," led to a reevaluation of Confucianism's economic implications. Scholars began to argue that Confucian values such as hard work, thrift, loyalty, and respect for education could actually facilitate economic development. Scholars such as Yu Yingshi (1984) have argued that the Confucian ethic has nurtured the triumph of successful business enterprise since the Ming dynasty (1368-1644). This perspective gained traction as countries with significant Confucian influence, including Japan, South Korea, Taiwan, and later China, experienced rapid industrialization and economic growth. The "Confucian ethic" was seen as a contributing factor to the disciplined, educated workforce and the cohesive societal structure that supported economic expansion.

The adaptation and sinification of Marxism in China also reflect the complexities of integrating Confucian values with other ideological frameworks (see Jesús Solé-Farràs,

2008). The Communist Party of China (CCP)'s ability to adapt and evolve, incorporating elements of Confucian political culture, has been seen as a factor in its longevity and effectiveness in governing China. As noted by scholars like David Shambaugh (2008), the CCP has undergone significant transformations, suggesting that Confucian values may not only coexist with but also enrich socialist ideologies within China.

The economic reforms initiated by Deng Xiaoping after Mao's death marked a turning point, leading to unprecedented economic growth and development in China. These reforms, while rooted in market principles, were also influenced by a pragmatic approach to governance that some argue is consistent with Confucian thought. The emphasis on stability, gradual reform, and the collective good can be seen as reflecting Confucian ideals.

In summary, the relationship between Confucianism and economic development in China is complex and dynamic. While early theorists viewed Confucian values as impediments to modernization, the success of East Asian economies has led to a reassessment of this perspective. Today, the interaction between Confucianism, socialism, and capitalism in China is seen as a unique blend that contributes to its economic strategies and development. This synthesis suggests that culture, far from being a static impediment or stimulant to development, plays a nuanced and evolving role in shaping economic outcomes.

1.2. Literature Review on Culture's Impact on China's Economic Development

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This section briefly examines the historical review about the impact of culture, particularly political and economic ideologies, on China's economic development, highlighting significant transitions in economic policies and leadership ideologies over time. The discussion spans from the era of Mao Zedong and the Cultural Revolution, through the market-oriented reforms initiated by Deng Xiaoping in 1978, to the recent shifts under Xi Jinping towards a model emphasizing "Common Prosperity" and greater state involvement in the economy.

The extensive work by Justin Yifu Lin (2011a&b, 2012a&b), who analyzed China's economic trajectory, notes the significant shift from a tumultuous period marked by the Cultural Revolution to the reform and opening-up policies that spurred economic growth from 1978 onwards. Deng Xiaoping's era is characterized by significant policy changes that favored market mechanisms and international trade, notably China's accession to the World Trade Organization and reforms that bolstered the private sector and reduced the scale of state-owned enterprises. This period is marked by aggressive economic growth strategies, even at the cost of increasing income inequality.

Under Xi Jinping, there has been a noticeable pivot. The focus has shifted towards enhancing the role of state-owned enterprises, increasing state investment, and asserting greater party control over private businesses. This shift aims at balancing economic growth with income equality, under the banner of "Common Prosperity," but has raised

concerns about the implications for private sector development and overall economic dynamism.

The transition from Deng Xiaoping's market-oriented reforms to Xi Jinping's focus on state-led development and income equality highlights the profound impact of leadership ideology on economic policy. While Deng's reforms unleashed decades of rapid economic growth and transformed China into a global economic powerhouse, the resulting income disparities have prompted a reevaluation under Xi Jinping's leadership. The shift towards "Common Prosperity" reflects a cultural and ideological pivot back towards greater equity, albeit with potential trade-offs in terms of economic freedom and private sector vitality.

1.3. Theoretical Underpinning of Culture on Economic Behaviour

This section introduces a theoretical framework to understand how cultural factors influence economic behavior, particularly through the lens of altruism and the allocation of resources based on "need" versus "contribution." The proposed parameter (η) aims to capture the extent to which individual and societal values on altruism and equity in resource distribution affect economic decisions and policies. This framework suggests that cultural attitudes towards altruism and the mechanisms of distributing societal wealth can significantly impact economic systems and regime choices, both within countries and in international trade relations.

The theoretical discussion underscores the importance of understanding the cultural underpinnings of economic behavior. The balance between altruism and equity in resource allocation can influence the design and acceptance of economic policies, reflecting deeper societal values and priorities. This analysis provides a nuanced perspective on the complex interplay between culture, politics, and economic development, particularly in a rapidly evolving global powerhouse like China.

Aligned with North's perspective, this paper explores how an institution's transformation is driven by the interplay of two opposing forces that shape an individual's daily decisions: one that champions personal self-interest and the freedom of market choice, and another that values social cohesion and cooperation, often aligning with societal or governmental norms over personal gain. Building on the framework introduced in my 2005 working paper, this study presents a model that elucidates the dynamics of an individual's willingness to cooperate and the evolution of economic systems through a mechanism that adjusts welfare incrementally, as depicted by prospect theory (Tversky and Kahneman, 1979).

Prospect theory posits that individuals evaluate gains and losses relative to a reference point. Inspired by the prospect theory and the concept of endogenous reference points proposed by Köszegi and Rabin (2006), this study argues that when an individual experiences more gains than losses, the reference point tends to shift upwards through learning. As a result, additional gains become more difficult to achieve, reducing the attractiveness of the strategy that generated the initial gains. Conversely, when losses exceed gains, the reference point tends to decline, increasing the likelihood that the

original strategy will generate gain and thereby making that strategy more attractive. This feedback mechanism, shaped by past outcomes, may generate cyclical patterns of behavior, including the fluctuations in cooperative attitudes examined in this study.

Incorporating a Ricardian trading model, this research analyzes how an individual's choice to cooperate affects her long-term utility gains from trade. The findings suggest that unless there is an initial alignment in the willingness to cooperate among trading partners, the resulting patterns of cooperation can be highly unpredictable. Factors such as differences in time preferences or specialization areas can exacerbate the volatility of the cooperation cycle or even precipitate the total collapse of the cooperative relationship.

Following the development of the theoretical framework linking culture, trade, and cooperative behavior, the study conducts a computer simulation to further examine the model's dynamics and policy implications. This analysis is complemented by an empirical investigation using historical data from the World Bank and the IMF to evaluate the model's key propositions. To measure a country's cooperative stance towards its trading partners, the study introduces a growth-equity ratio, heuristically analogous to the concept of Sharpe ratio in the Capital Asset Portfolio Model (CAPM). The measure is constructed by dividing a country's GDP growth rate by its Gini Index and is then examined in relation to international trade variables and international tourism, which serves as a proxy for cross-cultural exchange.

The foundational theoretical model is outlined in the subsequent section. Following this, section III deduces the optimal cooperative strategy choice for individuals. Section IV then presents a computer simulation of the model. An empirical analysis using historical data from the World Bank and IMF is conducted in Section V, which also delves into policy implications, particularly in light of recent developments in the Sino-US economic relationship. The paper concludes with some final observations in the last section.

2. Economic Modeling of Regime Transformation When a Country Opens to the World

This study begins by acknowledging the challenge of using mathematical models to capture the complex influence of culture on economic behavior. It presents a preliminary model to explore the evolution and transformation of the Chinese economic system upon opening to Western liberal capitalist markets, specifically comparing it to the U.S. The model simplifies the scenario to two countries (or individuals, say A and B) trading two goods (say, X and Y), focusing on how cultural values shape individual economic decisions and cooperative behaviors.

Initially, each country has a comparative advantage in producing one of the goods, leading to specialization. For instance, individual A (B) can produce α_X^A (α_X^B) amount of X good and α_Y^A (α_Y^B) of Y good per unit of labor input. Initially individual A has a

relatively comparative advantage and completely specialized in producing X good while individual B has an advantage and specialized in producing Y good, i.e., $\frac{\alpha_X^A}{\alpha_Y^A} > \frac{\alpha_X^B}{\alpha_Y^B}$.

The model introduces a value function (say $U(t)$ at time t) for each individual, influenced by cultural factors, to capture the balance between personal consumption satisfaction and altruistic concern for family or future generations. This is quantified using a parameter that adjusts the weight given to one's own versus others' welfare. The utility function, based on a Cobb-Douglas form, accounts for preferences between the two goods and the allocation of resources between the two individuals. It also incorporates the concept of seeking incremental welfare improvement over time, a key aspect of prospect theory. This reflects a cultural influence on individuals' intertemporal economic choices, emphasizing the balance between self-interest and cooperative behavior towards a harmonious relationship with others.

According to the discussion above, the utility (or value) of an individual pursues in her life time is characterized by how she visualizes the satisfaction from her own consumption on one hand, and her so-called paternalistic attitude toward the wellbeing of her family or her offspring of next generations on the other hand. This altruistic behavior of each individual is characterized by a parameter η_t^A ($0 \leq \eta_t^A \leq 1$). To derive the individual A's overall satisfaction from the current consumption for both individuals at period t (i.e., $U^A(t)$), the individual A will put some weight (say $\eta_t^A/2$) on her trading partner's consumption satisfaction versus her own (say $1 - \eta_t^A/2$). Here I implicitly assume that the welfare of others cannot exceed one's own. By assuming a logarithm type of Cobb-Douglas utility function with parameter β to characterize the individual's preference on X good (and $1 - \beta$ on the Y good), and variable S_t^A to denote the product X's allocation share to individual A (so the share of $1 - S_t^A$ allocated to individual B) while variable S_t^B denoting the product Y's allocation share to individual B (so the share of $1 - S_t^B$ to individual A), we can describe the individual A's direct utility level at period t as follows:

$$U^A(t) = (1 - \eta_t^A/2) * [\beta * \ln(\alpha_X^A(t) * S_t^A) + (1 - \beta) * \ln(\alpha_Y^B(t) * (1 - S_t^B))] + \frac{\eta_t^A}{2} * [\beta * \ln(\alpha_X^A(t) * (1 - S_t^A)) + (1 - \beta) * \ln(\alpha_Y^B(t) * S_t^B)].$$

Based on the implication of prospect theory, each individual is pursuing some sort of incremental welfare improvement over the preceding period with a relative weight defined by paramant γ instead of current absolute utility level. The greater the γ , the individual is more inclined to pursue her utility improvement as well as the enhancement of resources reserved for the next period or generation than the absolute level of her present wealth (utility). Take into account both the altruistic factor η_t^A and the incremental improvement (or cross-generation consideration) factor γ , the individual or country A will now maximize the following inter-temporal value function

$$(1) \quad \sum_{t=1}^{\infty} \delta^t V^A(t) = \sum_{t=1}^{\infty} \delta^t (U^A(t) - \gamma U^A(t-1)),$$

δ denotes the individual's time preference and plays a cultural role similar to γ in affecting an individual's intertemporal economic choice.

The specification of inter-temporal value function for country B can be similarly derived and omitted here.

The model explores the dynamic adjustment of these preferences and behaviors over time, suggesting that the interaction between internal motivations and external influences can lead to changes in cooperative attitudes and economic outcomes. This approach aims to shed light on the complex processes of economic transformation in a globalized context, emphasizing the role of cultural values and social dynamics.

3. Optimal Decision on Cooperative Strategy and Altruistic Attitude

Before deciding the optimal choice of altruistic attitude and corresponding cooperative strategy η_t^A and η_t^B for individuals A and B, we need to solve the allocation schemes of products X and Y for A and B, i.e., S_t^A and S_t^B . If the product allocation (consumed vs. exchanged) scheme (S_t^A) is entirely determined by the capitalist market mechanism, i.e., if the liberal capitalism prevails, then S_t^A will be determined by the proportion of person A's production contribution in total outputs' value which will also equal her consumption (or expenditure) share of total production. Assume there exists one period of lag. Then we will come to the following equation $S_t^A = p_t * \alpha_X^A(t) / [p_t * \alpha_X^A(t) + \alpha_Y^B(t)]$ where the relative price of good X to good Y is p_t at time t. Similarly, $S_t^B = \alpha_Y^B(t) / [p_t * \alpha_X^A(t) + \alpha_Y^B(t)]$. And we have the relationship that $S_t^A + S_t^B = 1$.

According to the ultimate goal of utopian socialism, the total social welfare should idealistically be distributed based on the "need" of each member of the society rather than simply on the "production contribution" of the individual. In other words, the consumption share of good X would be determined entirely based on good X's intrinsic value β rather than its production value $p * \alpha_X$. Nowadays the product allocation mechanism for the prevailing socialism has been compromised somewhere between the market-driven production value scheme (i.e., based on $p * \alpha_X / (p * \alpha_X + \alpha_Y^B)$) and the need-based preference share (β). Here for easy illustration I use the same weight (η) to simultaneously characterize the degree of compromise for socialistic goal and the degree of his altruism or cooperativeness.

We thereby express the product allocation share of good X for person A at time t (i.e., S_t^A) as follows:

$$(2) S_t^A = (1 - \eta_t^A) * \frac{p_t * \alpha_X^A(t)}{[p_t * \alpha_X^A(t) + \alpha_Y^B(t)]} + \eta_t^A * \beta.$$

S_t^B can be similarly derived as follows:

$$(3) \quad S_t^B = (1 - \eta_t^B) * \frac{\alpha_Y^B(t)}{[p_t * \alpha_X^A(t) + \alpha_Y^B(t)]} + \eta_t^B * (1 - \beta)$$

Since the relative price p_t is defined so that the selling value of good X that is exported (or not consumed) to person B by person A, i.e., $p_t * \alpha_X^A(t) * (1 - S_t^A)$, should be equal to the purchase value of good Y imported by person B, i.e., $\alpha_Y^B(t) * (1 - S_t^B)$. In other words, $p_t = \frac{\alpha_Y^B(t) * (1 - S_t^B)}{\alpha_X^A(t) * (1 - S_t^A)}$, which can be further expressed below after the substitution of equation (2) for the term S_t^A and equation (3) for the term S_t^B :

$$(4) \quad p_t = \frac{\alpha_X^A[\alpha_Y^B(1-\beta)\eta_t^B + (1-\beta\eta_t^A\alpha_Y^B)] + \sqrt{(\alpha_X^A)^2\alpha_Y^B(1-\beta)\eta_t^B + (1-\beta\eta_t^A\alpha_Y^B)]^2 - 4(1-(1-\beta)\eta_t^A)(\alpha_X^A)^2\alpha_Y^B[1-(1-\beta\eta_t^B)\alpha_Y^B]}}{[2(\alpha_X^A)^2(1-(1-\beta)\eta_t^A)]}.$$

According to the Euler equation, we can derive the first order condition for person A's cooperative strategy choice as follows:

$$(5) \quad \delta * \frac{dV^A(t+1)}{d\eta_t^A} + \frac{d(V^A(t))}{d\eta_t^A} = 0.$$

To simplify the discussion in the following we assume that the unit labor production for the two individuals, i.e., $\alpha_X^A(\alpha_X^B)$ of X good and $\alpha_Y^A(\alpha_Y^B)$ of Y good, are constant all the time. By examining the equation (1), we know that the impact of η_t^A on $V^A(t+1)$ and $V^A(t)$ is mainly through its direct effect on the term S_t^A and the subsequent indirect effect on $U^A(t)$. From equation (2) above, we can readily derive

$$\frac{dS_t^A}{d\eta_t^A} = \beta - \frac{p_t * \alpha_X^A}{[p_t * \alpha_X^A + \alpha_Y^B]}$$

Hence, we can obtain

$$\begin{aligned} \frac{dU^A(t)}{d\eta_t^A} = & \left(\beta - \frac{p_t * \alpha_X^A}{[p_t * \alpha_X^A + \alpha_Y^B]} \right) * \left(\frac{(1 - \eta_t^A/2) * \beta}{S_t^A} - \frac{\eta_t^A/2 * \beta}{1 - S_t^A} \right) + \frac{\beta}{2} * \ln \frac{(1 - S_t^A)}{S_t^A} \\ & + \frac{(1 - \beta)}{2} * \ln \frac{S_t^B}{1 - S_t^B} \end{aligned}$$

Therefore, the first order condition for the optimal choice of person A's cooperative strategy η_t^A becomes

$$\delta * \frac{dV^A(t+1)}{d\eta_t^A} + \frac{d(V^A(t))}{d\eta_t^A} = (1 - \delta * \gamma) * \frac{dU^A(t)}{d\eta_t^A} = 0,$$

which implies

$$(1 - \delta * \gamma) * \left[\left(\beta - \frac{p_t * \alpha_X^A}{[p_t * \alpha_X^A + \alpha_Y^B]} \right) * \left(\frac{(1 - \eta_t^A/2) * \beta}{S_t^A} - \frac{\eta_t^A/2 * \beta}{1 - S_t^A} \right) + \frac{\beta}{2} * \ln \frac{1 - S_t^A}{S_t^A} \right. \\ \left. + \frac{(1 - \beta)}{2} * \ln \frac{S_t^B}{1 - S_t^B} \right] = 0$$

As a result, we can derive the optimal η_t^A as follows:

$$(6) \quad \eta_t^A = (1 - S_t^A) * \left\{ 2 + S_t^A \left[\frac{(1 - \beta)}{\beta} \ln(S_t^B / (1 - S_t^B)) + \ln((1 - S_t^A) / S_t^A) \right] / (\beta - \frac{p_t * \alpha_X^A}{p_t * \alpha_X^A + \alpha_Y^B}) \right\}$$

By the same token, η_t^B can be derived below:

$$(7) \quad \eta_t^B = (1 - S_t^B) * \left\{ 2 + S_t^B \left[\frac{\beta}{1 - \beta} \ln(S_t^A / (1 - S_t^A)) + \ln((1 - S_t^B) / S_t^B) \right] / (1 - \beta - \frac{\alpha_Y^B}{p_t * \alpha_X^A + \alpha_Y^B}) \right\}$$

Assume there be one period delay in the price adjustment. Then p_t is described in the equation (4) and S_t^A and S_t^B in equations (2) and (3), are functions of last period's cooperativeness for both person A and B (i.e., η_{t-1}^A & η_{t-1}^B). Once the optimal choice of cooperation strategy at time t, i.e., η_t^A & η_t^B is decided according to equations (6) and (7), we can then determine the price level p_{t+1} , the domestic consumption level (S_{t+1}^A and S_{t+1}^B) as well as trade proportion ($1 - S_{t+1}^A$ and $1 - S_{t+1}^B$) in the next period t+1, and so on.

By examining the equations (6) and (7) we can obtain the following proposition:

Proposition I: Assume that individual A obtains a comparative advantage in the production of good X. The less preferable for the home-produced good X (i.e., a smaller β) or more desirable for the foreign good (i.e., a bigger $1 - \beta$), or the system becomes more open toward trade (i.e., greater $1 - S_t^A$), or there exists a smaller gap between the production value share (i.e., $p_t * \alpha_X^A / (p_t * \alpha_X^A + \alpha_Y^B)$) and its preference share (i.e., β), the individual A would become more altruistic and behave more cooperatively with its trading partner (i.e., η_t^A increases).

4. Simulation of Culture's Impact on Economic Behavior

There are several aspects of culture that would play significant roles in affecting an individual's economic behavior. In the model above the following four variables would

be factored into the consideration of the individual's economic choice for their best consumption shares, S_t^A and S_t^B . The first variable is the altruistic attitude toward the welfare of its trading partner which is represented by parameters, η_t^A & η_t^B . The second variable is an ideological belief about whether the social value of product allocation should be based on one's production contribution or one's intrinsic need, which is also represented by η_t^A & η_t^B . The third variable is an individual's time preference which is represented by the parameter δ . The fourth variable is reflecting the economic goal of an individual pursuing its absolute hedonistic pleasure at present or seeking an incremental improvement of wellbeing each time which is represented by the parameter γ . We believe that the indoctrination of long-lasting Chinese culture as pivoted by Confucianism would drive the individual toward more growth oriented economic discipline and pitch a relatively higher value of γ or δ . These two variables are treated as exogenously given in the model. Instead, the first two variables are strongly influenced by the reaction of an individual's trading partner and would be dealt with in a dynamic evolving way. At each point of time the individual would constantly revise its socialistic attitude and the degree of altruism after observing the reaction of its trading partner.

To facilitate the calculation of each period's cooperativeness I need to input the value of β, γ, δ as well as the initial data of η^A & η^B and S^A & S^B in the beginning period. The following four scenarios are considered:

- (i) Basic scenario: $\beta = 0.55$; $\gamma = 0.5$; $\delta = 0.5$; $S_0^A = 0.6$; $S_0^B = 0.8$; $\eta_0^A = 0.55$; $\eta_0^B = 0.45$

Period, t	0	1	2	3	4	5	6	7	8	9	10
$p(t)$	0.5000	1.0799	1.5258	1.3897	1.3151	1.2747	1.2528	1.2409	1.2345	1.2310	1.2291
S_t^A	0.6000	0.4525	0.5497	0.6035	0.5812	0.5679	0.5603	0.5560	0.5537	0.5524	0.5517
S_t^B	0.8000	0.4088	0.3129	0.4490	0.4493	0.4492	0.4491	0.4491	0.4491	0.4491	0.4491
$\ln[(1 - S_t^A)/S_t^A]$	-0.1761	0.0828	-0.0866	-0.1825	-0.1424	-0.1186	-0.1052	-0.0978	-0.0937	-0.0914	-0.0902
$\ln[(1 - S_t^B)/S_t^B]$	-0.6021	0.1603	0.3416	0.0888	0.0884	0.0886	0.0887	0.0887	0.0888	0.0888	0.0888
Trade vol.	0.6000	1.7738	2.0613	1.6529	1.6522	1.6525	1.6526	1.6527	1.6528	1.6528	1.6528
η_t^A	0.5500	0.9900	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100
η_t^B	0.4500	0.0100	0.9900	0.9900	0.9900	0.9900	0.9900	0.9900	0.9900	0.9900	0.9900
$U_A(t)$	0.1363	0.1587	0.2588	0.2386	0.2298	0.2244	0.2212	0.2195	0.2185	0.2180	0.2177
$U_B(t)$	0.2146	0.1584	0.0595	0.0997	0.1128	0.1203	0.1244	0.1267	0.1280	0.1286	0.1290
$V_A(t)$		0.0905	0.1795	0.1092	0.1104	0.1095	0.1091	0.1089	0.1088	0.1087	0.1087
$V_B(t)$		0.0511	-0.0197	0.0699	0.0630	0.0639	0.0643	0.0645	0.0646	0.0647	0.0647
PV of $V_A(t)$		0.2282	0.2822	0.2122	0.2129	0.2116					
PV of $V_B(t)$		0.0706	0.0430	0.1295	0.1231	0.1243					

Table 1: Simulation of Cooperative and Economic Behavior—Basic scenario with more cooperative A

Note. **Basic assumptions:** $\beta = 0.55$; $\gamma^A = \delta^A = 0.5$; $\gamma^B = \delta^B = 0.5$; $\eta_0^A = 0.55$; $\eta_0^B = 0.45$; $\alpha_X^A = 3$; $\alpha_Y^A = 2$; $\alpha_X^B = 2$; $\alpha_Y^B = 3$.

In this benchmark scenario, I assume that the expenditure share β be equal to 0.55 with time preference factor $\delta = 0.5$ and a moderate prospect effect γ equal to 0.5. In the beginning I assume that individual A be a little more open to trade than individual B (i.e., $1 - S_0^A = 0.4$, $1 - S_0^B = 0.2$). In addition, individual A has a relatively comparative advantage in producing X good while individual B has an advantage in producing Y good,

i.e., $\frac{\alpha_X^A}{\alpha_Y^A} = \frac{3}{2} > \frac{\alpha_X^B}{\alpha_Y^B} = \frac{2}{3}$. In this basic scenario, I also assume that person A embrace a little more cooperative and altruistic attitude than person B ($\eta_0^A = 0.55; \eta_0^B = 0.45$) in the very beginning.

It is readily seen from the table above that the degrees of altruism or cooperativeness for individuals A and B (i.e., η_t^A & η_t^B) are more or less in tandem with the degrees of openness to their trading partners (i.e., $\ln\left(\frac{1-S_t^A}{S_t^A}\right)$ & $\ln\left(\frac{1-S_t^B}{S_t^B}\right)$). Moreover, the value functions in each period, $V^A(t)$ & $V^B(t)$, as well as the present value of these value functions, $\sum_{t=1}^5 \delta^t V^A(t)$ & $\sum_{t=1}^5 \delta^t V^B(t)$, are also positively correlated to the degrees altruism or cooperativeness for individuals A and B (i.e., η_t^A & η_t^B).

Initially individual A is a little more willing to cooperate and open to trade than individual B. After one period of trade which witnesses a substantial expansion of trade by individual B than by individual A, individual A starts reversing its trading and cooperative attitude despite the gradual enhancement of cooperative trading attitude of individual B. Once observing a greater gain of trade attributing to individual B than A, individual A has since become lukewarm to cooperate in trade. In addition, individuals tend to behave in a way of complete trust or distrust. In the end individual A will encounter a cyclical fluctuation of its net welfare (i.e., the present value of all its future value functions) despite one period of boost while its trading partner will benefit from trade steadily and cyclically after one-period transitional downward adjustment. By all means the individual with more willingness to cooperate and openness to trade will enjoy a greater net present value of welfare than its trading partner.

- (ii) Scenario with individual A more far-sighted or greater propensity toward utility improvement:

$$\beta = 0.55; \gamma^A = \delta^A = 0.7; \gamma^B = \delta^B = 0.3; S_0^A = 0.6; S_0^B = 0.8; \eta_0^A = 0.55; \eta_0^B = 0.45$$

Period, t	0	1	2	3	4	5	6	7	8	9	10
$p(t)$	0.5000	1.0799	1.5258	1.3897	1.3151	1.2747	1.2528	1.2409	1.2345	1.2310	1.2291
S_t^A	0.6000	0.4525	0.5497	0.6035	0.5812	0.5679	0.5603	0.5560	0.5537	0.5524	0.5517
S_t^B	0.8000	0.4088	0.3129	0.4490	0.4493	0.4492	0.4491	0.4491	0.4491	0.4491	0.4491
$\ln[(1 - S_t^A)/S_t^A]$	-0.1761	0.0828	-0.0866	-0.1825	-0.1424	-0.1186	-0.1052	-0.0978	-0.0937	-0.0914	-0.0902
$\ln[(1 - S_t^B)/S_t^B]$	-0.6021	0.1603	0.3416	0.0888	0.0884	0.0886	0.0887	0.0887	0.0888	0.0888	0.0888
Trade vol.	0.6000	1.7738	2.0613	1.6529	1.6522	1.6525	1.6526	1.6527	1.6528	1.6528	1.6528
η_t^A	0.5500	0.9900	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100
η_t^B	0.4500	0.0100	0.9900	0.9900	0.9900	0.9900	0.9900	0.9900	0.9900	0.9900	0.9900
$U_A(t)$	0.1363	0.1587	0.2588	0.2386	0.2298	0.2244	0.2212	0.2195	0.2185	0.2180	0.2177
$U_B(t)$	0.2146	0.1584	0.0595	0.0997	0.1128	0.1203	0.1244	0.1267	0.1280	0.1286	0.1290
$V_A(t)$		0.0632	0.1478	0.0574	0.0627	0.0635	0.0642	0.0646	0.0649	0.0650	0.0651
$V_B(t)$		0.0940	0.0120	0.0818	0.0829	0.0864	0.0883	0.0894	0.0899	0.0902	0.0904
PV of $V_A(t)$		0.2316	0.2559	0.1700	0.1764	0.1780					
PV of $V_B(t)$		0.1079	0.0470	0.1176	0.1200	0.1242					

Table 2: Simulation of Cooperative and Economic Behavior—Scenario with Far-Sighted & Growth-Oriented A

Note. Basic assumptions: $\beta = 0.55$; $\gamma^A = \delta^A = 0.7$; $\gamma^B = \delta^B = 0.3$; $\eta_0^A = 0.55$; $\eta_0^B = 0.45$; $\alpha_X^A = 3$; $\alpha_T^A = 2$; $\alpha_X^B = 2$; $\alpha_T^B = 3$.

Compare Table 2 with Table 1, the individual A would substantially improve the net present value of its life-time welfare in the initial period. Since each period's utility function would not be affected by the parameters of time preference (δ) and the degree of utility improvement as dictated by prospect theory (γ), we only need to consider the resulting changes in value functions ($V^A(t)$ & $V^B(t)$) at each period of time. Due to the reduction of individual A's satisfaction from the future utility improvements ($V^A(t)$) relative to the ones in the basic scenario (Table 1) the present value of welfare begins to decline after a short period of time. However, this temporary reduction of utility improvement in the very beginning will soon be reversed and begins to improve after a while and henceforth lift the overall present value of welfare for this individual gradually.

In contrast, a reduction in the time preference factor and the degree of utility improvement for individual B will greatly improve its satisfaction from the future utility change (i.e., $V^B(t)$ increases). The net present value of overall welfare as discounted by a less time preference factor (i.e., as smaller δ) would then decrease for a short period of time and then increase gradually.

- (iii) Scenario with a reduction of preference for the goods in which individual A is specialized:

$$\beta = 0.5; \gamma = 0.5; \delta = 0.5; S_0^A = 0.6; S_0^B = 0.8; \eta_0^A = 0.55; \eta_0^B = 0.45$$

Period, t	0	1	2	3	4	5	6	7	8	9	10
$p(t)$	0.5000	0.9891	1.3994	1.2013	1.1024	1.0538	1.0298	1.0180	1.0122	1.0094	1.0080
S_t^A	0.6000	0.4250	0.5000	0.5824	0.5453	0.5241	0.5130	0.5073	0.5044	0.5030	0.5023
S_t^B	0.8000	0.4313	0.3003	0.4983	0.4987	0.4985	0.4984	0.4984	0.4984	0.4984	0.4983
$\ln[(1 - S_t^A)/S_t^A]$	-0.1761	0.1313	0.0000	-0.1445	-0.0789	-0.0419	-0.0225	-0.0126	-0.0077	-0.0052	-0.0040
$\ln[(1 - S_t^B)/S_t^B]$	-0.6021	0.1202	0.3674	0.0029	0.0023	0.0026	0.0027	0.0028	0.0028	0.0029	0.0029
Trade vol.	0.6000	1.7062	2.0992	1.5050	1.5040	1.5044	1.5047	1.5048	1.5049	1.5049	1.5050
η_t^A	0.5500	0.9900	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100
η_t^B	0.4500	0.0100	0.9900	0.9900	0.9900	0.9900	0.9900	0.9900	0.9900	0.9900	0.9900
$U_A(t)$	0.1339	0.1743	0.2472	0.2092	0.1951	0.1867	0.1822	0.1798	0.1787	0.1781	0.1778
$U_B(t)$	0.2297	0.1743	0.0654	0.1363	0.1549	0.1647	0.1697	0.1722	0.1735	0.1741	0.1744
$V_A(t)$		0.1073	0.1601	0.0856	0.0905	0.0892	0.0888	0.0887	0.0887	0.0887	0.0887
$V_B(t)$		0.0595	-0.0218	0.1036	0.0868	0.0873	0.0874	0.0874	0.0873	0.0873	0.0873
PV of $V_A(t)$		0.2257	0.2422	0.1698	0.1739	0.1724					
PV of $V_B(t)$		0.0908	0.0681	0.1852	0.1686	0.1692					

Table 3: Simulation of Cooperative and Economic Behavior—Scenario with a reduction of preference for the goods in which individual A is specialized

Note. Basic assumptions: $\beta = 0.5$; $\gamma^A = \delta^A = 0.5$; $\gamma^B = \delta^B = 0.5$; $\eta_0^A = 0.55$; $\eta_0^B = 0.45$; $\alpha_X^A = 3$; $\alpha_Y^A = 2$; $\alpha_X^B = 2$; $\alpha_Y^B = 3$.

Compare Table 3 with Table 1, the reduction of preference for the goods in which individual A is specialized (from $\beta = 0.55$ to $\beta = 0.5$) would reduce the individual A's consumption utility and increase individual B's utility for each period henceforward. Consequently, the incremental utility change would deteriorate for individual A except for the initial period. However, individual B would witness an improvement in its incremental utility change for all the periods except for the second period. As a result, the net present value of welfare would shrink from the worsening preference of the specialized good for individual A and improve for its trading partner, individual B, instead. Owing to the less favorable of its specialized good, the term of trade will become worse off resulting in a higher share of its domestic production reserved for trade (i.e., a greater $1 - S_t^A$) so as to maintain a balanced trade.

I summarize the simulation results in the following proposition:

Proposition II: *The dynamics of cooperative attitudes and associated economic behavior for two trading entities (individuals or countries) will proceed more or less in the following manners*

- (1) *(An initial small gap of cooperative attitudes can engender a wide fluctuation in the cooperative behavior from complete trust to distrust or vice versa. The economic welfare will then change accordingly) The individual A who starts with a greater willingness to cooperate and openness to trade will witness a short period of welfare improvement and then sharply reverse its cooperative and open attitude after observing its trading partner gaining substantially from its cooperativeness and openness. The net present value of welfare will fluctuate cyclically for both individuals with individual A reaping a relatively larger gain than individual B.*
- (2) *(Far-sighted attitude or less hedonistic mentality tends to lift a short-time welfare improvement but then taper off gradually) The growth-oriented attitude will enlarge short-period utility improvement and then bring down the gain gradually. A higher time preference on the future will cause the net present value of its overall welfare to fluctuate cyclically. As for its trading partner, the relatively myopic behavior and*

greater tendency to pursue the current utility satisfaction will damper short-period utility improvement as well as the present value of its overall welfare and then gradually recover with a minuscule cyclicity.

- (3) *(Specialization in a less favorable good will decimate its consumption utility each period and bring down the net present value of total future incremental utility changes, while raising the ones for its trading partner) If an individual obtains a comparative advantage in the relatively unfavorable product, it will think less favorable from the trade with its counterparty and worsen the terms of trade with its counterparty. In a consequence, the consumption utility as well as the net present value of welfare for individual A will deteriorate henceforth.*

5. Empirical Study of Cultural Impact on China's Economic Development

5.1. The empirical methodology considered for the model testing

This paper is intended to pinpoint the role of culture in deciding an individual's economic behavior via a dynamic transformation of its utility preference between self-interest and altruism (i.e., η) once exposed in an outer impetus like trade. In the case of a country, this transformation of utility function can be metaphorically thought as a dynamic choice between economic growth and social equality or between a market-oriented capitalism and a fairly-distributed socialism.

Each country strives to pursue a higher economic growth under an appropriate control or avoidance of widening income inequality. This issue of a government's prudent economic policy is analogous to an optimal asset allocation problem for an investor facing the trade-off between expected return and risk. The theory of CAPM (capital asset pricing model) shows that in a market equilibrium the investor's ultimate portfolio choice should be decided by the Sharpe ratio which is defined to be the expected excess return divided by the standard deviation of a market portfolio, i.e., $\bar{r}_m - r_f / \sigma_m$ where $\bar{r}_m$ & σ_m are the expected return and standard deviation of market portfolio, and r_f is risk-free rate. This Sharpe ratio also reflects the reverse of an individual's degree of absolute risk aversion, which is equal to the minus second derivative divided by the first derivative of the individual's utility function, i.e., $-U''/U'$. (Beneplanc, Gilles and Jean-Charles Rochet 2011).

According to the construction and development of the model presented in this paper, the parameter η , which measures an individual's utility weight between self-interest and social altruism (or the concern for other's interest) can be interpreted at the national level as a cultural Sharpe ratio. In this interpretation, η reflects the social-risk premium that individuals are willing to accept, or equivalently, improvement in economic welfare required to compensate for an increase in social inequality. I therefore use a country's GDP growth rate as a proxy for the former—the improvement in economic welfare—and

the Gini index as a proxy for the latter—income inequality. The resulting equity-equity ratio, analogous in spirit to the concept of Sharpe ratio, provides an empirical measure of the relationship between economic growth and inequality. Once this measure is constructed, I examine its statistical relationship with international trade and indicators of cultural exchange, particularly international tourism.

5.2. Description of data used for statistical analysis

Based on the construction of the growth-equity ratio, which is intended to capture the trade-off between incremental economic return, measured by GDP growth rate, and the associated degree of income inequality, measured by the Gini index, this section presents the data used to empirically examine the model developed above. In conjunction with the preceding historical discussion of the influence of culture on China's economic performance over recent decades, the relevant data for China and the United States are summarized in Table 4.

Because the availability and coverage of Gini index and international tourism data from the World Bank and IMF open-data sources are more limited than those of GDP and trade data, the sample period for GDP and trade variables is restricted to the common period for which sufficiently consistent data are available across all variables. This adjustment ensures that the variables used in the subsequent statistical analysis are comparable over the same observation period.

Panel A. 1993–2011

Variable	1993	1996	1999	2002	2005	2008	2010	2011
Gini Index—China	33.9	35.2	38.7	42	40.9	43	43.7	42.4
Gini Index—USA	40.4	40.3	40	40.4	41	40.8	40	40.9
GDP growth rate—China	0.132	0.171	0.063	0.098	0.157	0.182	0.182	0.184
GDP growth rate—USA	0.052	0.057	0.063	0.033	0.067	0.02	0.039	0.037
Growth-equity ratio—China	0.92	0.485	0.163	0.233	0.385	0.423	0.418	0.434
Growth-equity ratio—USA	0.128	0.141	0.157	0.081	0.164	0.05	0.099	0.089
Export/GDP ratio—China	0.149	0.175	0.178	0.221	0.304	0.329	0.235	0.253
Export/GDP ratio—USA	0.068	0.077	0.072	0.063	0.067	0.079	0.073	0.085
Trade (China to US)/GDP	0.003	0.002	0.002	0.002	0.003	0.003	0.002	0.002
Trade (US to China)/GDP	0.002	0.003	0.004	0.006	0.01	0.016	0.015	0.019

International tourists arriving in
China (thousands)

International tourists arriving in USA
(thousands)

Panel B. 2012–2020

Variable	2012	2013	2014	2015	2016	2017	2018	2019	2020
Gini Index—China	42.2	39.7	39.2	38.6	38.5	39.1	38.5	38.2	37.1
Gini Index—USA	40.9	40.7	41.5	41.2	41.1	41.2	41.4	41.5	39.7
GDP growth rate—China	0.104	0.101	0.0853	0.0704	0.0835	0.1147	0.1049	0.0731	0.027
GDP growth rate—USA	0.042	0.0386	0.0431	0.039	0.0279	0.0429	0.0533	0.0419	-0.01
Growth-equity ratio—China	0.246	0.2543	0.2177	0.1823	0.2169	0.2935	0.2724	0.1915	0.074
Growth-equity ratio—USA	0.103	0.0947	0.1038	0.0947	0.0678	0.1042	0.1286	0.1009	-0.02
Export/GDP ratio—China	0.245	0.2393	0.2272	0.2227	0.2142	0.1953	0.1771	0.1853	0.177
Export/GDP ratio—USA	0.095	0.0951	0.0936	0.092	0.0821	0.0772	0.0788	0.0806	0.076
Trade (China to US)/GDP	0.002	0.0024	0.0025	0.0024	0.0021	0.0018	0.0019	0.0017	0.001
Trade (US to China)/GDP	0.021	0.0217	0.0219	0.0226	0.0225	0.0207	0.0221	0.0233	0.019

International tourists arriving in
China (thousands)

International tourists arriving in USA
(thousands)

*Table 4: Historical Data Used for Statistical Analysis of the Model**Source: IMF and World Bank open data.*

It can be readily seen from the Table above that the income inequality in China (Gini index) has been worsening rapidly from 1993 (33.9) till 2010 (43.7), and then slightly improves to be 37.1 in 2020. This trend is more or less in tandem with the one for the percentage of China's export in its GDP. As for the trend of GDP growth rate, it started from an astonishing 31% in 1993 and then gradually slowed down to be around 10% in 2003. It then picked up again at an almost double-digit gallop till 2013. After stabilizing for a while till 2019 it then suddenly dropped to 2.7% in 2020. As a result, the growth-equity ratio fluctuates accordingly in a pattern similar to the trend of GDP growth rate.

On the contrast, the trends of either Gini Index, GDP growth rate or export percentage in GDP remain relatively stable in the USA. Consequently, its growth-equity ratios fluctuate more moderately between 0.05 and 0.15 except for 2020 sliding into a negative territory owing to its negative GDP growth occurred in that year.

5.3. Statistical Analysis

Because there are not sufficient degrees of freedom (17 observation) available to conduct more sophisticated regression or other time series analyses, I conduct a simple correlation analysis among those variables related and mentioned in this study.

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Total export as a percentage of GDP	0.097142
Import from USA as % of China's GDP	0.694297
Export to USA as % of China's GDP	-0.51111
No. of arrival of international tourists	0.811606

Table 5a: The correlation between China's GDP growth rate and the following:

Total export as a percentage of GDP	0.772452
Import from USA as % of China's GDP	0.146025
Export to USA as % of China's GDP	0.270615
No. of arrival of international tourists	0.616696

Table 5b: The correlation between China's Gini Index and the following:

Total export as a percentage of GDP	-0.05154
Import from USA as % of China's GDP	0.661432
Export to USA as % of China's GDP	-0.55121
No. of arrival of international tourists	0.824151

Table 5c: The correlation between China's cultural Sharpe ratio and the following:

Analogous to China's statistical analyses above the same correlation studies are also conducted for the USA below (Tables 6a to 6c) as a comparison.

Total export as a percentage of GDP	-0.15855
Import from China as % of US's GDP	-0.40848
Export to China as % of US's GDP	0.494503
No. of arrival of international tourists	0.910943

Table 6a: The correlation between US's GDP growth rate and the following:

Total export as a percentage of GDP	0.458986
Import from China as % of US's GDP	0.601280
Export to China as % of US's GDP	0.112962
No. of arrival of international tourists	0.870337

Table 6b: The correlation between US's Gini Index and the following:

Total export as a percentage of GDP	-0.17076
Import from China as % of US's GDP	-0.43036
Export to China as % of US's GDP	0.499012
No. of arrival of international tourists	0.914689

Table 6c: The correlation between US's growth-equity ratio and the following:

From the tables 5c and 6c above we can easily see that for either China or the USA the influx of international tourists can exert a more significant cultural impact than the

percentage of trade on a country's attitude toward the premium required to compensate for social inequality. As far as the cultural impact of bilateral trade between the US and China, the import from the US rather than the export to the US reflects a greater relevance in influencing China's attitude toward the degree of mutual cooperativeness while the export rather than import plays a more significant role in the USA.

6. Policy Implications of the Confrontation between China and the U.S.

History is replete with examples of confrontation and competition between states and market systems. The market system, despite its ability to produce abundance and solutions, should not be taken for granted. Markets are essential for progress and solving pressing problems but do not operate in isolation. They are shaped by societal values and state regulations. Neglecting these aspects can undermine societal values. Therefore, it's crucial to rebuild social capital to enhance market functionality, requiring a renewed sense of responsibility and solidarity among individuals and institutions. By aligning market values with societal culture, we can foster prosperity.

Trade serves as a vital mechanism for expressing intentions of cooperation. The choice between state socialism and market capitalism can result from or lead to a strategy of cooperation. The decision to pursue left, right, or moderate economic policies involves complex interactions between trading partners, influencing both internal and external dynamics. This study suggests that without initial coordination in cooperative attitudes or alignment in trade openness and time preferences, trading partners may experience fluctuating cooperation levels or a complete erosion of trust.

Computer simulations with cultural variables highlight the risks of mistrustful confrontations, as seen in the current U.S.-China relations. Initial acts of cooperativeness may not guarantee reciprocal actions, leading to uneven benefits from trade that can escalate into long-term negative impacts on welfare. Bridging the cultural divide requires more than just trade; cultural reconciliation, assimilation, or recognition through international tourism are essential to overcoming distrust. This study's empirical evidence shows that international tourism significantly influences cooperative attitudes more than traditional trade.

China is unlikely to seek conflict or convergence, recognizing the deep-seated differences in values, beliefs, and systems with the U.S. Historically, China has not actively spread its values but has allowed others to seek them out. A pragmatic approach would involve both nations focusing on their security, respecting each other's interests, and engaging in dialogue on global challenges to foster gradual understanding.

This study also highlights that the Chinese cultural emphasis on long-term benefits over short-term pleasures can lead to cyclical fluctuations in public welfare, reflecting the historical rise and fall of dynasties. It suggests that the Chinese government should invest in industries that leverage its production advantages rather than pursuing national pride projects.

7. Conclusions

Some scholars, most notably Deirdre McCloskey, argue that the role of formal institutions in economic development may be overstated and emphasize instead the importance of the ethical and cultural foundations that underpin market economies. McCloskey's work highlights the significance of the “bourgeois virtues,” including integrity, trust, prudence, and enterprise, as important drivers of economic progress. This perspective complements institution-centered explanations by drawing attention to the role of values, norms, and ethical behavior in shaping economic activity beyond the pursuit of profit alone.

The growing distrust between the United States and China has developed gradually and has been reinforced by a complex combination of political, strategic, and economic differences. Diplomatic narratives on both sides often emphasize competing political interpretations, making it difficult to identify the underlying economic dynamics of the bilateral relationship. This study therefore sets aside the diplomatic rhetoric interactions that shape the relationship. At the heart of the bilateral trade dispute lies an ideological divide over the preference for state versus market economies. Neither system can assert complete superiority. Recurring economic tensions between the United States and China can be viewed as manifestations of alternating patterns of cooperation and non-cooperation, reflecting broader cyclical dynamics in economic and social relationships.

This research explores the influence of culture on bilateral economic relationships, both within and across national borders. Inspired by the prospect theory, it proposes that the cooperative behavior of trading partners may evolve endogenously over time and may exhibit cyclical patterns as individuals and societies adjust their expectations and reference points in response to past economic outcomes. Supported by computer simulations and preliminary statistical analysis, this study provides an exploratory framework for understanding economic interactions across different cultural environments.

The analysis suggests that trade alone may be insufficient to overcome persistent cultural differences and the resulting deterioration of mutual trust. In an increasingly fragmented global economy, greater emphasis on education, cultural exchange, and interpersonal interaction may therefore be necessary to foster mutual understanding and appreciation of diverse cultural traditions. Finally, the study suggests that prudent and carefully calibrated industrial policies may help governments balance economic efficiency, social stability, and the broader welfare of their populations.

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Conflicts of interest

The author states there is no conflict of interests.

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