5-S Governance recipe for sustainable development in Central Asia with One Belt, One Road

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Ancient Silk Road was early “globalization”
Central Asia part of Ancient Silk Road
From Iranian to Turkic influence
Kazakhstan

Astana

Almaty
Kazakhstan’s challenges & opportunities

- **18 m** people, capital Astana, largest city Almaty
- **Largest land-locked country** with dry steppe region
- **131 ethnicities** - Kazakhs (63%), Russians, Uzbeks, Ukrainians, Germans, Tatars, and Uyghurs
- **70% Muslim, 26% Christian**
- **Russian language** even status
- **President Nazarbayev** since independence 1991 (re-elected in 2015 with 97.7% of votes)
- “**Multi-vector foreign policy**” – Russia, China, US etc
- **2nd largest uranium, chromium, lead, and zinc** reserves, **3rd manganese** reserves, **5th copper** reserves, top **10 for coal, iron, and gold.** 11th petroleum and natural gas reserves.
- Exports diamonds
- **Extractive industries** – 57% industrial output; 13% GDP
- **80% land agricultural; 70% of which pasture**
- **Wheat** (top agricultural export), barley, cotton, and rice
- **High in corruption but EITI compliant**
- **Grows at 8% p.a. for past decade - top 20 in World Economic Forum Global Competitiveness Reports**
- International standards of **sustainable development by 2019-2024** : ecology (especially water) and energy conservation
Uzbekistan
Uzbekistan - challenges & opportunities

- **Dry**, one of world’s two **doubly landlocked** countries
- **Only 10% land cultivable.** Over irrigated-land in river valleys and oases. Rest is vast desert and mountains.
- **Central Asia’s most populous country.** 32 million citizens = ⅓ of region. ⅓ young demographics - 34% < 14 years of age.
- **Uzbeks (81%), Russians (5.4%), Tajiks (4.0%), Kazakhs (3.0%), and others (6.5%).** Majority non-denominational Muslims.
- **Authoritarian** - torture, arbitrary arrests, and restrictions of freedom of religion, speech, press, association and assembly. World's second highest rate of “modern slavery” ~ 4%.
- **Tardy reform - state control, import substitution and self-sufficiency**
- **Discriminatory tariffs up 100 to 150%** making imports unaffordable.
- **Bureaucracy dominates; Corruption Perception Index - 156/176**
- **World’s (4th) largest gold deposits.** Silver. Copper (10th), Uranium (12th). 11th largest gas company. Oil, coal.
- **Agriculture = 26% of labor force, 18% GDP.** Rural underemployment 20%
- **Aral Sea** used to be world’s fourth-largest inland sea, providing air moisture and irrigation for arid land cultivation. Now **size halved and water to 1/3. Water-thirsty cotton cultivation. Soil pollution – salinity, fertilizers, pesticides**
- **Thanks to commodity prices – 26th fastest growing economy**
Kyrgyzstan
Kyrgyzstan - challenges & opportunities

• 80% Muslim; 17% Russia Orthodox
• Turkic origin, + Persian, Mongolian and Russian influence.
• Foreign domination - Uyghurs (early 9th c), Mongols (17th c), Manchus (early 19th c) and Russia Empire (from 1876)
• Almost continuous internal conflicts since 1911 independence
• 2010 - near-civil-war between Uzbeks and Kyrgyz in South Kyrgyzstan
• Revolution forced President Bakiyev with his family to seek asylum in Belarus. Leader of Social Democratic Party and then-PM Atambayev became President since December 2011
• Repression and illiberal laws against women e.g. 2013, banning women under 23 from traveling abroad without a parent or guardian
• Corruption Perception Index ranks Kyrgyzstan 136/176
• Issyk-Kul Lake in NE Tian Shan largest lake in Kyrgyzstan and 2nd largest mountain lake in world. Heavy winter snowfall leads to spring floods downstream.
• Syr Darya River from 2010 no longer reaches the Aral Sea. Too much water withdrawn upstream to irrigate cotton fields in Tajikistan, Uzbekistan, and southern Kazakhstan.
• 9th poorest country in former Soviet Union. Now 2nd poorest in Central Asia. 1/3 under poverty.
• 800,000 Kyrgyz migrants working in Russia =40% GDP
• Agriculture 1/3 GDP, ½ employment. Wheat, sugar beets, potatoes, cotton, tobacco, vegetables, and fruit.
• Mountainous - livestock-raising largest agricultural activity. Wool, meat and dairy products.
• Traditional farming by hand and horse – lack of transport infrastructure
• Substantial mineral reserves - coal, gold, uranium, antimony, and other valuable metals.
• Water resources and mountainous terrain enable it to produce and export large quantities of hydroelectric energy.
• Limited trade partners include Germany, Russia, China, Kazakhstan, and Uzbekistan
• Early reform – first CIS country to accede to WTO but economy now sluggish due to collapsing commodity prices and demands
• Way-out – Anti-corruption, transparency, industrial restructuring, foreign aid and investment
Tajikistan - challenges & opportunities

- Mountainous, landlocked, 7.4 million people
- 98% Muslim, 87%–95% Sunni. 3% Shia, 7% non-denominational.
- Ancient cultures. dating back to the Neolithic and Bronze Ages.
- Explorer Zhang Qian 張騫 reign of Wudi 漢武帝(141–87 BCE) enabled commercial relations with Han China to flourish.
- Foreign rule by Achaemenid Empire, Sasanian Empire, Hephthalite Empire, Samanid Empire, Mongol Empire, Timurid dynasty, and the Russian Empire.
- 1991 post-independence civil war - 1.2 million refugees within and without. All but 25,000 of > 400,000 ethnic Russians, mostly in industry, fled to Russia.
- 1997, central government began to take form, with peaceful elections from 1999.
- Single dominant-party system (People's Democratic Party) President Rahmon since November 1994.
- Authoritarian rule. No public criticism of regime tolerated. Protest severely suppressed; no coverage in local media.
- Drug trafficking major illegal source of income
- May 2015, Colonel Khalimov, commander of the Interior Ministry’s special-purpose police unit (OMON), defected to ISIS.
- 47% GDP from immigrant remittances from Tajiks in Russia
- 20% under poverty line
- Agriculture = 75% employment and ~ ¼ GDP, but only 7% land is arable
- Tajik Aluminum largest aluminum plant in Central Asia and one of largest in world
- Cotton = 60% agricultural output, 75% rural population, using 45% of irrigated arable land.
- Mountains > 90% of country. home to Nurek Dam, highest dam in the world. Glaciers major source of runoff for Aral Sea. Over 900 rivers > 10 km. Rivers Vakhsh and Panj have great hydropower potential
- 70% of population < age of 30. 35% between ages 14 and 30. 2008 tertiary education enrolment only 17%, significantly below the sub-regional average 37% due to low demand for high-skill jobs.
Turkmenistan
Turkmenistan - challenges & opportunities

- Slightly < than Spain, but > California.
- 1,748 km-long Turkmen shore bordering entirely-landlocked Caspian Sea
- Merv, ancient Islamic city on the Silk Road
- 8th century CE, Turkic-speaking Oghuz tribes moved from Mongolia into Central Asia

- 85% Turkmen, 5% Uzbek, 4% Russian and 6% others. 93% Muslim.
- Since independence, Niyazov as chief of state, nationalism + personality cult. 1999 abolished requirements for president to stand for re-election – dictatorial powers – isolationist – after death, succeeded in 2012 by DPM Berdimuhamedow, 97% of votes
- Former Communist Party, now as Democratic Party of Turkmenistan (DPT), remains dominant. No true opposition parties.
- Ranks 4th globally in terms of natural gas reserves. Despite inadequate export routes, natural gas total exports rose 15% p.a. 2003 to 2008, thanks to higher energy prices, making it one of the fastest growing economies.
- A desert country, intensive agriculture in irrigated areas. Largest crops - cotton, for export, and wheat, domestically consumed. World’s top ten producers of cotton.
- Central planning and state control. Rejects market reform programs.
- Since 1993, citizens provided with free electricity, water and natural gas.
Central Asia’s natural endowments
Importance of linkage industries – an African case study

BACKWARD LINKAGES

• Developing outsourcing independent firms (Urzua, 2007) e.g. South Africa mining equipment and clean coal technology firms – Industrial Policy Action Plan (IPAP) – 10 selected commodities – spill-offs in patented technologies, export of mining and haulage equipment etc.

• Gold sector in Ghana – (43% of exports (2009), over 50% GDP) – mandatory 10% government stake without contribution, small-scale mining for Ghanaians only, Made-in-Ghana products encouraged, development of Ghanaian mining equipment and service companies, training and localization of staff

FORWARD LINKAGES

• Diamond industry in Botswana – (40% of GDP, 60% of De Beer’s global supply of rough diamonds + high-grade large diamonds) – 2005 re-negotiation of 25-year mining license with De Beers – 50-50 JV Diamond Trading company (DTC) – mandatory release of >$500 m of diamonds for local cutting-industry with growth targets, creation > 3,000 diamond-cutting jobs, strict penalty for non-compliance, sorting, valuing, cutting and polishing= 1/3 value of mining, taking over London’s role for “aggregation of diamonds” = sale in parcels, government-established “Diamond Office” to develop long-term strategies on mid-level stones as costs > China and India but < Belgium and Israel

• Zambia’s potential in refined copper products e.g. cathodes and semi-fabricates e.g. plates, sheets and wires (controlled by one single US multinational due to lack of infrastructure, energy and skills); $800m new Chambishi China-Zambia Economic Cooperation Zone to offer opportunities for large-scale semi-fabricate manufacturing
From oil and gas to refineries and chemicals
Turkmenistan, Kazakhstan, and Uzbekistan

<table>
<thead>
<tr>
<th>Primary process</th>
<th>Secondary process</th>
<th>Tertiary process</th>
<th>Products</th>
<th>Applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biomass</td>
<td>Pyrolysis process</td>
<td>Fractionation</td>
<td>Extraction</td>
<td>Phenols</td>
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<td>Organic Acids</td>
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<td>Feedstock Refineries</td>
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<td>Heat &amp; Power</td>
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</tbody>
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From base metals to semi-finished spare parts and components

Kazakhstan, Uzbekistan, Kyrgyzstan, and Tajikistan
From gold and diamonds to jewelry

Uzbekistan (gold), Kazakhstan (gold & diamonds)
From cotton to clothing and fashion

Tajikistan and Turkmenistan
From Meat, diary, wheat and fruit to packaged products

Kyrgyzstan
From sunshine and water to solar and hydroelectric power

Tajikistan
From scenic mountains, lakes and rivers to eco-tourism

Tajikistan and Kyrgyzstan
From young demographics to innovative and digital economy

Uzbekistan and Tajikistan

- Medical robots are becoming more common in medical field.
- They have many uses including helping doctors and patients.
- An example of robotics in medicine today is laser eye surgery.
Pre-requisites - good governance

Companies publish what they pay and governments publish what they receive in an EITI Report.

ETI REPORT
where the tax and royalty payments are independently verified and reconciled.

GOVERNMENTS
disclose receipt of payments.

TOWARDS NEW SOCIAL CONTRACTS
 USING DIALOGUE PROCESSES TO PROMOTE SOCIAL CHANGE

CIVICUS

GOOD GOVERNANCE

BUILD RESILIENT INFRASTRUCTURE, PROMOTE INCLUSIVE AND SUSTAINABLE INDUSTRIALIZATION AND FOSTER INNOVATION
Pre-requisites – infrastructural connectivity

**FIGURE 2**
Central Asia—Silk Road Rail Lines and Proposed Regional Development Corridors

In addition to the Trans-Eurasia rail routes of the Silk Road crossing Central Asia, these nations require the development of their own regional rail network, for which key segments are shown here schematically. Some are under way, planned, or intended.

**THE LONGEST RAILWAY IN THE WORLD**

The China-European Train is the longest on earth, crossing the Chinese-Asian Railway and the Trans-Siberian railway. This railway travels through the greatest number of countries, going through China, Kazakhstan, Russia, Belarus, Poland, Germany, and France before ending in Spain.
China’s OBOR offers epochal opportunities

81,000 km (50,000 miles) high-speed rail to be built in 65 countries. Potential investment estimated at $1.4 trillion = 12 x Marshal Plan ($120b in today’s prices)
embedding a China-Central Asia-West Asia Economic Corridor

The Belt and Road Initiative: Six Economic Corridors Spanning Asia, Europe and Africa

China’s pipelines connecting Central Asia
• China contributes $40 billion to set up a Silk Road infrastructure fund to boost connectivity across Asia, through building roads, railways, ports and airports across Central Asia and South Asia.

• To focus on China's Silk Road Economic Belt and the 21st Century Maritime Silk Road initiative.

• To be "open" and welcome investors from Asia and elsewhere.
.... and a new Asian Infrastructure Investment Bank

- 57 Founding Country Members including 16 of world’s largest economies (except US, Japan, Canada, Mexico) and key US allies (latest Philippines)
- All BRICS countries included. Nearly all of Western Europe, except Belgium and Ireland.
- Non-Asian countries limited to overall 25% shares
..... meeting $8 trillion Asian infrastructure needs

AIIB - 57 Founding Member Countries including key US allies, $50b paid-in capital, $100b authorized capital

- **World Bank president** reserved for an American
- **IMF head** for an European
- **ADB** – Japan’s voting power 2X China’s
- Bretton Woods institutions follow **Washington Consensus** – full privatization and liberalization of markets, exchange rate, interest rates, trade and investment, tight budget – Not working for most developing countries
..... supported by New Development Bank (BRICS Bank)

- Representing 41.4% (3 b) world population, 25% of world land mass and GDP
- HQ in Shanghai; African regional centre in Johannesburg
- Inaugural President from India
- Inaugural Chairman of B of Directors from Brazil
- Inaugural Chairman of B of Governors from Russia
- No veto power for any Member
- No increase in any Member’s share without other 4 Members agreeing
- Non-BRICS country can join but BRICS share > 55%
- Authorized lending up to $34 b p.a., to start in 2016
**Potential investments in Central Asia natural resources**

**Joint Chinese investment in Central Asia natural resources**

### CENTRAL ASIA, XINJIANG PRC MARKETS AND TRADING PARTNERS*

<table>
<thead>
<tr>
<th>Country/Region</th>
<th>Principal natural resources</th>
<th>Primary farm products and industries</th>
<th>Major exports</th>
<th>Major Imports</th>
<th>Major trading partners Former Soviet Union</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kazakhstan</td>
<td>Oil and gas, chrome, iron ore, coal, gold, copper, lead-zinc ore, tungsten</td>
<td>Wheat, barley, meat, wool, metallurgy, textiles, machine building, petrochemicals</td>
<td>Oil and gas, coal, nonferrous metallurgy, grain, garments, footwear</td>
<td>Machinery, oil and gas, processed food and beverage, ferrous metallurgy</td>
<td>Russia, Ukraine, Uzbekistan, Kyrgyzstan</td>
<td>China, Germany, Sweden, Switzerland</td>
</tr>
<tr>
<td>Kyrgyz Republic</td>
<td>Hydroelectricity, gold, mercury, uranium, coal, cesium, antimony</td>
<td>Tobacco, livestock, wool, metallurgy, agro-processing, electronics, textiles, sugar</td>
<td>Agro-machinery, wool, tobacco products</td>
<td>Oil and gas, wheat, processed food, machinery, chemicals, light industrial products</td>
<td>Russia, Ukraine, Kazakhstan, Uzbekistan</td>
<td>Germany, Bulgaria, Czech &amp; Slovak Republics, China</td>
</tr>
<tr>
<td>Uzbekistan</td>
<td>Oil and gas, gold, coal, silver, copper, lead-zinc ore, tungsten</td>
<td>Cotton, fruits and vegetables, textiles, cotton harvesters, textile machinery, metalurgy</td>
<td>Cotton, gold, gas, fertilizers, light industrial goods</td>
<td>Machinery, oil and gas, chemicals</td>
<td>Russia, Ukraine, Kazakhstan, Kyrgyzstan</td>
<td>Switzerland, South Korea, Turkey, China</td>
</tr>
<tr>
<td>Xinjiang PRC</td>
<td>Oil and gas, coal, gold, cotton, grapes</td>
<td>Cotton, corn, sugar beet, animal husbandry, minerals extraction, petrochemicals, textiles</td>
<td>Sugar, maize, tomato ketchup, peas, hops, cotton, sheep’s casings, wool, garments, carpets</td>
<td>Steel products, chemical raw materials, fertilizers, building materials</td>
<td>Kazakhstan, Uzbekistan, Kyrgyzstan, Russia, Ukraine</td>
<td>NA</td>
</tr>
</tbody>
</table>

*For purposes of this study, Central Asia refers to Uzbekistan, Kazakhstan, Kyrgyz Republic, and Xinjiang PRC.*
Public-private inbound-outbound opportunities

Cross-border projects under the New Silk Road initiative in the coming years

<table>
<thead>
<tr>
<th>Pilot projects</th>
<th>Investment destination</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gwadar Port development</td>
<td>Pakistan</td>
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<tr>
<td>Hambantota Port construction</td>
<td>Sri Lanka</td>
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<tr>
<td>Capacity co-operation plan (investment value: US $23.6bn)</td>
<td>Kazakhstan</td>
</tr>
<tr>
<td>Sihanoukville port construction</td>
<td>Cambodia</td>
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<tr>
<td>Indonesia port construction</td>
<td>Indonesia</td>
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<tr>
<td>China-Laos-Thailand railway</td>
<td>Laos and Thailand</td>
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<tr>
<td>China-Myanmar railway</td>
<td>Myanmar</td>
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<tr>
<td>China-Tajikistan railway</td>
<td>Tajikistan</td>
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<tr>
<td>China-Pakistan railway</td>
<td>Pakistan</td>
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<tr>
<td>China-central Asia natural gas pipelines line C and line D</td>
<td>Central Asia</td>
</tr>
<tr>
<td>China-Russia natural gas pipelines, west line and east line</td>
<td>Russia</td>
</tr>
</tbody>
</table>

Source: Xinhua, HSBC

- Inbound and outbound private sector investment opportunities with China
  - E.g. real estate, telecommunications, e-commerce, financials, tourism, education, creative industries, and green technologies.
  - China’s proactive role in Paris COP21 Climate Change Agreement and development of world’s largest green bond market
Unprecedented middle-class explosion 88% in Asia

At a global level, we are witnessing the most rapid expansion of the middle class the world has ever seen.

At the end of 2016, there were about 3.2 billion people in the global middle class. On average 160 million will join the middle class annually for the next 5 years.

The middle class will spend $29 trillion more per year by 2030.

Globally, the middle class is already spending $35 trillion, and could spend $29 trillion more by 2030, accounting for roughly 13% of the global economy. The market for middle class consumption could grow faster than global GDP growth.

In only three years, the fast-expanding global middle class will reach a historic milestone.

Around 2020, the middle class will become a majority of the global population for the first time ever.

We are on pace to add another billion in seven years and another billion by 2030.

A world with more middle class people must wrestle with the implications for carbon emissions.

To ease middle class pressure on the global commons, we need smart cities and girls education.

1. Given rapid urbanization, plan cities with energy-efficient buildings and mass transport.

2. Provide girls with secondary education, which results in at least 4 fewer children, fewer people, lower carbon emissions.

The global middle class market is growing slowly in advanced countries and rapidly among emerging market economies.

The middle class market in the U.S., the Eurozone, and Japan is projected to grow at only 0.5% per year compared with annual growth of 6% or more in China and India.

88 percent of the next billion entrants into the middle class will be in Asia.

By 2030, Asia could represent 2/3 of the global middle class population.
Hong Kong as global connector to and from China

Ranking the World by Economic Freedom

**Top 10 Countries**

1. Hong Kong **88.6**
2. Singapore **87.8**
3. New Zealand **81.6**
4. Switzerland **81.0**
5. Australia **80.3**
6. Canada **78.0**
7. Chile **77.7**
8. Ireland **77.3**
9. Estonia **77.2**
10. United Kingdom **76.4**

**Economic Freedom Scoring Key**

80-100 Free
70-79.9 Mostly Free
60-69.9 Moderately Free
50-59.9 Mostly Unfree
0-49.9 Repressed

SOURCE: 2016 INDEX OF ECONOMIC FREEDOM

heritage.org
High speed rail link to heart of China
5-S for sustainable development – Scrutization

Figure 2.1: The Five Stages of Strategic Management

Stage 1: Develop a Strategic Vision (and Mission)
Stage 2: Setting Objectives
Stage 3: Craft a Strategy to Achieve Objectives and Vision
Stage 4: Implement and Execute Strategy
Stage 5: Monitor, Evaluate, and Take Corrective Actions

One Thing Leads To Another
Promoting Industrialisation by Making the Most of the Commodity Boom in Sub-Saharan Africa

Mike Morris, Raphael Kaplinsky and David Kaplan

IoT, Robotics, and AI
The Real Game-Changers in Manufacturing

PLANET
Environmental Issues

CONSERVATION
Philosophy

PROSPERITY
Economic Issues

SUSTAINABILITY

PEOPLE
Social Issues

LAND Ethic

MORAL Economy

40
5-S for sustainable development – Systemization

**SUSTAINABLE DEVELOPMENT GOALS**
17 GOALS TO TRANSFORM OUR WORLD

**EQUATOR PRINCIPLES**

**Principle 1:** Review & Categorisation
**Principle 2:** Social & Environmental Assessment
**Principle 3:** Applicable Social & Environmental Standards
**Principle 4:** Action Plan & Management System
**Principle 5:** Consultation & Disclosure
**Principle 6:** Grievance Mechanism
**Principle 7:** Independent Review
**Principle 8:** Covenants
**Principle 9:** Independent Monitoring & Reporting
**Principle 10:** EPFI reporting
5-S for sustainable development – Sanitization

Factors creating and affecting pollution problems and future trends of environmental quality

Pollutants

Evaluation of Levels of Problems

The problem is trivial or of medium scale.

Monitoring of Environmental Quality

Overall situation is severe or tends to be severe.

"Pollution Control Area" consideration by the National Environmental Borad

To abate or mitigate pollution by applying available legal measures, e.g. ministerial regulation notifications, acts, etc.

Yes

The locality is designated as "Pollution Control Area"

Implementation of the Action Plan

No

Monitoring of Environmental Quality

M.S. Binoj Kumar
P.K. Gopalakrishnan
5-S for sustainable development – Standardization
5-S for sustainable development – Self Discipline
Thank you

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International and independent China Specialist with over 40 years professional experience covering Hong Kong and Mainland China. Chairman of Andrew Leung International Consultants, founded in London now relocated to Hong Kong. Provides strategic advice on China-related finance, investment, politics and economics globally, including both business and governments. China Futures Fellow selected worldwide by Berkshire Publishing Group, Massachusetts. On the Brain Trust of Evian Group, a Lausanne-based think-tank. Founding Chairman of China Group of Institute of Directors City Branch, London. Advisory Board Member of China Policy Institute, Nottingham University, 2005-10. Governing Council, King’s College London, 2004-10. Visiting Professor with Metropolitan University Business School. Helped set up Standard Chartered Bank’s first merchant-banking subsidiary in Hong Kong (1983); oversaw the trans-migration of industries into China as Deputy Director-General of Industry; US-government sponsored month-long visit to brief Fortune 50 CEOs on China beyond Tiananmen Square (1990); Editor-at-Large of a London-based international consultancy on China’s energies (2007). Sponsored Speaker on China at international conferences, including Forum Istanbul, Turkey, Annual African Banking and Financial Institutions Conference in Accra, Ghana, and Low Carbon Earth Summit in Dalian, China. Regular interviewee on live television with CNBC, Aljazeera English, Times Now of India, BBC and other international channels. Awarded Hong Kong’s Silver Bauhinia Star (SBS) and included in UK's Who's Who since 2002.