

**China's Transition to a "Sustainably Competitive" Model of Economic Development:
Four Core Components and their Interconnections***

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Albert S. Yee
Department of Political Science
Colgate University

ayee@colgate.edu

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1. Introduction

Traumatized by the economic fallout from the 2008 U.S. financial crisis and the ensuing global recession, Chinese policymakers and analysts have widely concurred that China's post-1978 economic development model requires transformation. This growing policy consensus has been enunciated repeatedly by top leaders and enshrined in numerous official government documents, research reports and media analyses. The need for a new model was first officially broached in 2003-2004, given explicit government acknowledgement in 2007, became recognizable as an alternative coherent model in 2008-2009, and continues to be elaborated upon today. Initially, policymakers acknowledged the need for a new model, but conceived of it only vaguely as some unspecified transformation of the old export-led model. At the 13th CPC Congress, Chinese policymakers publicly conceded that the fabulously successful economic development strategy that China had been following since 1979 was becoming increasingly dysfunctional and needed to be transformed. By the 17th CPC Congress in 2007, they explicitly called for transitioning the Chinese economy to a new model, but one still largely defined negatively in terms of necessary corrections to the old model. In particular, at his March 2007 NPC press conference, Wen Jiabao called for shifting to a new model that would overcome the "four uns" (i.e., unsustainabilities) plaguing the export-led model. Jolted by the 2008 global recession, policymakers and analysts began to formulate a positively specified and coherent new model in 2008-2009 with continuing refinements in subsequent years. Since 2008, the official mantra of policymakers and policy analysts has been that China needs to "accelerate the transformation of its development mode."¹ Finally, in the 12th Five Year Plan adopted in 2011, this policy consensus was explicitly enshrined as the official policy of the Chinese government.

Although there is widespread agreement that China needs to transform its development model, there exists some confusion about the precise substantive contents and theoretical coherence of this new model. There exist differing tabulations, both official and unofficial, of the diverse elements contained in this new model of economic development. Part of the confusion arises from the differing mixture of

macroeconomic, developmental, and social policy elements contained in these multiple accounts. To clarify the contents and coherence of these compilations, a “development model” needs to be differentiated from standard macroeconomic management of a (largely) market economy. Moreover, the key elements of this model need to be clearly identified and their interconnected coherence explicitly delineated. Otherwise, it is difficult to argue that China is actually adopting a new development “model.” Accordingly, Sections 3-7 of this paper identify four core components of this new model and render explicit their prescriptions for their respective diagnosed “unsustainables” found in the old post-1978 export-led model. Section 8 then delineates the multiple ways in which these four prescriptions are mutually reinforcing and form a dense matrix of integrated interconnections. Although not yet officially delineated and not yet given an official name, one substantively accurate label for this new model might be the “Sustainably Competitive” Model of Global Economic Development (持续并有竞争力的经济发展模式) or the “SC Model.”²

2. Four “Unsustainables” in China’s Export-Led Model of Development

Even before the onset of the 2008-2009 Global Recession, the State Council recognized that China’s economy was, as Wen Jiabao bluntly stated at his March 16, 2007 National People’s Congress press conference, “unstable, unbalanced, uncoordinated, and unsustainable.”³ These “four uns,” explained Wen, referred to the unstable mixture of excessive investment, liquidity and current-account surplus, the unbalance between urban-rural and east-west disparities, the uncoordinated regional and structural imbalances, and the unsustainable problems of environmental degradation, income disparities, and excessive resource usage.⁴ As the World Bank reported in greater detail,

“the existing pattern of growth is energy- and natural resource-intensive, environmentally unsustainable, and does not create enough urban jobs. Supporting it has required ever higher corporate savings and sustained explicit and implicit government subsidies. Inequality has climbed to levels approaching those in Latin America. And lack of access to health, education or social support by the poor means that

millions of migrants leave their children behind as they move to the coastal areas in search of work. The importance of addressing these challenges has been laid bare by the crisis and its aftermath of slower global expansion that are challenging some of the foundations of China's current growth model."⁵

The Global Recession rendered inescapably clear all of these unsustainabilities plaguing the Chinese economy. Despite over 30 years of stellar economic growth, China's "export-led" model of economic development had subjected the Chinese economy to daunting vulnerabilities and was unsustainable in the long run. As Hu Jintao incisively observed at the annual seminar for principal leading cadres at the Central Party School on February 3, 2010, "on the surface, the global financial crisis impacted on the speed of China's economic growth, but in essence it was the economic growth pattern that was worst hit."⁶ Similarly, Wen Jiabao acknowledged at the March 2010 China Development Forum that "This crisis has actually been a challenge to China's economic development mode."⁷ Consequently, as the Standing Committee of the National People's Congress (NPC) reported in March 2010, "Against the backdrop of the global financial crisis, the existing pattern of economic development is clearly unsuitable; therefore, accelerating its transformation has become an inherent requirement for ensuring sustainable economic development and social harmony and stability."⁸

There are specific drawbacks of the export-led model of economic development that China has pursued since 1978. According to Wang Yang, the Guangdong CPC Party Secretary and Politburo member, "Our growth model of 30 years, which enriched us rapidly, has come to the end of its cycle. First, rapid growth generally neglects the costs of resources, the environment, and worker health. Rapid growth has caused environmental damage. . . . Second, the traditional model is excessively dependent on international demand, which in the current crisis threatens our economy."⁹ As the writer Ren Zhongping elaborated, this export-led model gave preference "to the international market over the domestic demand, preference to low cost advantage over the capability for independent innovation, preference to material input over resources and environment, preference to increase in wealth over increase in the level of social benefits." As a consequence, "this type of pattern of growth does not give sufficient importance to the improvement of structure, the increase in efficiency, the sustainability of the process, and the sharing of

results.”¹⁰ These various criticisms can be distilled into four major ways in which China’s post-1978 export-led model of economic development is increasingly undesirable and unsustainable.

Unsustainable #1 of Economic Imbalance

In China’s post-1978 “export-led” model of economic development, investments and exports accounted for the bulk of economic growth. Household consumption, meanwhile, accounted for only 35% of GDP in 2006 (down from 41.4% in 2004 and about 50% in the late 1970s). In contrast, household consumption accounted for roughly 60% of GDP in Japan, South Korea, and Taiwan, and about 70% of GDP in Western Europe and the USA.¹¹ Despite the phenomenal success of China’s export-led model, this heavy reliance on investments and exports was unsustainable economically, materially and politically.¹² Not only are there economic and resource limits to the growth in investments, global overcapacity and protectionist policies overseas also place limits on the continued growth in exports. As Stephen S. Roach explained, China’s export-led model “is not sustainable from a macro point of view because it threatens to produce the twin possibilities of a deflationary overhang of excess capacity and a protectionist backlash to open-ended exports.”¹³

Such great dependence on export markets, moreover, rendered the Chinese economy vulnerable to global economic downturns. As the Global Recession makes abundantly clear, economic growth derived from investments and exports would decline precipitously when export markets contracted significantly. Indeed, during the first half of 2009, China’s GDP suffered a negative 2.9% from declining exports, while investment provided 6.2% and consumption accounted for 4.6% of positive GDP growth.¹⁴ For all of 2009, according to the National Bureau of Statistics (NBS), investment accounted for 8% of China’s 8.7% GDP growth (i.e., 92.3% of the total), while consumption contributed 4.6% (or 52.5% of the total) and exports accounted for a negative 3.9% (or a negative contribution of minus 44.8% of the total).¹⁵ Given the realities of these economic vulnerabilities, China’s current economic imbalance is ultimately unsustainable. As numerous Chinese analysts and policymakers now recognize, China needs

to rebalance its economy by increasing domestic consumption and reducing its reliance on exports and infrastructure investment. As Vice Premier Li Keqiang declared at the Davos World Economic Forum (WEF) on January 28, 2010, China “must change the old way of inefficient growth and transform the current development model that is excessively reliant on investment and exports.”¹⁶ Indeed, a new “post-crisis consensus” has emerged among Chinese policymakers and analysts affirming that “neither investment nor exports, not even the combination of the two, can drive lasting, coordinated, and healthy growth of the Chinese economy.”¹⁷ According to this “single, overriding consensus about the future of the Chinese economy” held by both senior leaders and economists, “China needs to rebalance its economy away from excessive dependence on exports and investment and to do more to boost demand by its own consumers.”¹⁸ To achieve this necessary rebalancing, as many observers have noted, China needs a new model of economic development.¹⁹

Unsustainable #2 of Low-Wage Assembling of Exports

China’s export-led model of economic development is unsustainable in a second way due to its reliance on low-wage labor for assembly of simple and intermediate goods for export. Not only are these industries vulnerable to the loss of export markets, but the reliance on low wage labor is hostage to the sufficient supply of pliant Chinese workers and the absence of competition from other lower wage countries. Yet both essential conditions for the success of China’s export-led model are now under siege. Broadly, the costs of the means of production such as land, energy and raw materials are increasing, while the population is aging with fewer people of working age.²⁰ More importantly, as the recent 12 suicides at Foxconn and the 12-day labor strike against Honda in July 2010 showed, Chinese workers today are no longer willing to accept low wages and poor working conditions. Unlike their predecessors in the 1980s and 1990s, they are better educated, more ambitious, cognizant of their labor rights (as codified in the new January 2008 Labor Law), constantly connected through information technology (text messaging, chat rooms, social webpages), and aspire to urban lifestyles and living standards.²¹ Just in Guangdong

alone, there were 35 labor strikes during the seven weeks prior to the much more publicized strike against Atsumitec, the Honda auto transmissions parts plant in Foshan. To resolve their labor problems, Honda was forced to raise monthly wages by an average of 47 % (from 1500 yuan (\$234 USD) to 2000-2500 yuan (\$373.13 USD), while Foxconn raised wages at its massive Shenzhen plant by an average of 65%.²² Moreover, as economic development and infrastructure projects in inland provinces siphon off workers, there is emerging a significant shortage of migrant workers in coastal processing/assembling factories operating in the Pearl River Delta, the Yangtze River Delta and even in Shandong Province. In post-financial crisis Dongguan, for example, 90% of local companies are experiencing difficulties attracting workers while manufacturers of electronics, shoes, clothing, and toys on average are 20% understaffed.²³ As a result of this labor shortage, coastal firms have been forced to offer higher wages to attract and retain workers. On average, monthly wages have increased by several hundred yuan to roughly 1500 yuan.²⁴ This wage increase is good for workers but, as Wu Jinliang of the Zhejiang Provincial Party School acknowledged, “it also eats away the competitive edge of thousands of small businesses that used to rely on cheap labor.”²⁵

Meanwhile, lower wages in Vietnam, Bangladesh, and other less developed countries (LDCs) have prompted transnational manufacturers to establish factories in these countries. According to a new study by Dennis Tao Yang, Vivian Chen and Ryan Monarch, urban Chinese wages are now roughly equivalent to those in Thailand and the Philippines.²⁶ As Cai Fang, the Director of the Institute of Population and Labor Economics of the CASS, worried “We are seeing the end of the period of extremely low-cost labor in China, and Chinese-made goods are becoming less of a bargain for overseas clients.”²⁷ As a result, China’s low wage model of export-led growth is increasingly unsustainable.

Indeed, even if this model can be perpetuated for many more years, its current incarnation has at least two major undesirable consequences. First, simple assembly manufacturing for exports relegates Chinese firms to low value-added segments of the global value chain. While companies holding patents on technology and possessing consumer preferred brands reap most of the profits in this type of globalized production, Chinese manufacturers are left with low profit margins and unsecure contracts.

According to Liu Shucheng, the Deputy Director of the CASS Economics Department, less than 10% of China's export products are "brands" with the Chinese manufacturer possessing independent intellectual property rights. The other 90% are merely "labeled products" assembled by original equipment manufacturers (OEM) at the "low end of the value chain" with very low value-added.²⁸ As the director of the General Customs Administration Sheng Guangzu lamented, "While they [foreign funded enterprises] reap most of the profits, our country earns only small processing fees." According to Xu Quanning, the Secretary General of the Shanghai Toy Industry Association, 80% of Chinese toy manufacturers "are mere processing businesses, without any brands or core technologies." As a result, they earn merely 5-8% profits, compared to the other 20% of toy manufacturers with intellectual properties that earn 20-30% profits.²⁹ For example, China manufactured five billion dolls from 2000-2009, with 45% of them exported to the U.S. But while the best known Barbie doll has a retail price of nearly \$10 in the U.S. market, Chinese processing firms earn merely 35 cents per doll, while Mattel, the American firm that owns the brand, reaps nearly \$8 in profits.³⁰ In another example, the popular iPad retails for \$499 USD (for the low-end model), while the cost of the materials is about \$260 (the most expensive component is the \$65 USD display panel from LG), the cost of manufacturing by Chinese processing firms (e.g., Foxconn) is only \$9 USD, and most of the rest goes to Apple as profits.³¹ Likewise, as Wen Jiabao pointed out, "An iPod is sold for \$299, and China in the manufacturing link will only get \$6 for it."³² For Chinese furniture manufacturers, similarly, producing foreign brand products for export yielded only a profit margin of 5%, whereas producing their own brands of furniture for the domestic Chinese market generated profits of over 50%.³³ As Richard Herd, economist at the Organization for Economic Cooperation and Development (OECD), bluntly stated, "China is exporting high-tech products that are 'made in China' rather than 'created in China,' and thus has produced little added value."³⁴

Second, perpetuating a low wage model of economic development retards the generation of the higher skilled and higher paid jobs needed to cultivate greater domestic consumption. As one writer cogently observed, "The export-oriented processing model can make products, boost GDP, and employ people, but it cannot create brands, develop advanced technology, generate high profits or pay high

salaries. Moreover, sustaining operations by simple order processing leaves companies vulnerable to external economic factors like the global financial crisis.”³⁵

Given all these disadvantages, China’s export-led model of development is clearly undesirable as well as unsustainable. Consequently, according to many analysts and policymakers, China needs to transition its economy into higher value-added manufacturing and higher skilled services. As Richard Herd, the OECD economist urged, “China has to shift its focus from labor-intensive industries to high-technology ones,” because it is “facing growing labor costs and competition from other emerging economies whose development also take advantage of labor supplies.”³⁶ To successfully make this transition, China must implement policies derived from a new model of economic development.

Unsustainable #3 of Urban/Rural, Regional and Economic Disparities

China’s export-led model of development is unsustainable in a third way because it produces gaping disparities that generate societal divisiveness, social unrest, and political instability. The success of export manufacturers in urban coastal cities generates economic disparities between wealthy capitalists and government officials on the one hand and poor low-wage workers, many from rural inland provinces, on the other hand. Moreover, as the coastal economies grow, regional economic disparities are exacerbated between wealthy coastal provinces and poor inland areas. Finally, as coastal urban areas grow richer, the gap between urban and rural areas becomes wider. These growing economic, regional and urban/rural disparities render China’s export-led model of development unsustainable in the long run. As many Chinese policymakers and analysts realize, China needs to follow a new model of economic development. At the March 22, 2010 China Development Forum in Beijing, for example, Wen Jiabao exhorted, “We should shift the economy’s dependence from external demand to domestic demand, and make great efforts to shorten the gaps between regions, and between urban and rural areas.”³⁷

Unsustainable #4 of Overuse of Material Resources and Ecological Degradation

A fourth unsustainability plaguing China's export-led model of economic development arises from its intensive and suboptimal use of material resources and carbon energy. With outmoded manufacturing and power plants and inefficient production processes, China's economy is consuming too much natural resources that are dwindling in global supply. According to the International Energy Association, China uses twice the amount of oil to generate a unit of GDP as other countries. In terms of total resources per unit of GDP, China's inefficient economy consumes four times the amount of the typical developed country and double that of other developing economies in Asia.³⁸ Moreover, these outmoded and inefficient manufacturing facilities are generating environmental externalities that endanger the ecology of China and the planet. According to the World Bank, China contains seven of the world's ten most polluted cities and the world's most polluted waters.³⁹ As a result, sooner rather than later, China's export-led model of manufacturing is materially and ecologically unsustainable.⁴⁰ As Ba Shusong, the Deputy Director of the Financial Institute of the State Council's Development Research Center, recognized, China's "extensive growth of exports relying on cheap labor and at the expense of consuming resources . . . has now met with a bottleneck in its course of development."⁴¹ Similarly, Niu Wenyan, the head of the Sustainable Development Strategy Research Group of the Chinese Academy of Sciences (CAS), warned that "the bottleneck restrictions of resources and the environment have become more and more conspicuous with each passing day."⁴² "For all its successes," reported the World Bank in April 2010, "the existing pattern of growth is energy- and natural resource-intensive, environmentally unsustainable, and does not create enough urban jobs."⁴³ "The old ways of consuming resources and importing [migrant] labor will not work," agreed Wang Yang, the Guangdong Party Secretary. "Even if we wanted to continue with it, we would be unable to do so—we are running out of resources and environmental capacity."⁴⁴ Indeed, as one senior official definitively concluded, "the present world economic growth model is unsustainable; the developed countries' excessive consumption model can hardly continue, and readjustment of the world economic growth model is imperative. We must . . . speed up our [i.e., China's] transformation of the economic growth mode . . ."⁴⁵

According to numerous policymakers and analysts, in short, China needs to follow a new model of economic development. In the wake of the Global Recession, a remarkable consensus on this point has emerged among Chinese leaders and economists. As the writer Wang Yaguang explained, “the financial crisis has made China deeply realize that the low-value-added extensive mode of development devoid of core technology that it has practiced at the cost of consuming resources and sacrificing the environment cannot continue and that it must change its development pattern by switching to reliance on scientific and technological innovation and technological progress and by enhancing its international competitiveness.”⁴⁶ According to Yao Jingyuan, the Chief Economist at the National Bureau of Statistics (NBS), “China has long depended on material resource investment to support economic growth. This is unsustainable. China must improve its ability to innovate and use technological progress to provide more support for economic growth.”⁴⁷ Similarly, at their annual sessions in March 2010, the deputies of the National People’s Congress (NPC) and the National Committee of the Chinese People’s Political Consultative Conference (CPPCC) concurred that “we must shift economic development from . . . depending largely on material resource input to depending on innovations in science and technology and improvements in labor quality.”⁴⁸ “Instead of relying mainly on increased material consumption,” Wen Jiabao affirmed, China’s economic growth must rely on “scientific and technological advancement, improved quality of workers, and management innovation.”⁴⁹

3. Towards a “Sustainably Competitive” Model of Economic Development

The Global Recession rendered the unsustainability, vulnerability and undesirability of China’s export-led model of development starkly visible to Chinese policymakers. Their new or newly urgent appreciation of China’s precarious perch in the new global economy prompted them to implement various longer-term policies to render the Chinese economy more balanced along multiple dimensions, more upwardly competitive globally, and more sustainable socially and ecologically. “Priority must be given to economic restructuring and transformation in development pattern,” explained Wen Jiabao, “to solve

China's economic imbalances, incoherence and unsustainability exposed in the crisis."⁵⁰ As Hu Jintao elaborated, "Transforming the economic development mode at an accelerating pace is an inevitable requirement for adapting to major changes in the structure of global demand and enhancing the ability of our country's economy to withstand risk in the international market, for improving our capacity for sustainable development, for seizing the commanding heights in international competitiveness and striving to foster new strengths after the international financial crisis is over . . ."⁵¹

By exposing the dysfunctions and unsustainabilities of China's export-led model, the Global Recession facilitated the emergence of a new model of economic development. This new model supplies cogent diagnoses of the problems plaguing the old model and deduces policy prescriptions for attaining sustainable growth in the fiercely competitive new global economy. Guided and prompted by this new "model" of "sustainable competitiveness," Chinese policymakers are pursuing policies that follow a more viable model of economic development. As a March 5, 2010 Ministry of Finance Report noted, its budget preparation and financial work in 2010, based on a half-page long "guiding thought," will "place greater emphasis on promoting economic restructuring and improving the quality and efficiency of economic development; on boosting domestic demand, particularly consumer demand, and achieving steady and rapid economic growth; on ensuring and improving people's well-being, and promoting balanced economic and social development."⁵² Unfortunately, as Hu Jintao lamented, "leading cadres of many localities and departments have been 'unwilling to change' their thinking, do not know 'how to change' their actions, and . . . there is also a lack of institutions and systems supporting 'sustained change'."⁵³ But given the urgent impetus of the Global Recession, the new post-2008 mantra of Chinese policymakers is that "accelerating the change in the mode of economic development" is now their top priority.⁵⁴

Four Integrated Components of the New Model of Economic Development

To avoid the pitfalls of the old export-led model and to plot a course for success in the new global

economy, Chinese policymakers are pursuing longer-term policies derived from the basic precepts of a new model of economic development. These basic elements form a coherent new model that prescribes particular policies that would both rectify the unsustainabilities of the old export-led model and generate sustainable economic growth in the future. Although this new model has not been explicitly delineated nor officially designated, some Chinese policymakers and analysts have made oblique references to it. In particular, Vice President Xi Jinping (Hu Jintao's heir apparent) have referred to this model vaguely and unsatisfactorily as “a new style of industrialization path”⁵⁵ or as “the road of new industrialization with Chinese characteristics.”⁵⁶ To be more substantively accurate, I will call it the new “Sustainably Competitive” Model of Global Economic Development (持续并有竞争力的经济发展模式) or “SC Model.”

When pieced together, this SC Model consists of the integration of four major components that are readily recognizable from government documents, policymakers' speeches, and analysts' writings. These four components directly and indirectly provide diagnoses of, and prescriptions for, the “four unsustainables” plaguing China's export-led model of economic development. In brief, this new SC Model consists of the integration of the four sets of diagnoses and prescriptions that are listed in Table 1. The first component diagnoses the problem of unsustainable economic imbalance and prescribes policies to increase domestic consumption by raising household incomes and improving the social safety net. The second component diagnoses the unsustainable and undesirable reliance on low-wage, low value-added, assembling manufacturing of exports. To redress these problems, it prescribes policies to improve global economic competitiveness by removing outmoded production facilities and pursuing technological innovation. The third component diagnoses the unsustainable disparities between coastal and inland provinces, between urban and rural areas, and between rich and poor citizens. To reduce these increasing disparities, it prescribes the “*san nong*” (“three rural issues”) policies to modernize agricultural production, increase farmer incomes and economically develop inland rural areas. The fourth component diagnoses the unsustainable overuse of resources and rampant ecological degradation afflicting China's

export-led model of economic development. To surmount these problems, it prescribes policies to develop green technology and renewable energy. In Sections 4-7 below, the four components that constitute the new SC Model are analyzed sequentially to delineate their diagnoses and prescriptions.

Table 1: Diagnoses and Prescriptions of the “Sustainably Competitive” Model of Economic Development (or “SC Model”)

Export-Led Model of Economic Development (1979-present)	SC Model’s Diagnoses of Four “Unsustainables” in Export-Led Model	SC Model of Economic Development (2003-present)	Implemented Policies of SC Model (2003-present)
<u>Core Component #1</u>→ Economic growth disproportionately from investments and exports	Limits to investment and export growth Structural imbalances Vulnerabilities to trade disruptions	Rebalance economy by limiting investments and increasing domestic consumption --Increasing incomes of workers and farmers --Establishing effective social safety net	Increased urban minimum wages Allowed labor strikes for higher wages Abolished agricultural tax Increased rural subsidies Establish universal health care system Expanded pension system Increased funding for education
<u>Core Component #2</u>→ Low wage assembly or processing manufacturing of exports	Rising labor costs Competition from other low(er) cost countries Dangers of protectionism Undesirable low-value added assembling	Invest in higher value-added manufacturing and modern services Generate technological innovations by funding R&D : Long-term Plan for Development of Science and Technology(2006-20)	Increased funding for science and technology Special funding allocated for “strategic industries” Increased funding of advanced research and education
<u>Core Component #3</u>→ Disparities and inequalities: <ul style="list-style-type: none"> • urban-rural • economic class • regional disparities 	Dangers of <ul style="list-style-type: none"> • political instability • social unrests, and • normative injustice 	Institute effective social safety net Subsidize rural poor Shift low wage production to inland areas Pursue high value-added industries	Increased worker incomes to reduce economic inequality Increased rural incomes to reduce urban-rural equality Established universal health care system Expanded pension system Funded nine years free rural education Improved regional economic integration
<u>Core Component #4a</u>→ Intensive use of natural resources	Depletion and inefficient use of natural resources; Vulnerable to supply disruptions	Undertake more efficient production Close/upgrade inefficient plants Develop green technology and renewable energy	Increased funding for green technology, solar energy, electric cars, etc. Closed, upgraded inefficient power plants and steel mills
<u>Core Component #4b</u>→ Ecological externalities	Damage to ecology of China and planet	Develop green technology renewable energy Enforce environmental regulations	Increased funding for environmental clean-up, greater enforcement of environmental regulations

4. Component #1 of SC Model

Diagnosis: Unsustainable Economic Imbalance Due to Overinvestment and Underconsumption;

Prescription: Increase Domestic Consumption by Increasing Household Incomes and Improving Social Safety Net

To address the unsustainable economic imbalance of over-reliance on investments and exports to generate economic growth, Chinese policymakers have tried to increase domestic consumption. In their short-term package response to the Global Recession, they included subsidies and tax breaks to help promote the purchases of household appliances and vehicles. A more durable long-term solution to the problem of unsustainable imbalanced growth plaguing the “export-led” model, however, would balance the contributions of consumption, investment and exports to GDP growth by providing Chinese consumers with the means to consume more.⁵⁷ This central prescription is a key component of the new SC Model and enjoys wide assent from Chinese policymakers and analysts. As Commerce Minister Chen Deming recently reported, “Right now, China is summarizing what it has learned in the aftermath of the financial crisis about how to adjust our economic setup and transform the modes of economic development. . . . One extremely important point about transforming the mode of economic development is promoting a further shift away from mainly using investment and exports to spur economic development and toward a coordinated drive involving consumption, investment, and exports.”⁵⁸ Similarly, during his 2009 inspection tour of Shanghai and Jiangsu, Wen Jiabao declared that “We must speed up the pace of facilitating the change of China’s economic growth with the pull of coordinated consumption, investment, and exports, instead of relying mainly on investment and exports.”⁵⁹ Providing a more integrated assessment of multiple elements of the SC Model, Hu Jintao proclaimed at the November 2008 APEC Summit in Lima that “China will promote the shift in economic growth from mainly relying on investment and exports to relying on consumption, investment, and exports and from mainly relying on higher consumption of resources to mainly relying on scientific and technological

progress, improvement in the quality of the workforce, and management innovation.”⁶⁰ This remarkable consensus among top leaders on the SC Model’s prescription for economic rebalancing is also reflected in the views of numerous Chinese analysts. As Zhang Liquan, a researcher with the Development Research Center of the State Council succinctly stated, “balanced development” is needed for “sustainable development.”⁶¹ “Unless China finds a way of promoting private consumption growth,” warned Zhu Baoliang, chief economist at the State Information Center, “it will not be easy for the country to achieve sustainable and healthy economic growth.”⁶²

In the consensus view of Chinese policymakers and analysts, in short, increasing domestic consumption is the key general prescription provided by the SC Model to redress the diagnosis of economic imbalance due to underconsumption. To generate this greater domestic consumption, in turn, the SC Model prompts Chinese policymakers to logically deduce specific policy measures. Prescriptively, there are two major sets of policies that would clearly and logically bring about increased household consumption. The first set of measures would directly increase the incomes of Chinese citizens. The second set of measures would indirectly facilitate increased consumption by establishing or improving China’s social safety net. A remarkable consensus has developed among Chinese policymakers and analysts on the validity of the SC Model’s prescriptions for both of these sets of policies. According to Xu Guangjian, the Vice Dean of the School of Public Administration at Renmin University, “How to raise the income levels of the general public and dispel their misgivings about spending should constitute the dominant part of the future policy for the expansion of domestic demand.”⁶³ “Providing safeguards and improving the people’s livelihood,” as two other writers recommended, “will help expand civilian consumption, push forward the change in economic development model, and promote coordinated economic and social development.”⁶⁴

Specific Policy Prescription of Increase Household Incomes

To increase domestic consumption, Chinese policymakers first need to increase the incomes of

Chinese citizens. According to Minister of Finance Xie Xuren, China needs “to raise the incomes of urban and rural residents in order to expand the consumer demands of the people.”⁶⁵ After all, as Commerce Minister Chen Deming sensibly pointed out, “In the area of domestic demand, we must first raise peoples’ incomes, since you only have purchasing power when you have cash income.”⁶⁶ This consensus among policymakers on the need to raise domestic demand by raising incomes is shared by many other writers and analysts. According to Yang Ruilong, the Dean of the Economics Institute at Renmin University, “the key to spurring domestic demand is to have consumption demand, and behind consumption demand lies the income distribution problem; in income distribution reform we must consider how to raise the proportion of people’s income in overall national income.”⁶⁷ “Only by distributing the fruits of economic development more extensively and fairly and increasing the income of the laborers,” argued the writers of a recent article, “will it be really possible to pull domestic consumption.”⁶⁸ As Zhu Baoliang, the Chief Economist of the State Information Center, concluded, “How to raise the income levels of the general public and dispel their misgivings about spending should constitute the dominant part of the future policy for the expansion of domestic demand.”⁶⁹

Implemented Policies

As a percentage of GDP, the labor incomes of Chinese workers were 49.49% in 1993, 53.4% in 1996, and 51.4% in 2000. Yet by 2007, this percentage had declined to a mere 39.74%. In contrast, the profits of firms as a percentage of GDP rose from 21.2% in 1996 to 31.3% in 2007.⁷⁰ To reverse these worrisome trends and increase worker incomes as prescribed by the SC Model, the Chinese government has taken numerous steps in recent years to raise the incomes of farmers and to increase the wages of urban workers.

For farmers, as shown in the previous Section on Component One of the SC Model, the Chinese government has embarked on various “*san nong*” since 2004. In March 2006, it abolished the agricultural tax. In subsequent years, the government raised prices for farm produce, and provided various subsidies

for appliances and education.⁷¹ All of these measures are designed to increase the incomes of rural families and thereby boost their consumption.

For urban workers, meanwhile, the Chinese government has recently allowed some of them to stage labor strikes in order to obtain wage increases. According to Yuan Gangming, a researcher at the Institute of Economics of the CASS, “China is taking a more lenient attitude toward settling employee-employer disputes and objectively, this has played a positive role in pushing forward the reform of the income distribution system in China. This has also reflected one aspect of the ongoing change in the mode of economic development of contemporary China that excessively depends on cheap labor and export processing trade . . .”⁷² The most well-known of these work stoppages were directed against three Honda auto parts plants in southern Guangdong in May 2010 and against two factories operated by the Toyota auto parts supplier Toyoda Gosei in Tianjin in June 2010.⁷³ According to press reports, there was also a labor strike against a Japanese industrial sewing machine factory in Xian. In addition, there were work stoppages at various Taiwanese companies, including strikes against a computer parts factory in Shanghai’s Pudong District, a rubber plant in Kunshan, Jiangsu Province, and a sporting goods factory in Jiujiang, Jiangxi Province.⁷⁴ Meanwhile, at least 14 provinces, municipalities and autonomous regions have raised the minimum wages of workers. In Beijing, for example, the minimum wage was first introduced in 1994 and raised by about 10% annually until 2009. Beginning on July 1, 2010 (to make up for no increase in 2009), the monthly minimum wage was raised by 20% from 800 yuan (\$117 USD) to 960 yuan.⁷⁵ Similarly, in February 2010, Jiangsu Province raised its monthly minimum wage by 13% to 960 yuan. In Guangdong Province, meanwhile, Guangzhou raised its minimum monthly wage effective May 1, 2010 by 21% to 1,030 yuan (\$150 USD) and Dongguan raised its minimum wage to 920 yuan.⁷⁶ As Vice Premier Li Keqiang explained, “there is a need to strengthen the work of ensuring the basic livelihood of the people, particularly the people who have difficulties, so that the results of economic development will benefit them and their consumption will help boost economic growth and form a virtuous cycle of development.”⁷⁷

Specific Policy Prescription of Establishing and Improving Social Safety Net

Boosting domestic household consumption to rebalance the Chinese economy can also be facilitated indirectly by pursuing a second set of policies. Since part of the impetus for the lack of consumer spending stems from the traditional high savings rate of Chinese citizens (over 25% of incomes in 2007) worsened by the loss of over 60 million jobs due to SOE restructuring, Chinese policymakers have also implemented social welfare policies to provide citizens with greater social security. As recent studies have shown,⁷⁸ high precautionary savings and frugal habits can be reduced if people are reassured that they need less savings for their basic social needs such as health care, pensions, and children's education.⁷⁹ As the Asian Development Bank recently reported, "a significant increase in consumption is likely to require a strengthening of the social safety net, and provision of well-targeted public goods, such as education, health care, and affordable housing, as well as higher incomes."⁸⁰ There exists wide consensus among Chinese analysts on this specific policy prescription of the SC Model. According to Wang Kaiyu, a senior researcher with the Anhui Provincial Academy of Social Sciences, "a sound social security system could help decrease 'precautionary savings' and boost domestic consumption."⁸¹ As Zhao Ping, an economist with the Ministry of Commerce elaborated, "People in the rural areas have to save money for old age; children [caring for aging parents is] the traditional way, but people can't rely on that because of the one-child policy. The government is trying to improve the social security system, healthcare and retirement programs in rural areas. Only when the system is established will people have the confidence to spend more."⁸² Meanwhile, Ba Shusong, the Deputy Director of the Financial Institute of the State Council's Development Research Center, drew the following lesson from the Global Recession: "We should take the policies for boosting domestic demand as the main-line policies for dealing with the current crisis in an all-round way. These include improving the social security system, restructuring the system for national income distribution, reducing taxes, and enlivening the rural market."⁸³ Finally, in a clear and cogent explanation, Yao Jingyuan, the Chief Economist at the National Bureau of Statistics (NBS) counseled that "the public is under great pressure regarding future

expenditures and do not dare to spend money. . . . The solution is to increase investment in the people's livelihood and perfect the social security system. . . . Only a consumption pattern that includes perfecting the social security system, ensuring that ordinary people have money, and ensuring that they dare to spend that money, can become an important driving force of economic growth."⁸⁴ From this perspective, as one writer succinctly concluded, developing the social security net is the "fourth driving force of economic growth" after investment, exports and domestic consumption.⁸⁵

Implemented Policies

The central government has increase funding for health care, pensions, and education in their long-term response to the Global Recession. "During the course of implementing the plan for expanding internal demand," Wen Jiabao proudly reported, "we have tilted the distribution of public resources toward education, medical and health care, and social security. . . . All of this is helpful for expanding immediate demand at home, building up consumers' confidence, and powerfully pushing our economic growth . . ."⁸⁶ As one writer elaborated in a recent article:

"Over the past year, being faced with the severe shock of the international financial crisis and the extreme difficulties in China's economic development, the central government fully implemented and constantly improved a package plan designed to expand domestic demand. An important aspect of this is trying hard to ensure and improve people's livelihood, including raising the income of urban and rural residents, large scale increases for consumer subsidies, expanding employment by every possible means, large-scale boosts for social security, the prioritized development of education, pushing forward the reform and development of healthcare, and speeding up the construction of low-income housing projects."⁸⁷

As prescribed by the SC Model to boost domestic consumption, the State Council in January 2009 passed a medical reform bill to establish a universal health care system by 2011⁸⁸ and to spend 850 billion yuan to improve health care, build hospitals, and train village and community doctors.⁸⁹ By November 2009, 90% of the population or 1.2 billion Chinese received basic medical insurance under three plans. According to Dr. Lei Haichao, the Director of Policy Research at the Ministry of Health, the first is the New Rural Cooperative Medical Scheme (NRCMS) that was initiated in 2003 and now covers

833 million rural citizens. The second is the Urban Employee Basic Health Insurance Scheme (URBMI) that was piloted in 2007 in 88 cities and now covers 337 million urban residents. A third plan is called the Urban Resident Basic Health Insurance Scheme.⁹⁰ The central government pays 80% of the health insurance premiums for these plans and in 2010 provided an annual 120 yuan per person subsidy for non-working urban residents and for the rural cooperative medical care system.⁹¹

Meanwhile, a pilot pension insurance program for rural residents was started in 320 counties of 27 provinces and autonomous regions, as well as the four municipalities directly under central government control. Under this program, farmers over 60 years old received 55 yuan per month.⁹² In addition, as of November 2009, approximately 230 million urban Chinese had joined the basic pension insurance program.⁹³ Pensions for enterprise retirees, meanwhile, increased 10% in January 2009 to 120 yuan per month (compared to only a 5.9% increase in 2008).⁹⁴ Finally, the Chinese government also increased funding for basic welfare payments for the poorest citizens. In 2007, a nationwide rural basic living guarantee system was completed and 42.91 million rural people benefited from this program in 2008.⁹⁵ By the end of 2008, 66 million Chinese nationwide received minimum subsistence payments that were increased by one-third in 2009 with a total cost of 20 billion yuan.⁹⁶ Drawing on 2009 data from the National Bureau of Statistics (NBS), Nicholas Lardy concluded that “increases in employment, transfer payments, and pension income contributed to a 9.8% increase in the disposable income of urban residents and an increase of 8.5% in the net income of rural residents.”⁹⁷

The Chinese government also implemented universal primary education, funded free education for rural children, and announced the expansion and upgrading of universities. By better educating the work force and thereby enabling them to obtain better paying jobs, these measures would redress the over reliance of the economy on investment and exports by increasing domestic consumption. In 2009, the central government spent 66.6 billion yuan to provide nearly 150 million rural compulsory education students with full tuition, free textbooks, and miscellaneous fee exemptions. In the central and western regions, roughly 12.2 million compulsory education children from poor rural families were enrolled in boarding schools and given cost-of-living subsidies. Furthermore, the central government plans to

implement a similar policy for urban compulsory education of the children of migrant workers in cities.⁹⁸ In addition, the government provided free tuition for students from poor families who attended trade and vocational schools or who study agriculture related majors in colleges.⁹⁹ In providing education assistance to rural pupils, the problems of economic, regional and urban/rural disparities in incomes would also be partly alleviated.

Prompted by the SC Model's diagnosis of underconsumption as a key cause of China's unsustainable economic imbalance and its prescription to increase household consumption, Chinese policymakers enacted specific policies to increase worker incomes and improve the social safety net. In 2009, central government expenditures in education, health care, social security, employment assistance, protection of the livelihood of the poor and others reached 728.46 billion RMB (an increase of 29.4% over 2008).¹⁰⁰

5. Component #2 of SC Model

Diagnosis: Unsustainable Reliance on Low-Wage Assembling of Exports;
Prescription: Global Economic Competitiveness by Technological Advances up the Value Chain

To redress the problem of unsustainable reliance on low-wage assembly manufacturing of exports, Chinese policymakers have emphasized the importance of technological innovation in enabling Chinese firms to move up the value-chain of global production. In recent years, China's research and development expenditure as a percentage of GDP has risen above 1.5%, but still lags behind the 2.5%-3% that is typical for European countries and the USA.¹⁰¹ Yet chastened by the Global Recession, Chinese policymakers and analysts have forged a remarkable consensus on the need to develop advanced technologies in order to compete successfully in the new global economy. During his April 2009 inspection of enterprises in southern Guangdong, Wen Jiabao declared to a burst of worker applause that:

“At present, economic development has met with difficulties. This is an opportunity for high-end industries to enter the world arena. No fierce competition can stop innovated products and competitive

products. Only by carrying out innovation can we seize opportunities. Enterprises can thrive only by occupying the international market. The Chinese should advance ahead of the world in the area of innovation.”¹⁰²

Accordingly, science and technology, as Wen declared unequivocally in December, are “key to China’s economic development.”¹⁰³ As he reaffirmed at the 2010 China Development Forum, “We entrust the future of the Chinese economy to scientific and technological development, especially the development of high and new technologies, including biotechnology and life sciences.”¹⁰⁴ With similar urgency, a March 2010 report of the National People’s Congress recommended that “The transformation of the pattern of economic growth should be placed in an even more prominent position, with improvement of the economic structure and increase in the capability for independent innovation as the key points.”¹⁰⁵ “Enhanced independent innovative capacity and the building of an innovation-oriented country,” Vice Premier Li Keqiang concurred, “lie at the core of our national development strategy and hold the key to improving our overall national power.”¹⁰⁶ As he elaborated in a later speech,

“Technological innovation is the core and key to the improvement and upgrade of the industrial structure. Therefore, efforts should be made to strengthen the capability for independent innovation. While boosting original innovation, it is also necessary to attach importance to the integration of innovation as well as to the importation, digestion and absorption of re-innovation, step up the building of quality and standards, cultivate independent brands, and strive to create new advantages in international competition.”¹⁰⁷

This broad consensus among Chinese policymakers and analysts on the need to develop technological innovation in order to compete in the global economy stems from their shared understanding of the unsustainability of China’s low wage, high resources, export-led, model of economic development. There is an explicit learning from the historical experiences of other countries, especially from economically successful Asian countries. As Lu Zheng, the Director of the Institute of Industrial Economics of the CASS urged,

“China should race against time; give priorities to importing, digesting, and assimilating new technologies; and narrow technology-related gaps when compared with developed countries. In view of the experiences gained by Korea, Japan, and Taiwan, these countries shifted their focus of production to technology-intensive industries with high added values, little energy consumption, and high labor

productivity after their labor-intensive industries experienced the rises in production costs and their capital-intensive industries experienced the rises in the prices of upstream energy resources and raw materials. China will actually be able to tide over its current difficulties only by improving its existing technological levels and industrial qualities.”¹⁰⁸

This basic logic of leveraging technological innovation to move up the global production value chain was highlighted and given great urgency by the Global Recession. According to Zhang Songtao, the Director of the Central Finance Leadership Team Office of the Bureau of Economy and Trade, “the global financial crisis and economic recession . . . has forced China to further upgrade the international competitiveness of its industries . . .”¹⁰⁹ Similarly, Yang Yi, the Director of the Bureau of Industrial Injury Investigation of the Ministry of Commerce, argued that “the global financial crisis will force Chinese enterprises to strengthen their inherent strengths, accelerate their structural transitions, and upgrade and raise their level of international competitiveness.”¹¹⁰ Indeed, some writers observed that “in the process of responding to the international financial crisis, a ‘race’ to capture the commanding heights of future economic development has quietly started. The country that is able to have the advantage in science and technology innovation will be able to have the initiative in future development.”¹¹¹ As one commentator recently elaborated,

“The financial crisis has made people more soberly understand the reality that enterprises are weak in independent innovation and their economic development is at a low technological level. It has also made people more profoundly feel the constraints caused by the lack of core technology, innovative talented personnel and top-end products. Further, the financial crisis has made people more conscientiously regard strengthening original innovation, accelerating technological reconstruction and fostering strategic emerging industries as the fundamental points for improving economic competitiveness.”¹¹²

The 2010 Government Work Report presented a remarkably detailed and far-sighted assessment of the requirements for successful competition in the new global economy. In one diagnostic passage, the Report observed that “The global financial crisis is hastening the birth of a new technological and industrial revolution. It is of decisive importance for the future of our country that we develop emerging industries of strategic importance and capture the economic, scientific and technological high ground . . .”¹¹³ In a second related passage, the Report then deduced a series of policy prescriptions:

“We need to earnestly implement the policy of independent innovation, comprehensively build an innovative country, and accelerate the implementation of our major science and technology programs. We need to concentrate on making breakthroughs in key scientific and technological problems that can drive the technological revolution forward and promote industrial invigoration, in major scientific and technological problems related to public welfare that can improve people’s health and quality of their lives, and in problems in strategic, high-tech fields that can enhance our country’s international competitiveness and safeguard our national security.”¹¹⁴

Specifically, the Report called for increased funding for particular “strategic industries”: “We need to vigorously develop new energy sources, new materials, energy conservation, environmental protection, biomedicine, information networks, and high-end manufacturing industries. We will make substantive progress in developing motor vehicles powered by new energy sources and in integrating telecommunications networks, cable television networks, and the Internet, and accelerate R&D in and application of the Internet of Things. We will also increase investment in and policy support for emerging industries of strategic importance.”¹¹⁵ Echoing these prescriptions, Feng Fei, the Director of the Industrial Economics Department of the Development Research Center of the State Council, urged that “we must attach importance to developing strategic emerging industries and at the same time, make breakthroughs in the core and crucial technology . . .”¹¹⁶ Meanwhile, in order to “keep up” in the world economy, Li Yizhong, minister of the Ministry of Industry and Information Technology argued, “requires us to accelerate the transformation and upgrade of traditional industries by focusing on the present considerations on the one hand and, on the other, keep sight of the long-term considerations and pay more attention to the cultivation and development of emerging strategic industries.”¹¹⁷

In 2008, the Chinese government’s four trillion yuan fiscal stimulus package included special increased funding for ten “pillar industries.” To improve the long-term competitiveness of the Chinese economy, funds to upgrade technology were dispersed to the following ten industries: automobiles, iron and steel, shipbuilding, textiles, machinery and equipment manufacturing, electronic information technology, light industry (e.g., consumer products), petrochemicals, non-ferrous metals and logistics. In addition, approximately 100 policies, measures, and detailed implementation rules were enacted to reduce operational impediments and facilitate the functioning of firms.¹¹⁸

To enhance future global economic competitiveness, Chinese policymakers also increased funding for scientific research, implemented technological upgrades, and improved protections for intellectual property rights.¹¹⁹ In 2009, the Central government allocated 20 billion yuan for 4,441 technological upgrading projects and spent a total of 151.2 billion yuan (an increase of 30%) on science and technology.¹²⁰ Guangdong alone allocated one billion yuan to upgrade the production facilities at 1,000 firms.¹²¹ According to the NDRC, 16 key science and technology programs were fully implemented (e.g., ultra-large scale integrated circuits, digitally controlled machine tools), major science projects (e.g., multi-object fiber spectroscopic telescope, electron-positron collider) were completed, 25 national engineering laboratories and 63 key national laboratories were built, 58 national engineering or technology research centers were funded, and 85 national projects to develop major industrial technologies were implemented.¹²² At the provincial level, meanwhile, local governments have provided numerous tax incentives, technical assistance, start-up grants, and research and development funds to promote technological innovation. In Guangdong, for example, the provincial government provided firms with pre-tax deductions of up to 150% of their investments in R&D and offered start-up grants of up to 100 million yuan to new innovative businesses.¹²³ Finally, Chinese government firms and investment funds have actively shopped internationally for natural resources, advanced technologies, and anything that would enhance the long-term economic development of China.¹²⁴

Guided by the SC Model's diagnosis of the unsustainability and indeed undesirability of China's low wage, low value-added, assembling manufacture of exports, and prompted by the model's prescription to move up the global production value-chain by leveraging technological innovations, Chinese policymakers enacted supportive policies and allocated increased funding for research and education to spur advances in science and technology.

Moving Up the Value Chain by Moving Inland

During the past few years, many assembling manufacturers of exports in Guangdong have moved

their factories to Jiangxi and other inland provinces. In fact, most provinces have sent business delegations to Guangdong and Guangdong officials have visited numerous provinces to facilitate regional economic cooperation.¹²⁵ At the February 24, 2010 executive meeting of the State Council, one of the many objectives cited was to “promote an accelerated relocation of such industries as electronic information, light industry, and textiles to the central and western regions.”¹²⁶ As Wen Jiabao urged in March, “We should take great pains to narrow the gap between urban and rural areas and between different regions, and strive to increase consumption by the residents.”¹²⁷ To achieve these worthy objectives, he reported at the April 2009 Boao Forum,

“we have intensified the construction of infrastructure facilities to bring about a coordinated economic development in the country. While the uneven developments between cities and rural areas and between different regions are conspicuous problems of China’s economic and social development, they are also the areas with the enormous economic growth potentials. We have now organically combined our efforts to grapple with the international financial crisis and our efforts to address these problems. Our plan for additional investments has given priority to intensifying rural construction and building infrastructure projects in central and western China.”¹²⁸

6. Component #3 of SC Model:

Diagnosis: Unsustainable Disparities between Inland vs. Coastal Provinces, Urban vs. Rural Areas, and Rich vs. Poor Citizens;
Prescription: *San Nong* Policies; Increase Household Incomes, Build Social Safety Net

Since the early 2000s and even earlier, many Chinese policymakers and analysts have worried about the growing economic disparities in China between coastal and inland provinces, between urban and rural areas, and between rich and poor citizens. As these gaps widen, economic discontent would inevitably generate social unrest and political instability that would undermine economic growth. In China’s export-led model of economic development, these three types of disparities are connected since the rich tend to reside in urban areas of coastal provinces where most export factories are located, while the poor are overwhelmingly rural residents of inland provinces and autonomous regions. The 2008 global recession exacerbated these problems by forcing the closure of tens of thousands of assembling

manufacturers in the coastal provinces and sending an estimated 20 million laid-off migrant workers back to their home villages in poor inland provinces. Moreover, the economic downturn temporarily depressed the prices of farm products, while ironically agricultural production has continued to increase annually (from 2004-2010) due to earlier government policies. Overall, as the writer Zhang Hongyi lamented, “a national income distribution pattern that is favorable to stabilizing and increasing the incomes of peasants has not taken shape, and an enduring mechanism for increased incomes for the peasants remains unsound.”¹²⁹ As a result, concluded the writers of a recent article, “The gap between cities and the countryside in income and public services is still widening. The key reason for all this is that a long-term mechanism for making overall plans for urban and rural development has not effectively been established yet, and particularly, the policy for investment in the ‘three rural issues’ is not secured by institutional guarantees.”¹³⁰

Clearly, to redress these unsustainable disparities in China’s export-led model, the Chinese economy needs to shift towards an alternative model that reduces the gaps between rich urban areas of coastal provinces and poor rural areas of inland provinces and autonomous regions. The logical key to bringing about this shift is to increase the wealth of rural inland provinces and autonomous regions. Understanding this diagnosis of unsustainable disparities in the old model and deducing the logical prescription required in pursuing a new model, the Chinese government has made a concerted effort in recent years to improve the household incomes and living conditions of poor inland farmers. For seven consecutive years starting in 2004, the CPC has devoted its annual top priority “Document No. 1” to addressing the “three rural issues.” These prescribed “*san nong*” policies focus on developing agriculture, raising the incomes of farmers, and developing the rural economy.¹³¹ Not by accident, the seven years of consecutive top priority given to these three rural issues coincided with the period when Chinese leaders first acknowledged the need to transform China’s export-led model at the 13th CPC Congress in 2003 and then later explicitly sought a new transformed model as a goal at the 17th CPC Congress in 2007.

Since they are issued top-down through the Party organization, these classified internal CPC “Central Documents” contain the most important concerns and directives of the CPC leadership. The

2009 “Document No. 1” called for the continued and intensified “implementation of policies to strengthen and benefit agriculture by creating favorable environment and conditions for the peasants to increase their incomes.” These policies include increasing subsidies, raising price supports, building grain storages, and improving market access for non-public firms. As summarized by the writer Zhang Hongyi, the main subsidy prescriptions are for raising the “direct grains subsidy, intensify the comprehensive subsidy for farm capital . . . directly promote increased incomes for peasants through an increase of the comprehensive income subsidy . . . give full play to . . . subsidies for improved [seed] strains and for purchase and installation of farm tools and equipment . . .”¹³²

The 2010 “Document No. 1” continued and expanded these subsidies and price support policies to improve agricultural production and increase the incomes of farmers. As one CPC commentator summarized, “we mean to try in every possible way to facilitate a sustained and fairly fast growth in the income of peasants, and strive to improve the production and living conditions of peasants.” To further raise rural incomes, he added, “We should actively provide agricultural production-related technical training as well as work-skill training for peasants, vigorously promote the development of a highly efficient specialty agriculture as well as the agricultural product processing industry.” To improve peasant living conditions, meanwhile, we should improve “the social security system for farmer workers,” guarantee “funds for rural compulsory education” provide “free secondary and vocational education in rural areas,” establish “free labor reserves training for new labor forces,” fund the “new rural cooperative medical scheme,” and experiment with the “new social endowment insurance scheme in rural areas.”¹³³

Unlike the six previous Document No.1s, however, the 2010 Document added major new prescriptions for coordinating urban and rural development. This top priority Document highlighted in its title the main theme of “Increasing the Intensity of Making Overall Planning for a Coordinated Urban-Rural Development” in addition to calling once again for “Further Consolidating the Basis of Agricultural and Rural Development.”¹³⁴ As one commentator noted, this “Central Document No. 1 has given greater prominence to making overall planning for urban-rural development, . . . for promoting agriculture with industry . . . for bringing along development of rural areas with urban areas, and . . . bringing about an

integrated urban-rural economic and social development.”¹³⁵ According to Tang Renjian, the Deputy Director of the Office of Central Rural Work Leading Group (CRWLG), this greater coordination of urban-rural development would “reinforce the foundation for agricultural and rural development.”¹³⁶

Implemented Policies

According to official statistics, the Chinese government has been steadily increasing the funds allocated to rural agriculture in recent years. In 2010, the central government will spend 818.34 billion yuan to benefit agriculture, rural areas, and farmers. This is an increase of 93.03 billion yuan, or 12.8%, from the amount allocated in 2009.¹³⁷ In 2009, meanwhile, the central government devoted 725.3 billion yuan to agricultural areas, or an increase of 21.8% from the 595.55 billion yuan spent in 2008 and 59.6% more than the 431.8 billion yuan spent in 2007.¹³⁸

With regard to agricultural subsidies, the Chinese government allocated 127.45 billion yuan in 2009 for direct subsidies to grain producers as well as subsidies for agricultural supplies, improved seeds, and agricultural machinery and tools. This amount represented an increase of 24.41 billion yuan from the agricultural subsidies allocated in 2008.¹³⁹ In 2010, central government subsidies for agriculture increased to 133.49 billion yuan.¹⁴⁰ Moreover, the four existing types of subsidies to farmers were augmented by a “three expansions” policy that was announced in the CPC’s 2010 “Document No. 1.” First, the eligibility for seed subsidies was expanded to include “excellent” or superior varieties of crop seeds. Second, the types of agricultural equipments and tools eligible for subsidies were expanded to include machinery and equipment for animal farming, forestry, drought prevention, and water conservation. Third, the areas eligible for agricultural subsidies are expanded to include animal farming, forests, and reclamation areas.¹⁴¹

To further bolster the incomes of farmers, the Chinese government also raised the minimum grain purchase prices. The average floor prices per kilogram were increased for wheat by 0.22 yuan and for rice by 0.26 yuan.¹⁴² Aside from subsidies and price supports, the Chinese government also assisted

agricultural production by increasing funding for the construction of agricultural infrastructure. In particular, funds were allocated to construct or improve irrigation projects, water pumping stations, and reservoirs. In 2009, the central government spent 189 billion yuan on rural capital construction, or an increase of 150% from the amount spent in 2008.¹⁴³ As a result of all these government subsidies, price supports and infrastructure construction, farmers' per capita net annual income has grown for over 6% for six consecutive years. In 2009, this amounted to 5,153 yuan, or an increase of 8.5% from the net per capita annual income of farmers in 2008.¹⁴⁴ Guided by the SC Model's diagnosis of rural backwardness as the primary source of unsustainable disparities between rich urban areas of coastal provinces and poor rural areas of inland provinces, and prompted by the model's prescription to raise agricultural productivity and rural incomes, Chinese policymakers made the "*san nong*" the top priority in their annual "Document No. 1" for seven consecutive years and implemented specific policies to improve agricultural production and raise farmers' incomes.

7. Component #4 of SC Model

Diagnosis: Unsustainable Overuse of Material Resources and Ecological Externalities
Prescription: Green Technology and Renewable Energy

China's export-led model of economic development is plagued by excessive use of material resources, over-reliance on climate-altering carbon energy, and extensive ecological damages to the environment. As Zhang Ping, the NDRC Chairman, admitted "The contribution of scientific and technological advancement to economic development is on the low side; economic growth continues to depend, to a large extent, on significant input of material resources."¹⁴⁵ More precisely, as Liu Shucheng, of the Economics Department of the CASS, lamented "China's growth has relied mainly on the massive consumption of energy and resources, and the output per unit of resources is only 1/10th of that of the United States and 1/20th of that of Japan."¹⁴⁶ Clearly, such an inefficient and resource guzzling mode of economic development is unsustainable. As the Asian Development Bank recently reported, "The

sustainability of the current high energy-consuming and environment-unfriendly growth model is doubtful. A more sustainable model would be more reliant on technology, innovation, and skills. That could be achieved by increasing spending on research and development . . . Large investments in education and vocational training are also needed.”¹⁴⁷ As one writer pointed out, “Advancing sustainable development and constructing [a] low-carbon economy will be the important path for China’s future economic growth.”¹⁴⁸

Chinese policymakers and analysts are increasingly aware of this diagnosis of the resource and ecological unsustainability of China’s export-led model of development. In response, they have revised their thinking and deduced suitable policy prescriptions. To redress the problems of excessive use of material resources, carbon energy, and environmental externalities, China needs to develop alternative green technologies and non-carbon forms of renewable energy. According to Vice Premier Li Keqiang, “There is a need to give more prominence to energy saving, improving efficiency, and ecological protection; eliminate obsolete production capacities, make efforts to resolve the bottleneck in the fields of resources and environment . . .”¹⁴⁹ As he elaborated at the March 2010 China Development Forum in Beijing, “Starting from conserving energy, improving performance, and protecting the ecology and environment, we must step up technological transformation, eliminate through competition backward production facilities, accelerate the development of the green economy, recycling economy, and energy conservation as well as ecological and environmental protection industries, popularize and apply low-carbon technology, actively deal with climate change, and realize industrial upgrading and structural optimization.”¹⁵⁰ A recent report by the People’s National Congress made similar points. “In the course of economic and social development,” the Report stated, “we should take full consideration of the bearing capacity of resources and the environment as well as the climate change factor . . .”¹⁵¹ Prescriptively, the Report continued, “It is necessary to step up guidance of fiscal and industrial policies, restrict repetitious projects in industries with surplus production capacity, promote the merger and reorganization of enterprises, and speed up elimination of backward production capacity.”¹⁵²

All of these policy prescriptions, deduced from a diagnosis of the unsustainable predicament

facing China's export-led model of economic development, are aimed at overcoming natural resource limits, redressing ecological degradation, and enhancing China's competitiveness in the new global economy. On the one hand, energy-saving technologies enable companies to reduce operating costs and hence compete more successfully. According to Gu Zhanggen, the CPC secretary of the Maanshan Iron and Steel Company, "Emission reduction and energy saving is not only an issue of environmental protection, but important to a company's profitability, especially when the financial crisis deteriorates the economic situation."¹⁵³ Moreover, given the high costs of energy, manufacturers of such green technology products would have a large and eager market of consumers. As Wen Jiabao marveled during his April 2009 inspection tour of southern Guangdong, "At present, external demand has decreased, and the market has shrunk, but people's demand for new products, such as high-end products and energy-saving and environmental protection products, will be always as large as the ocean."¹⁵⁴ Given all these economic benefits of green technology and renewable energy, Lu Jianhua, assistant to the Minister of Commerce argued that "China must accelerate the upgrading of its business, structures, in the face of drastic external changes and reduction of external demand, with efforts focused on promoting modern industrial systems, such as high value-added activities, energy conservation, and environmental friendliness, facilitating the diversion of factors of production to areas of higher efficiency. In particular, it is important to accelerate the development of service industries, with a view to facilitating further improvements in China's international competitiveness."¹⁵⁵

Chinese policymakers have increased funding in recent years to develop solar energy, wind power, electric cars, and other innovations. The PBOC has moved to "restrict credit to industries that are high energy consuming and highly polluting, industries with surplus production capacity, and companies of mediocre quality in order to promote economic restructuring and transformation of the pattern of development."¹⁵⁶ In so doing, they also contributed to helping Chinese firms move up the value-chain by developing new green technologies. As a result, these green investments would also redress the problem of unsustainable low wage assembling manufacturing. Moreover, by developing high value added green technology that would pay Chinese workers in these industries higher wages, this solution would also

help overcome the current economic imbalance by allowing wealthier Chinese workers to increase their consumption.

A remarkable consensus has emerged among Chinese policymakers and analysts about the ecological unsustainability of China's old investment heavy, export-led model and the need for a new SC Model. This new model contains multiple integrated components that promise to overcome the unsustainabilities of the old export-led model and to forge a new mode of economic development that is sustainable and competitive in the new global economy. As Niu Wenyuan, the head of the Sustainable Development Strategy Research Group of the Chinese Academy of Sciences explained, "implementing a new green policy and pushing forward green development" are becoming "the consensus of a new generation of civilization. Promoting an ecological civilization and developing a green economy are the only choice to make sustainable development in our country. The practice of green development can completely integrate saving resources, improving the environment, making independent innovation and optimizing management with national development, social progress and the ecological civilization to form a benign cycle that meets the requirements of sustainable development."¹⁵⁷

This consensus new thinking was reiterated recently by Vice President Xi Jinping in his keynote address at the opening plenary of the annual Boao Forum for Asia on April 10, 2010:

"We have put forward the following thinking on development since the mid 1990s, in particular the beginning of the new century and new stage. We need to commit ourselves to the Scientific Outlook on Development that puts the people first and focuses on comprehensive, balanced and sustainable development. We need to handle the issue of environment and development extremely seriously and . . . adhere to the path of sustainable development. We need to implement the strategy of reinvigorating the nation through science and education, make strategic adjustment to the economic structure, and actively promote development through innovation. We need to develop the economy mainly by relying on the domestic market, and attach great importance to domestic demand, consumer demand in particular, in driving economic development. . . . We need to explore a new path to industrialization . . . that features high scientific and technological content, good economic returns, low resource consumption, less pollution to the environment . . . We need to take resource conservation as a basic national policy, develop circular economy, protect the environment, accelerate the pace to build a resource-conserving and environment-friendly society, and achieve economic growth in line with the realities concerning the population, resources and the environment. We need to . . . develop an industrial structure, a growth mode and a consumption pattern that is energy- and resource-efficient and environment-friendly . . . We need to . . . address climate change, and make unremitting efforts for the sustainable development of China and the world. . . . All of these thinkings are highly consistent with the concept of green and sustainable development . . ."¹⁵⁸

8. The Interconnected Developmental Logic of the SC Model

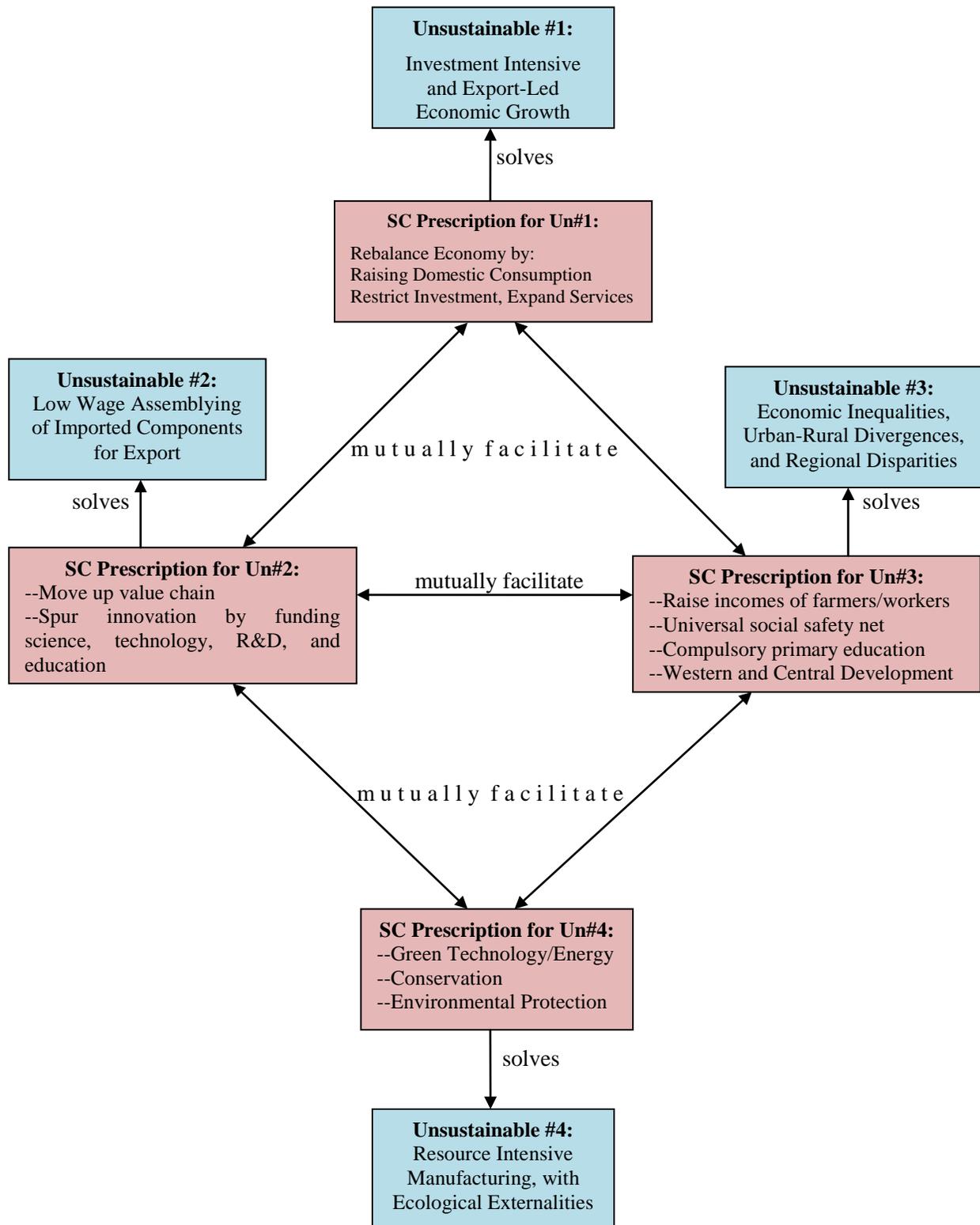
Each of the prescriptions of the four components of the SC Model directly solves the four respective “unsustainables” diagnosed in China’s post-1978 export-led model of development. First, economic imbalances arising from excessive reliance on investments to drive economic growth can be resolved directly by restricting investments and increasing domestic consumption. Second, the looming impasse of low wage export assembling can be resolved directly by achieving technological advances to move up the global value chain. Third, the widening disparities between rich and poor, urban and rural, and coastal and interior can be resolved directly by raising incomes, improving agriculture and developing the western provinces. Finally, the depletion of natural resources and the spewing of ecological externalities can be resolved directly by switching to green energy and green technology. Altogether, these four sets of diagnoses and prescriptions constitute the core components of a new “Sustainably Competitive” model of global economic development. As an article in *Renmin Ribao* argued,

“China’s future economic development should first put ‘expanding domestic demand to maintain long term, fast and steady economic development’ as [the] strategic concept. Second, we should put ‘enhancing independent innovation ability’ as the inner power to push forward the optimization and upgrade of the industrial structure. Thirdly, we should put ‘promote coordinated development of city and countryside regions’ as the main direction of building a well-off society. Fourthly, we should regard the improvement of people’s livelihood as the fundamental purpose of development. Fifthly, we should put strengthening resource conservation and environmental protection as important actions for sustainable development.”¹⁵⁹

Although not comprehensively presented in any government documents or scholarly analyses, the four core components of the new SC Model are integrated into a coherent whole by a dense matrix of reciprocal reinforcements. Each of the four prescriptions not only directly resolves their respective diagnosed unsustainables, each also facilitates the resolutions of the other three prescriptions. These mutually reinforcing resolutions integrate the prescriptions of the four components into a coherent logic

of development. In fact, there are tantalizing suggestions of bi-componential interconnections scattered in various official and media statements. Section 8 illuminates this unstated developmental logic by comprehensively delineating the mutually reinforcing prescriptions that mesh the four components into a coherent model of development. These multi-componential interconnections, together with the four sets of prescriptions for the four diagnosed “unsustainables,” are depicted in Figure #2.

The Interconnected Logic of the SC Model: Four Diagnoses and Prescriptions



Prescription 1 (Rebalancing by Raising Domestic Consumption) Facilitates Prescriptions 2 and 3

The Chinese economy's unsustainable overreliance on investments to fuel economic growth can be resolved by rebalancing the economy. Increasing the proportion of economic activity derived from domestic consumption is the key element of this needed rebalancing. In turn, increasing domestic consumption requires increasing the income of citizens and their willingness to spend more on non-essential goods and services. In recent years, the Chinese government has sought to increase domestic consumption, particularly among the peasantry, by reducing or eliminating taxes, subsidizing the purchase of consumer appliances and motor vehicles, and building a comprehensive social safety net to alleviate the economic insecurities that fuel obsessively high savings and tamp down discretionary household spending. Yet clearly, increasing domestic consumption would also impact the resolutions of the second (i.e., low wage export assembling) and third (i.e., economic, urban-rural and regional disparities) unsustainables of China's export-led model of development.

Rising labor costs is a key impetus for the unsustainability of low-wage export assembling in China (together with growing global competition from other lower wage producers). This dire problem can be directly resolved by producing higher value-added products that enable firms to pay higher wages to more skilled and productive workers. Such a resolution, however, would also be impacted by government efforts to raise domestic consumption. Since encouraging household spending contributes to the demand for higher wages, this resolution of the first unsustainable exacerbates the second unsustainable and thereby reinforces the need to move up the value chain of production. This linkage between raising domestic consumption to rebalance the economy and shifting to higher value-added production can be discerned in Vice President Xi Jinping's speech at the April 2010 Boao Forum for Asia. According to Xi, China needs "to persist in taking the path of sustainable development . . . to implement a strategy of rejuvenating the nation through science and education, carry out a strategic economic restructuring, . . . promote innovative development . . . build economic development on the basis of relying primarily on the domestic markets and to attach great importance to growth that is driven

by domestic demand, notably consumer demand.”¹⁶⁰

Raising domestic consumption to rebalance the economy also impacts the resolution of the third unsustainable. The unsustainable economic disparities between rich and poor, urban and rural areas, and coastal and inland provinces have prompted the Chinese government to implement policies to increase rural incomes, build a comprehensive social safety net, and foster the development of interior provinces. These laudable efforts to resolve the third unsustainable, however, also facilitate resolutions of the first unsustainable. As Sun Ziduo, the Head of the Institute of Economics of the Anhui Provincial Academy of Social Sciences, observed, “government efforts” to increase farmers’ incomes “will not only improve people’s well-being, but also boost domestic demand and accelerate transformation of the growth pattern and help maintain social stability.”¹⁶¹ Clearly, since over 60% of China’s population resides in rural inland provinces, increasing rural incomes and improving rural health care, pensions and children’s education would contribute significantly to raising the contribution of domestic consumption to GDP growth. As the CPC’s 2010 “Document No. 1” urged, cadres should “regard the improvement of the livelihood of rural people as an important aspect of the adjustment of the distribution pattern of national revenue” and “regard expanding rural demand as the key measure for driving forward domestic demand.”¹⁶² Indeed, according to another writer, “Increasing farmers’ income is key to boosting domestic consumption to advance the transformation of the growth pattern as China has a rural population of 720 million and farmers’ purchasing power remains weak due to relatively low income and lack of a sound social security system.”¹⁶³

Prescription 2 (Move Up Value Chain) Facilitates Prescriptions 1 and 3

The second unsustainable of low-wage export assembling due to rising labor wages can be resolved by ascending the value chain of global production. By shifting to more technologically advanced higher value-added products, Chinese firms can afford to pay the higher wages demanded by their workers. “China has to shift its focus from labor-intensive industries to high-technology ones,”

explained the economist Richard Herd of the Organization for Economic Cooperation and Development (OECD), because it is “facing growing labor costs and competition from other emerging economies whose development also take advantage of labor supplies.”¹⁶⁴ This resolution of the second unsustainable, however, also facilitates government efforts to rebalance the economy by increase domestic consumption (i.e., the first prescription). By creating new higher paying jobs, Chinese firms would enable their workers to increase their household consumption and thereby facilitate the rebalancing of the Chinese economy. As the author and investment banker Robert Lawrence Kuhn observed, “the challenge for China was to increase the value-added elements of products, primarily through technology and branding, as it would enable companies to pay higher wages to workers, whose buying power would stimulate and sustain the economy.”¹⁶⁵

Ascending the value chain to manufacture higher value-added products would also facilitate the resolution of the third unsustainable of widening economic, urban-rural, and regional disparities. Under the post-1978 export-led model of development, coastal provinces benefited from FDI and export processing and grew faster economically than inland provinces. Meanwhile, urban areas became wealthier while rural areas experienced little or slow growth, and economic inequality increased between rich and poor. All of these disparities are linked because profitable export processing factories are located mainly in urban areas of coastal provinces. To reduce these unsustainable economic, urban-rural, and regional disparities, Chinese policymakers have sought to increase rural incomes, establish a more comprehensive social safety net, and develop interior provinces. Shifting to higher value-added production (i.e., Prescription 2), however, would also alleviate these disparities by spatializing the move up the value chain and enhancing the regional integration of the Chinese economy.

Chinese firms recognized that rising labor costs in urban coastal areas rendered their low profit margin assembling of exports increasingly unable to compete against lower cost producers in Bangladesh, Vietnam, and other developing countries. This looming unsustainability of their low cost factories prompted many Chinese firms to relocate their processing operations to rural and inland provinces where labor costs are still low. While the average hourly wage in coastal provinces is \$1.08,

the average hourly wage in inland provinces ranges from \$0.55-0.80. With regard to migrant workers only, according to statistics from the third quarter of 2009, the average monthly wages in eastern coastal areas were 1,455 yuan (\$213 USD), while the average was 1,389 (\$203 USD) in central regions and 1,382 (\$202 USD) in the west.¹⁶⁶ Hence, shifting low cost assembling operations to rural areas and interior provinces, as Guangdong Party Secretary Wang Yang observed, “will reduce labor costs and improve the competitiveness of Chinese products in world markets.”¹⁶⁷ Such a spatial shift, moreover, would also help alleviate the unsustainable regional, urban/rural, and economic disparities that threaten social and political instability. As the writer Zhang Hongyi observed, “We should guide these areas [central and western regions] in taking over the transfer of industries from the eastern region and from the cities, strengthen county and town economies, and thereby reduce the gap in regional development.”¹⁶⁸ A “dual transfer”¹⁶⁹ would occur whereby the relocation of coastal low-wage assembling factories to inland provinces would be accompanied by the repatriation of migrant workers to their home communities.

As these migrant workers remain in their home provinces (i.e., rather than migrate to Guangdong, Zhejiang, etc.), they spend their incomes locally and thereby ameliorate the economic disparities between urban and rural areas, and between coastal and interior provinces. Moreover, this increase in household incomes in inland provinces would also help rebalance the overall Chinese economy by increasing overall domestic consumption. As Qu Qiwen of the Wuhan Commerce Bureau observed, “Central regions, including Hubei, Hunan, Jiangxi, Henan, Anhui and Shanxi, with advantages in labor and resources, should seize the opportunity for development relying on domestic consumption.” Otherwise, “migrant labor in central regions” would “return to the east” and thereby “indicate our failure to rebalance the economy and narrow regional disparities.”¹⁷⁰

Meanwhile, firms in urban coastal areas can shift to more technologically advanced higher value-added production. Their higher paid workers, in turn, will spend more discretionary income and thereby help rebalance the Chinese economy by increasing domestic consumption (i.e., Prescription 1). In such an “industrial division of labor on a higher level,” Party Secretary Wang Yang observed that “Guangdong should move on both ends of the industrial chain: concentrating on R&D, design, marketing, and sales at

the commencement and logistics at the culmination.”¹⁷¹ As Commerce Minister Chen Deming elaborated,

“We want to encourage our enterprises to actively bring in advanced technologies from abroad and accelerate products innovation, and we want to support our enterprises to transform from engaging in low end manufacturing to the middle and high end sector in [the] international division of labor. At the same time, we also encourage our enterprises to make more efforts to transform themselves from ones that engage in processing imported materials for foreign businesses into ones that integrate design, production, and marketing, in an effort to raise their international pricing and bargaining ability.”¹⁷²

Prescription 3 (Alleviate Economic, Urban-Rural and Regional Disparities) Facilitates Prescriptions 1 and 2

The third unsustainable component of China’s export-led model of development is the widening economic disparities between rich and poor, urban and rural areas, and coastal and inland provinces. To directly reduce these socially and politically de-stabilizing gaps, the Chinese government has sought to raise rural incomes, provide universal welfare benefits (in healthcare, pensions, education, unemployment insurance, and minimum living allowances), and develop interior provinces. All of these prescriptions to resolve the third unsustainable, however, also facilitate the resolutions of the first and second unsustainables.

By raising rural incomes to alleviate economic, urban-rural and regional disparities, the Chinese government is also facilitating the rebalancing of China’s economy (i.e., Prescription 1). Since over 60% of the population resides in rural areas, increasing rural household incomes would expand domestic consumption and thereby help rebalance the economy. Furthermore, the building of a viable social safety net would alleviate some of the economic fears (about healthcare, pensions, education and unemployment) that encourage excessive savings by Chinese citizens. Less worried about affording medical treatment and their children’s education, they would increase their household consumption and help rebalance China’s economy.

Government policies to reduce economic, urban-rural and regional disparities would also facilitate the resolution of the second unsustainable. Since the unsustainability of low wage export

assembling necessitates a move up the value chain and a spatial relocation inland, the development of rural interior provinces would facilitate both shifts. By mandating nine years of compulsory education nationwide and increasing educational funding to poor rural areas, the Chinese government is also helping to train both basic literate workers and higher skilled workers needed for higher value-added jobs. Meanwhile, developing the infrastructure of rural interior provinces facilitates the spatial relocation of low wage factories inland and the shipment of assembled export products to coastal seaports.

Prescription 4 (Renewable Energy and Green Technology) Facilitates Prescriptions 2 and 3

The fourth unsustainable component of China's export-led model of development is the excessive use of natural resources and the enormous ecological degradation entailed in Chinese industry. Since these resources are finite and the environmental externalities are ultimately deadly, their continued expansion threatens to undermine not only the Chinese economy, but also China's entire ecosystem. To resolve this fourth unsustainable, Chinese policymakers have sought to develop renewable sources of energy and ecologically friendly green technology. As Yao Jingyuan, chief economist at the National Bureau of Statistics (NBS), observed: "China has long depended on material resource investment to support economic growth. This is unsustainable. China must improve its ability to innovate and use technological progress to provide more support for economic growth."¹⁷³ Indeed, resolving the unsustainable use of resources and reducing ecological degradation are needed to surmount obstacles to greater economic growth. According to Vice Premier Li Keqiang,

"We should consider energy conservation and increased efficiency as well as ecological and environmental protection as the important means for restructuring the economy, speed up the development of a green economy, cyclical economy and low carbon economy; further step up technological renovation and equipment upgrade; forcefully develop industries on energy efficiency and environmental protection; encourage green consumption; and exert great efforts to resolve the problems of constraints caused by bottlenecks in the resources and environment."¹⁷⁴

Promoting renewable energy and green technology to resolve the fourth unsustainable, however,

would also facilitate Chinese industry's move up the value chain of production (i.e., Prescription 2). Indeed, green energy and green technology are key sectors targeted for research funding. As Hou Yunchun, the Deputy Director of the State Council Development Research Center, explained: "If we want to maintain healthy global economic development, we must carry out a new round of industrial revolution and technical revolution. All the measures taken at present to develop new energy, biotechnology, the low-carbon economy and in other areas are efforts made in this direction."¹⁷⁵ According to the March 2010 Work Report of the Standing Committee of the National People's Congress, three steps are needed to "increase the sustainability of our development":

"First we need to vigorously carry out technological upgrading in enterprises, with the focus on conserving energy, reducing its consumption, and developing a circular [i.e., re-cycling] economy. Second, we need to strengthen technological innovation, accelerate R&D on high-end products, and upgrade industries and products. Third, we need to energetically develop emerging industries, with the focus on a green economy and a low-carbon economy, and foster new areas of economic growth."¹⁷⁶

The promotion of renewable energy and green technology would also facilitate the resolution of some aspects of the third unsustainable of economic, urban-rural and regional disparities. The successful development of new green energy and green technology would generate new higher value-added products and new higher wage jobs. The result would be an expansion of the middle class and an amelioration of economic inequality. In return, an enlargement of the middle class would facilitate the resolution of the fourth unsustainable. According to the Kuznet Curve, as society develops a middle class, the constituency supporting eco-friendly development enlarges while the funding devoted environmental protection increases.

Comprehensive Integration of Mutually Reinforcing Prescriptions

In multiple ways, the four prescriptions to the four diagnosed unsustainables are mutually reinforcing and form a dense matrix of interconnections. Together with the four direct prescriptions for the four unsustainables, they form the integrated logic of development of a new "Sustainably

Competitive” model of development. Although these dense reciprocal prescriptions have not been delineated by Chinese policymakers and analysts, the separate components of this new model have been listed by several analysts. According to Niu Wenyuan, the Head of the Sustainable Development Strategy Research Group of the Chinese Academy of Sciences, “four integrated adjustments of China’s economy” are needed for “speeding up the change in the mode of development.” Niu’s four adjustments are equivalent to the First, Second and Fourth components of the SC Model:

“First, we must “take into full account the strategic advantages and features of various localities in China, effectively carry out geographic division of work and achieve balanced development; second . . . export, investment and [consumption] demand should organically match with each other, and in particular, expanding domestic demand should be put at the central position . . . ; third, . . . develop strategic-type emerging industries, develop the modern service trade, especially the production-service industry . . . ; fourth, . . . raise the percentage of clean energy to more than 30% of the total energy of China within the coming 30 years, and realize healthy development.”¹⁷⁷

The 2010 Report of the NDRC provides a more comprehensive listing of the four components of the SC Model. In one detailed and cogent passage, the Report combined the need to rebalance the economy by increasing domestic consumption, the need to move up the value chain of global production, the need to redress economic, urban-rural and regional disparities, and the need to address resource and ecological sustainability. China must, the Report urged:

“improve the economic structure, foster emerging industries of strategic importance quickly, eliminate backward production capacity . . . , promote enterprise transformation and upgrading, and intensify energy conservation, emissions reduction and environmental protection while consolidating the foundation for an economic turnaround. At the same time, we need to intensify efforts to balance urban and rural development and development among different regions, pick up the pace of urbanization, create new areas and poles of economic growth, and further expand domestic demand, especially consumer demand. This is the only way we can better satisfy the new expectations and new demands of the people, eliminate the tight restraints resources and environment place on economic development, further raise the quality and efficiency of development, and seize opportunities and keep the upper hand in complex and fierce international competition.”¹⁷⁸

In a second related passage, the Report goes on to combine these concerns about ecological sustainability, consumer demand and regional disparities with the need to enhance the social well-being of citizens and the innovative bases for sustained economic growth. As the Report argued,

“To achieve the major objectives for economic and social development, we need to integrate efforts to maintain steady and rapid economic development with those to adjust the economic structure, and genuinely make development more sustainable. We need to integrate efforts to boost domestic demand, especially consumer demand, with those to maintain the level of external demand, and strive to make economic development more balanced. We need to integrate efforts to balance development between urban and rural areas and among regions with those to promote urbanization, and do all we can to create more room for development. We need to integrate efforts to promote independent innovation with those to foster emerging industries of strategic importance, and strive to achieve innovation-driven development. We need to integrate efforts to deepen reform with those to promote development, and comprehensively increase the inherent driving force of economic development. Moreover, we need to integrate efforts to develop the economy with those to improve people’s well-being, and further balance economic and social development.”¹⁷⁹

9. Conclusion

In accordance with their new understanding of the four unsustainable elements of China’s investment heavy, export-led model of economic development, Chinese policymakers formulated new policies that would redress these unsustainabilities and ensure the future global competitiveness and sustainability of China’s economy. In so doing, these new policies consist of four integrated components of coherent model of economic development. The logic of this new model derives fundamentally from deduced prescriptions to overcome the four diagnosed “unsustainables” of China’s investment driven, low wage assembling, economically polarizing, high resource and heavy polluting, export-led model of development. Although not explicitly delineated and not yet given any official name, this new “model” of development has already emerged in the consensual thinking of Chinese policymakers and analysts and has guided their policy prescriptions. I have called this new model the “Sustainably Competitive” Model of Global Economic Development (持续并有竞争力的经济发展模式), or the “SC Model” in short.

¹ Hu

² Yee 2010.

³ Quoted in Kai Guo and Papa N’Diaye, “Is China’s Export-Oriented Growth Sustainable?”, *IMF Working Paper 09/172* (Washington, DC: International Monetary Fund 2009), p. 3.

⁴ Roach, *Next Asia*, p. 232.

⁵ World Bank, *East Asia and Pacific Economic Update*, p. 20.

- ⁶ Quoted in *Xinhua*, February 27, 2010, February 3, 2010, March 3, 2010; *Liaowang*, February 21, 2010.
- ⁷ Quoted in *Zhongguo Xinwen She*, March 23, 2010; *Xinhua*, March 22, 2010, March 24, 2010.
- ⁸ “Full Text of the Work Report of the Standing Committee of the National People’s Congress, March 9, 2010,” *Xinhua*, March 20, 2010.
- ⁹ Robert Lawrence Kuhn, “Guangdong Visions: A Talk with Wang Yang,” part one of two-part interview, *BusinessWeek Online*, June 8, 2009.
- ¹⁰ *Renmin Ribao*, March 3, 2010.
- ¹¹ Stephen S. Roach, *The Next Asia: Opportunities and Challenges for a New Globalization* (Hoboken, NJ: John Wiley & Sons, Inc. 2009), pp. 179, 219, 246; Kojima, “China’s High Economic Growth,” p. 106; Tong and Zhang, “China’s Responses to the Economic Crisis,” p. 13.
- ¹² *Renmin Ribao*, March 5, 2010; *Xinhua*, March 3, 2010.
- ¹³ Roach, *Next Asia*, pp. 173, 195, 234-35, quote on p. 225; Yu, “China’s Policy Responses,” p. 8.
- ¹⁴ Schuller and Yun, “China’s Economic Policy,” p. 176.
- ¹⁵ NDRC, *Report*, p. 3; *Xinhua*, February 15, 2010, February 24, 2010, February 25, 2010, March 14, 2010.
- ¹⁶ Quoted in *Xinhua*, January 29, 2010.
- ¹⁷ *Xinhua*, February 24, 2010.
- ¹⁸ *Financial Times*, January 18, 2010.
- ¹⁹ E.g., Roach, *Next Asia*, pp. 172, 187, 230.
- ²⁰ Kojima, “China’s High Economic Growth,” pp. 119-121; *The Economist*, July 31, 2010; *New York Times*, June 24, 2010; *Renmin Ribao*, March 3, 2010.
- ²¹ Leslie T. Chang, “More Mobile, Less Content,” *New York Times*, June 13, 2010; *Washington Post*, June 7, 2010.
- ²² *The Economist*, July 31, 2010; *Xinhua*, June 18, 2010.
- ²³ *Zhongguo Wang*, March 1, 2010; *Xinhua*, March 25, 2010.
- ²⁴ *Xinhua*, February 13, 2010, March 1, 2010; *Zhongguo Qingnian Bao*, September 23, 2009.
- ²⁵ Quoted in *Xinhua*, February 13, 2010.
- ²⁶ Cited in *The Economist*, July 31, 2010.
- ²⁷ *Xinhua*, March 25, 2010.
- ²⁸ *Renmin Ribao*, April 1, 2010, March 3, 2010.
- ²⁹ Quoted in *Xinhua*, December 6, 2008.
- ³⁰ *Xinhua*, April 14, 2010.
- ³¹ *Xinhua*, May 28, 2010.
- ³² Quoted in *New York Times*, September 23, 2010. According to a 2007 study by the Sloan Foundation, an iPod that is manufactured in China in 2007 costs \$150, of which \$146 consists of imported parts and only \$4 is paid to the Chinese manufacturer.
- ³³ *Xinhua*, March 25, 2010.
- ³⁴ Quoted in *Xinhua*, March 12, 2010.
- ³⁵ *Xinhua*, May 28, 2010.
- ³⁶ Quoted in *Xinhua*, March 12, 2010.
- ³⁷ Quoted in *Xinhua*, March 22, 2010.
- ³⁸ Stephen S. Roach, “China’s Economic Future,” China 2025: Keynote II, *Council on Foreign Relations*, October 19, 2009; Roach, *Next Asia*, p. 216.
- ³⁹ Cited in Roach, *Next Asia*, p. 216.
- ⁴⁰ *Renmin Ribao*, March 5, 2010.
- ⁴¹ Quoted in *Zhongguo Xinwen She*, December 3, 2008. See also *Renmin Ribao*, March 3, 2010.
- ⁴² “Interview with Niu Wenyuan,” *Renmin Ribao*, May 13, 2010.
- ⁴³ Quoted in *Xinhua*, April 7, 2010.
- ⁴⁴ Kuhn, “Guangdong Visions.”
- ⁴⁵ Quoted in *Liaowang*, April 1, 2010.
- ⁴⁶ *Xinhua*, June 9, 2010.
- ⁴⁷ “Interview with Yao Jingyuan,” *Renmin Ribao*, April 13, 2010.
- ⁴⁸ As reported in *Xinhua*, March 4, 2010.
- ⁴⁹ Quoted in *Xinhua*, December 2, 2009.
- ⁵⁰ Quoted in *Xinhua*, March 14, 2010; see also Wen’s comments in his interview with *Xinhua*, December 27, 2009.
- ⁵¹ Quoted in *Xinhua*, February 3, 2010.
- ⁵² Ministry of Finance, *Report*, p. 19.

- ⁵³ Quoted in *Liaowang*, February 21, 2010.
- ⁵⁴ *Zhongguo Xinwen She*, February 21, 2010; *Renmin Ribao*, March 3, 2010; *Xinhua*, February 27, 2010, March 4, 2010; *Liaowang*, February 21, 2010.
- ⁵⁵ “Full Text of Opening Ceremony Speech by Xi Jinping at the Boao Forum for Asia, April 10, 2010,” *Xinhua*, April 20, 2010.
- ⁵⁶ “Text of Speech by Xi Jinping at the Opening Ceremony of the February 25, 2010 International Forum on Economic Globalization and Trade Unions,” *Xinhua*, May 9, 2010.
- ⁵⁷ *Xinhua*, February 25, 2010, March 8, 2010, May 15, 2010, June 18, 2010.
- ⁵⁸ “Transcript of March 6, 2010 News Conference,” *Xinhua Wang*, March 17, 2010.
- ⁵⁹ Quoted in *Xinhua*, December 2, 2009.
- ⁶⁰ “Full Text of President Hu Jintao’s Speech at the APEC Summit in Lima on November 21, 2008,” *Xinhua*, November 22, 2008; see also Hu’s February 3, 2010 speech at the annual seminar for principal leading cadres at the Central Party School, excerpted in *Xinhua*, February 3, 2010, and the similar February 21 comments of Li Yizhong, the Minister of Industry and Information Technology, quoted in *Xinhua*, February 27, 2010.
- ⁶¹ Quoted in *Xinhua*, January 21, 2010.
- ⁶² *Xinhua*, February 25, 2010.
- ⁶³ Quoted in *Xinhua*, February 24, 2010.
- ⁶⁴ *Xinhua*, January 13, 2010.
- ⁶⁵ Xie Xuren, “Carry out a Proactive Fiscal Policy to Promote a Stable and Fairly Rapid Economic Development,” *Renmin Ribao*, June 9, 2010; see also *Xinhua*, January 13, 2010.
- ⁶⁶ “Transcript of March 6, 2010 News Conference,” *Xinhua Wang*, March 17, 2010.
- ⁶⁷ Quoted in *Liaowang*, November 17, 2009.
- ⁶⁸ *Xinhua*, June 18, 2010.
- ⁶⁹ Quoted in *Xinhua*, February 24, 2010.
- ⁷⁰ *Xinhua*, May 28, 2010, June 18, 2010, January 7, 2010.
- ⁷¹ *Xinhua*, February 25, 2010.
- ⁷² *Xinhua*, June 18, 2010.
- ⁷³ *Financial Times*, June 17, 2010.
- ⁷⁴ *Washington Post*, June 11, 2020.
- ⁷⁵ *Xinhua*, June 3, 2010.
- ⁷⁶ *Xinhua*, March 25, 2010.
- ⁷⁷ *Xinhua*, March 8, 2010.
- ⁷⁸ Emanuele Baldacci, Giovanni Callegari, David Coady, Ding Ding, Manmohan Kumar, Pietro Tommasino, and Jaejoon Woo, “Public Expenditures on Social Programs and Household Consumption in China,” *IMF Working Paper 10/69* (Washington, DC: International Monetary Fund, March 2010). According to this study (pp. 20, 22), “a sustained one percentage point of GDP increase in public expenditures, distributed equally across education, health, and pensions, would result in a permanent increase in the household consumption ratio of 1.25 percentage points of GDP.” See also Steven Barnett and Ray Brooks, “China: Does Government Health and Education Spending Boost Consumption?”, *IMF Working Paper 10/16* (Washington, DC: International Monetary Fund, January 2010). According to Barnett and Brooks (p. 11), “broadening coverage of public health care could have an important effect on household precautionary savings. . . . each additional yuan in government health spending boosts urban consumption by 2 yuan.”
- ⁷⁹ Asian Development Bank, *Asian Development Outlook*, pp. 139-40; Tong and Zhang, “China’s Responses to the Economic Crisis,” p. 14; Prasad and Rajan, “Modernizing China’s Growth Paradigm,” pp. 333, 335; Schuller and Yun, “China’s Economic Policy,” pp. 174-75, 177; Roach, *Next Asia*, pp. xiv, 176, 180, 186, 212, 214, 219-20; 243, 246, 253; Guo and N’Diaye, “Is China’s Export-Oriented Growth Sustainable?” pp. 4, 16; *Xinhua*, February 25, 2010, March 3, 2010, March 12, 2010, March 14, 2010.
- ⁸⁰ Asian Development Bank, *Asian Development Outlook*, p. 140.
- ⁸¹ *Xinhua*, March 3, 2010.
- ⁸² Quoted in *Los Angeles Times*, February 13, 2010.
- ⁸³ Quoted in *Zhongguo Xinwen She*, December 3, 2008.
- ⁸⁴ “Interview with Yao Jingyuan,” *Renmin Ribao*, April 13, 2010.
- ⁸⁵ *Xinhua*, March 3, 2010.
- ⁸⁶ “Text of Wen Jiabao Keynote Speech at the Boao Forum Opening Ceremony, April 18, 2009,” *Xinhua*, April 20, 2009.

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- ⁸⁸ *Xinhua*, March 5, 2010.
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