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# CHINA'S PATENT LAW AND THE ECONOMIC REFORM TODAY

Liwei Wang\*

## I. INTRODUCTION

When the People's Republic of China (P.R.C. or China) promulgated its Patent Law in 1984,<sup>1</sup> Americans greeted the law with optimism. According to orthodox Marxism, an individual works to create for and benefit the state; protecting an individual's intellectual property rights would seemingly contravene the basic tenets of socialism.<sup>2</sup> Still, Americans maintained hopes that:

[t]he patent law, among other new laws in the present "legal revolution," would pave the way for a second Chinese "renaissance." Such a development would, most certainly, not be a break from the traditions of the past, but might herald the reestablishment of Chinese pre-eminence in science and technology.<sup>3</sup>

The June 1989 bloody crackdown on the pro-democracy movement in Beijing shocked Western society. More Americans came to realize that China's legal reform is incomplete, and that the still ambiguous relationship between the policies of the Chinese Communist Party (C.C.P. or Party) and the law keeps the legal system vulnerable to political manipulation.<sup>4</sup> To dispel the concerns of foreigners, China's current leadership insists that the country's economic reform policy will continue; at the same time, however, the leadership is endorsing an austerity program.<sup>5</sup> The Party openly

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1. *The Patent Law of the People's Republic of China*, BEIJING REV., Apr. 9, 1984, at supp. I-VII.

2. Beaumont, *The New Patent Law of the People's Republic of China: Evidence of A Second Chinese Renaissance?*, 27 IDEA 39, 44 (1986).

3. *Id.* at 56.

4. Hsia & Zeldin, *Recent Legal Developments in the People's Republic of China*, 28 HARV. INT'L L.J. 249, 287 (1987).

5. After the economic reform was initiated at the end of the 1970s, China's economy grew at a fast rate for several years; but in the second half of the 1980s, inflation became a serious problem. In the summer of 1988, panic purchasing and a run on

stated the need to examine experiences over the past few years "to determine whether specific measures square with the principles and policies adopted since the [Party's 1978] 3rd plenum."<sup>6</sup> This announcement suggests that some well-established reform policies might be curtailed.<sup>7</sup> Indeed, since the summer of 1989, the government has stressed its commitment to a state-centralized economy, indicating that policies favoring a commodity economy<sup>8</sup> and the managerial power of enterprises have been discredited.<sup>9</sup>

In socialist China, most of the means of production belong to the state: in 1980, public ownership of the means of production amounted to 99.4% of the nation's economy, 79.4% of which fell to state ownership, 20% to collective ownership, and 0.6% to others.<sup>10</sup> Most individuals cannot afford to invest in the type of research that leads to inventions. This remains true despite a decade of economic reform. The more likely inventors and patentees are state-owned enterprises.<sup>11</sup> Given that the austerity policy discourages state-

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banks occurred in all major Chinese cities. The Third Plenum of the 13th Central Committee of the Chinese Communist Party, held in September 1988, recognized the problems caused by the nation's unbalanced economic structure; it responded by adopting the policy of "controlling economic environments and rectifying economic order" (economic control and rectification) to address China's over-heated economic growth and rampant inflation. The new policy is generally called the "austerity policy." Its main components include cutting state investment, postponing price reforms, tightening the money supply, restoring direct controls over lending by banks, and emphasizing a planned economy. The austerity policy has caused declining production, depressed markets and other grave problems. See the following text.

6. Delfs, *Stuck in the Groove*, FAR E. ECON. REV., Oct. 5, 1989, at 14, 15. It is generally recognized that the Third Plenum of the 11th Central Committee of the Chinese Communist Party held in 1978 was a landmark event, during which the Party began to emphasize economic and legal reconstruction instead of political campaigns.

7. *Id.*

8. The Western equivalent for the Chinese term "commodity economy" is "market economy." As the planned economy's antithesis, the commodity economy is:

[a]n economic system in which decisions about the allocation of resources and production are made on the basis of prices generated by voluntary exchanges between producers, consumers, workers and owners of factors of production. Decision making in such an economy is decentralized — i.e. decisions are made independently by groups and individuals in the economy rather than by central planners. [Commodity] economies usually also involve a system of private ownership of the means of production — i.e. they are 'capitalist' economies. However [commodity] economies can function, to some extent, under social ownership.

See THE DICTIONARY OF MODERN ECONOMICS 273 (D. Pearce ed. 1983).

9. *The Decision of the Central Committee of the Communist Party of China on Further Economic Control and Rectification and Deepening Economic Reform (Digest)*, People's Daily (overseas ed.), Jan. 17, 1990, at 1 [hereinafter *Decision of the Central Committee on Economic Control*].

10. Jin, *Reform and Protection of State-Owned Enterprise Property Rights* [hereinafter Jin], 112-113 (June 1, 1989) (available from the Committee on Legal Education Exchange with China, Columbia Law School).

11. Huang, *On Patent System and Patent Law*, 3 FAXUE YANJIU [STUDIES IN LAW] 53 (1984). In many countries, inventions made while on the job generally comprise 80-90% of all inventions.

owned enterprises from claiming a voice in management, it is doubtful that many enterprises will actually apply for their patent rights.<sup>12</sup> As long as the austerity policy remains in force, the patent law is unlikely to play a significant role in the development of China's science and technology.

This article discusses the role of the patent law in advancing the development of China's science and technology, especially in encouraging Chinese inventors and in spreading their inventions. To avoid "measuring Chinese corn by the American bushel," this author provides a comparison of Chinese and Western patent laws.<sup>13</sup> Part II of this article discusses the patent law's relationship to the Party's economic policies. Part III examines the limited role of the patent law under the more recent austerity policy. Part IV suggests that the austerity policy was a response to serious problems caused by the economic reform. Part V concludes that China's patent law is unlikely to pave the way for a Chinese "renaissance" in the near future.

## II. THE PATENT LAW: A PRODUCT OF ECONOMIC REFORM

Those living in Western societies, where the rule of law is highly valued and regarded as an appropriate instrument for regulating social relations, tend to think that this view of law prevails in all countries. In some countries, however, law plays a subordinate role to non-legal methods of regulation.<sup>14</sup> Such is the case in China. The orthodox Chinese definition of the nature of law draws on a quotation from Lenin: "[W]hat is a law? The expression of the will of the classes which have emerged victorious and hold the power of the state."<sup>15</sup> Like the Communist Party of the Soviet Union, the

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12. See generally Yao, *Intellectual Property* (sec. III of ch. V), in ZHONGHUA RENMIN GONGHEGUO MINFA TONGZE JIANGHUA [DISCUSSIONS ON THE GENERAL PRINCIPLES OF THE CIVIL LAW OF THE P.R.C.] 168, 172 (1986).

13. Alford, *The Inscrutable Occidental? Implications of Roberto Unger's Uses and Abuses of the Chinese Past*, 64 TEX. L. REV. 915, 965 (1986).

14. R. DAVID, MAJOR LEGAL SYSTEMS IN THE WORLD TODAY [hereinafter DAVID] 13 (J. BRIERLEY TRANS. 1985).

15. V.I. LENIN, *The Agrarian Programme of Social-Democracy in the First Russian Revolution 1905-1907*, 13 LENIN COLLECTED WORKS 327 (1962). Shortly after the Russian October Revolution, law was officially defined as "a system of social relations which corresponds to the interests of the dominant class and is safeguarded by the organized force of the class." ZHONGGUO DABAIKE QUANSHU, FAXUE [CHINA ENCYCLOPEDIA, LAW] 76 (Y. Zhang ed. 1984). In the late 1930s, the then Attorney-General of the Soviet Union, Andrei Vyshinsky, recognized this approach by describing law as a system of norms designed "to guard, secure, and develop social relationships and social orders advantageous and agreeable to the dominant class." E. BODENHEIMER, JURISPRUDENCE: THE PHILOSOPHY AND METHOD OF THE LAW 80-81 (1974). Despite Vyshinsky's notoriety after Stalin's death, the C.C.P. insists on the earlier official definition of law.

C.C.P. resolutely rejects the Western political theory of the "separation of state power."<sup>16</sup> The relationship between the Party's policy and law, even at the height of the reform, remain inseparable: the Party's policy is both the spirit of law which is enacted to fulfill the Party's goals and the foundation upon which law is based.<sup>17</sup> Law has never gained an independent status in China. China's legal system, therefore, only makes sense if one takes into account the relationship between the Party-principal and the law-subordinate.

#### A. Comparison of the U.S. and P.R.C. Patent Laws

Throughout recent history, and particularly during the Cultural Revolution (1966-1976), the Chinese people have suffered under oppressive political campaigns. Fed up with the so-called "ideological struggle," the people began longing for material change. In recognition of popular sentiment, the Third Plenum of the 11th Central Committee of the C.C.P. in 1978 rejected Maoist Cultural Revolution policies, and instituted the Four Modernizations as the focus of the Party's work.<sup>18</sup> The Plenum's Communiqué emphasized the importance of constructing a "socialist legal system" which would bring about the more secure and orderly environment required by the Four Modernizations.<sup>19</sup> The new Party goals made possible the enactment of such statutes as China's patent law.

The reformers were faced with a formidable task in adopting a patent law in socialist China. Patent laws originated from a system of private ownership of the means of production. The United States economy, for example, depends upon a free private competitive market as the fundamental determinant of price, output, quality and the allocation of resources.<sup>20</sup> Under the U.S. system, the profit

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16. Soon after the Russian October Revolution, the Constitution of the Soviet Union rejected both the Western theory of "separation of power" and a judiciary independent of the government. Z. ZILE, *SOVIET LEGAL PROCESS* [hereinafter ZILE] 134 (1990). The C.C.P. traditionally follows Marxist-Leninist principles without hesitation. Gu, *Why the System of Separation of Powers is Not Being Implemented in China*, 6 *FAXUE YANJIU* [STUDIES IN LAW] 23 (1987). Wu, *Why the System of Separation of Powers is Being Implemented in the U.S.A.*, 6 *FAXUE YANJIU* [STUDIES IN LAW] 18 (1987). See also You, *Are There No Differences in Democracy between the East and the West?*, *People's Daily* (overseas ed.), Feb. 21, 1990, at 2.

17. THE TEACHING & RESEARCHING OFFICE OF LAW, *FAXUE JICHU* [BASIC LAW THEORY] 80-82 (1984) (The School of the Central Committee of the P.R.C.); AN INTRODUCTION TO LAW 37 (Z. Wu ed. 1987).

18. The term "Four Modernizations" refers to the modernizing of industry, agriculture, science and technology, and national defense. See *Communiqué of the Third Plenary Session of the 11th C.C.P. Central Committee*, PEKING REV., Dec. 29, 1978, at 6-16 [hereinafter *Communiqué of the 11th Central Committee*].

19. *Id.* at 14.

20. S. OPPENHEIM, G. WESTON, P. MAGGS & R. SCHECHTER, *UNFAIR TRADE PRACTICES AND CONSUMER PROTECTION* 1 (1983).

motive is the basic driving force behind production decisions.<sup>21</sup> It is believed that a market economy will best achieve the nation's interests in the equitable distribution of income, technological development, and the dedication of resources to their most productive uses.<sup>22</sup>

In the U.S., the fact that patents are granted constitutional protection reflects a judgment that, although short-range competitive interests might benefit from immediate and free access to technological innovation, such access could destroy incentives to innovate. Without patent protection, many products might not be introduced into the market, and the level of competition would decline.<sup>23</sup> Patents merit protection to encourage the inventions of better products. Consumers are better off than they would be without inventions, as evidenced by the fact that they willingly pay what the patentee charges.<sup>24</sup> Western patent law expresses a basic assumption that individuals realize maximum social benefits through the pursuit of their personal interests.<sup>25</sup>

The Chinese system stands in marked contrast to that of United States. In China, the economic system, established during the first Five-Year Plan for the nation's economic development (1953-1957), was modeled after that of the U.S.S.R. This system is mainly characterized by the following features: the economy is primarily state-owned; economic activities such as production, distribution, exchange and consumption are determined by state plan; and subordinate units are accountable to superiors for completing the mandatory plan.<sup>26</sup> As Lenin declared, "All citizens become employees and workers of a single nationwide state 'syndicate.' The whole of society will have become a single office and a single factory, with equality of labor and equality of pay."<sup>27</sup>

According to the orthodox view, socialist public ownership of the means of production has eliminated the private profit motive; thus, the long-term interests of the "whole" (namely, the people as a whole) and the "parts" (individuals and enterprises) are basically congruent. Where conflicts of interest exist, partial interests should

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21. W. BOWMAN, PATENT AND ANTITRUST LAW 3-4 (1973).

22. P. GOLDSTEIN, COPYRIGHT, PATENT, TRADEMARK AND RELATED STATE DOCTRINES 3-4 (1981).

23. *Id.*

24. *See Communiqué of the 11th Central Committee, supra* note 18.

25. Hsia & Huan, *Laws of the People's Republic of China on Industrial and Intellectual Property*, 38 LAW & CONTEMP. PROBS. [hereinafter Hsia & Huan] 274, 276-277 (1973).

26. Yang, *On Economic Structure Reform*, in DANGQIAN ZHONGGUO JINGJI WENTI TANTAO [THE EXPLORATION OF CONTEMPORARY ECONOMIC PROBLEMS IN CHINA] 18 (1985). Hsu, *Changing Conceptions of the Socialist Enterprise in China, 1979-1988*, 15 MODERN CHINA [hereinafter Hsu] 499, 504 (1989).

27. Zile, *supra* note 16, at 104.

be subordinated to those of the whole, short-term interests to long-term interests, and individual interests to those of the collective.<sup>28</sup>

The rule of rewards for inventions incorporates these principles. Article 23 of the Regulations on Awards for Rationalization Proposals and Technical Inventions issued in 1963 states:

All inventions are the property of the state, and no person or unit may claim monopoly over them. All units throughout the country (including collectively-owned units) may make use of the inventions essential to them.<sup>29</sup>

The dominant view in the early 1970s was that patent law, a quintessential expression of the values of Western society, was basically incompatible with Marxist principles.<sup>30</sup>

### B. The Economic Reform

Marxist principles have been changing over time. For example, Marx and Engels, the founders of Communism, maintained that the proletarian revolution could not succeed in one capitalist country alone, and that "[u]nited action, of the leading civilized countries at least, is one of the first conditions for the emancipation of the proletariat."<sup>31</sup> Lenin changed this principle with the Russian October Revolution, which led to the establishment of the first socialist country in the world. Mao Zedong in turn modified Leninist doctrine by leading a peasant revolution in rural China for "the dictatorship of the proletariat." The current Chinese leadership may further adapt socialist principles to current needs. In 1978 the Party proclaimed:

[O]ne of the serious shortcomings in the structure of economic management in our country is the over-concentration of authority, and it is necessary boldly to shift it under guidance from the leadership to lower levels so that the local authority and individual and agricultural enterprises will have greater power of decision in management under the guidance of unified state planning.<sup>32</sup>

The Party called on the Chinese people to emancipate their minds in order to eliminate certain ideological taboos.<sup>33</sup> Responding to the Party's call, the Chinese began the process of reevaluating their economic system. They found that China's economic theory, con-

28. Hsu, *supra* note 26, at 503.

29. See Hsia & Huan, *supra* note 25, at 281.

30. *Id.*

31. K. MARX & F. ENGELS, *Manifesto of the Communist Party*, in 1 MARX & ENGELS SELECTED WORKS 125 (1969).

32. *Communiqué of the 11th Central Committee*, *supra* note 18, at 6. It is generally accepted that this session was the beginning of Deng Xiaoping's tenure of power, and the start of China's economic reform.

33. Ren, *Emancipation of the Mind is the Great Historical Current*, 12 HONGQI [RED FLAG] 24 (1978).

stantly adjusting to various policies and political campaigns, had ceased to function effectively. The Chinese proclaimed it wrong to take the experience of a particular socialist country as a universal rule for development, and harmful to mechanically intone classic Marxist principles of socialism.<sup>34</sup> This growing dissatisfaction with the socialist economic system ushered in the period of economic reform.

Economic reform first began in the rural areas. The "System of Management Responsibility Contracts" was instituted throughout the countryside, giving farmers greater autonomy in managing land held under contract, while leaving ownership in the hands of collective economic organizations called production teams, production brigades, and people's communes.<sup>35</sup> The same system of separating management from ownership was utilized in industrial reform as well.<sup>36</sup>

According to Professor Li Yining, a well-known scholar in the field of economic reform, economic reform in urban areas primarily focused on enterprise reform.<sup>37</sup> The goal of enterprise reform was to vitalize enterprises, especially those large and medium-sized enterprises owned by the state.<sup>38</sup> Features of enterprise reform such as the profit-retention system, the tax-for-profit system, the director-responsibility system and the management contracting system were all aimed at increasing the productivity and profitability of Chinese enterprises.<sup>39</sup>

Under the orthodox socialist system, profits made by enterprises were turned over to the state, while any losses were made up by the state. Management practices were not linked with the enterprises' material interests.<sup>40</sup> Despite orders from higher authorities

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34. Jia, *A Report on Discussions on Regulating through Market Planning*, 1 Soc. SCI. IN CHINA [hereinafter Jia] 78-79, 81, 88 (1981).

35. Since the late 1950s, the so-called "people's communes" have been set up in China's countryside as local government structures, as well as productive organizations. However, the 1982 P.R.C. Constitution treats the people's communes as productive organizations, but not as local governments. *Constitution of the People's Republic of China*, BEIJING REV., Dec. 27, 1982, at 10-29.

36. Jing, *The Historical Role of Civil and Economic Law During Economic Reform*, 53-54 (May 29, 1989) (available from the Committee on Legal Education Exchange with China, Columbia Law School). Rural reforms restoring the family household as the basic agricultural production unit were pioneered in the late 1970s in Sichuan Province under Zhao Ziyang, former secretary general of the C.C.P., and in Anhui Province under Wan Li, chairman of the National People's Congress of the P.R.C. See *40 Years of Chinese Communism*, FAR E. ECON. REV., Oct. 5, 1989, at 51, 57.

37. Li, *Reform — the Hope of China*, in DANGQIAN ZHONGGUO JINGJI WENTI TANTAO [THE EXPLORATION OF CONTEMPORARY ECONOMIC PROBLEMS IN CHINA] 83 (1985).

38. See Jin, *supra* note 10, at 114.

39. See Hsu, *supra* note 26, at 499.

40. Liu & Zhao, *Socialist Economic Planning and the Market*, BEIJING REV., Aug. 3, 1979, at 8.



to improve their performance, enterprises lacked substantial motivation to lower production costs, to upgrade the quality of products, or to increase variety so as to meet demand. Waste was rampant.<sup>41</sup> The state plan, which imposed production targets on countless grass-roots units all over the country, often failed to reflect actual production capabilities or consumption levels. Complicating matters still further, China was not a well-developed country, which is the principal requirement for a planned economy under orthodox Marxist doctrine.<sup>42</sup> To overcome these problems, the market mechanism and the law of value<sup>43</sup> were introduced into China's planned economy. In addition, the central government granted Chinese enterprises greater managerial autonomy.

An experiment in enlarging the managerial power of enterprises was carried out in 100 enterprises in Sichuan Province at the beginning of 1979. Not surprisingly, it proved tangibly successful.<sup>44</sup> Enterprise reform spread rapidly to other cities. Released from the rigid mandate of state planning, P.R.C. enterprises became increasingly independent commodity producers under the flexible "guidance of state planning."<sup>45</sup>

In 1984, summarizing the experiences of economic reform, the Party declared that the P.R.C.'s socialist planned economy was:

a planned commodity economy based on public ownership, in which the law of value must be consciously followed and applied. The full development of a commodity economy is an indispensable stage in the economic growth of society and a prerequisite for

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41. *Id.* at 10.

42. Xue, *A Study in the Planned Management of the Socialist Economy*, BEIJING REV., Oct. 26, 1979, at 14, 15.

43. In China, the "law of value" refers to rules of law which regulate economic activities, such as the production, circulation, distribution and consumption of commodities. It is claimed in China that the law of value constitutes inherent rules of the objective world which operate independently of subjective human perception or recognition. According to the orthodox Marxist theory introduced from the U.S.S.R., the law of value operates mainly in capitalist societies based upon private ownership of the means of production; in a socialist society based upon public ownership of the means of production, the law of value generally does not operate since economic activities are based on state plans. Hence, the law of value was ignored by the C.C.P. before the economic reform.

44. *Enterprise Management: Tentative Practice*, BEIJING REV., Aug. 10, 1979, at 6.

45. Tian, *More Autonomy for Enterprises Revives the Economy*, BEIJING REV., Apr. 6, 1981, at 21. Under the guidance of state planning (*zhidao jihua*), there would be suggested targets for the enterprises, instead of mandatory quotas. The state would use prices, taxes, credit allocation and other economic incentives to induce enterprises to comply with its plan, indirectly ensuring macro-balances. With greater autonomy, the enterprises might revise state-plan targets according to market changes. Economists also believed that enterprises (including the power enterprises) should have independent financial responsibility and commensurate management autonomy to spur greater productivity. By the mid-1980s, the ideas of "guidance of state plan" and "independent financial responsibility" were avidly embraced by economists and increasingly implemented by the Party's policies. See Jia, *supra* note 34, at 510-511.

our economic modernization.<sup>46</sup>

### C. The Enactment of the Patent Law

As enterprise reform progressed, the idea of enacting a patent law took hold. Protection of individual patent rights had previously been considered a symbol of capitalism that conflicted with socialism. In the early 1980s, this idea, like many other orthodox Marxist precepts, fell out of favor. Chinese reformers argued that patent protection would promote science, technology and production. The most advanced countries — the United States, West Germany and Japan — owed their wealth mainly to advanced science and technology, the development of which was significantly stimulated by patent protection in those countries.<sup>47</sup>

Reformers drew inspiration from the Soviet Union model as well. Soon after the Russian October Revolution, the Soviet government promulgated the first socialist patent law. Further justification was found in the more than 150 countries, capitalist and socialist alike, which had enacted patent laws.<sup>48</sup> It seemed clear that a patent law could serve societies other than those based on capitalist regimes.

To enact a patent law, it was claimed, was to recognize a number of propositions: that mental labor for inventions, like manual labor, could create value; that inventions arising from mental labor were an important property; that inventions were commodities, possessing utility value and exchange value; and that an inventor, as the relatively independent producer of commodities, had some right to the invention. It was further proposed that an individual's inventions belonged to the individual, that a collective enterprise's inventions belonged to the collective enterprise, and that a state-owned enterprise's inventions essentially belong to the state. State-owned enterprises, as legal persons and independent accounting units, would have the right to hold but not own inventions as their property. This form of ownership, limited by the state, should not be shared freely with others.<sup>49</sup> The above suggestions were in strict conformity with the trend of economic reform.

Early in January 1980, the State Council approved the estab-

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46. *Decision of the Central Committee of the Communist Party of China on Reform of the Economic Structure*, BEIJING REV., Oct. 29, 1984, at supp. VII.

47. Lu, *A Preliminary Study on the Advantages and Disadvantages of the Establishment of Patent Law*, 4 FAXUE YANJIU [STUDIES IN LAW] 19, 20 (1981). Wang, *A Brief Talk on the Making of Patent Law*, 5 FAXUE YANJIU [STUDIES IN LAW] [hereinafter Wang] 27, 30 (1981).

48. Dong, *On the Correct Recognition of the Patent Law*, 3 FAXUE YANJIU [STUDIES IN LAW] 19, 21-22 (1981).

49. Wang, *supra* note 47, at 28-29.

lishment of the Patent Office of the P.R.C.<sup>50</sup> The Chinese government sent groups to more than 30 countries representing a variety of social systems to study their patent laws; more than 100 foreign experts travelled to China to deliver lectures or hold conferences on patent systems. The draft of the patent law was revised more than 20 times.<sup>51</sup>

The P.R.C. Patent Law was issued in 1984. Prior to this time, the Chinese government had promulgated several sets of regulations that encouraged inventions with moderate awards.<sup>52</sup> But none had played a significant role in the development of China's science and technology. For example, under the Provisional Regulations on the Protection of the Invention Right and the Patent Right (1950), only six inventions and four patents were approved. These Regulations were eventually invalidated,<sup>53</sup> probably as a result of the Party's insistence until 1980 on "putting proletarian politics in command" at every turn,<sup>54</sup> and the fact that material incentives had been denounced as bourgeois.<sup>55</sup> Few individuals and even fewer enterprises exhibited any zeal for inventions. Not satisfied with the existing system for awarding inventors, the Party, through the National People's Congress, enacted a patent law infused with Western char-

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50. D. DONG, *ZHONGGUO ZHUANLI ZHISHI JIANGZUO* [LECTURES ON CHINA'S PATENT LAW] 12 (1987).

51. Huang, *General Comment on Patent Law*, in *ZHONGGUO ZHUANLIFA JIQI SHISHI* [CHINA'S PATENT LAW AND ITS IMPLEMENTATION] [hereinafter Huang] 101 (1985).

52. See, e.g., *Provisional Regulations on the Protection Right and the Patent Right (1950)*, 1 *ZHONGYANG RENMIN ZHENGFU FALU HUIBIAN* [COLLECTION OF LAWS AND REGULATIONS OF THE CENTRAL PEOPLE'S GOVERNMENT] [hereinafter FLHB] 359 (1952); *Provisional Regulations on Awards for Inventions, Technical Improvements and Rationalization Proposals Relating to Production (1954)* [hereinafter *Regulations on Awards for Inventions*], 5 FLHB 53 (1955); *Regulations on Rewards for Rationalization Proposals and Technical Innovations (1963)*, in *ZHONGHUA RENMIN GONGHE GUO FALU HUIBIAN* [COLLECTION OF LAWS AND REGULATIONS OF THE P.R.C.] 241, 246, translated in *SURVEY OF CHINA MAINLAND PRESS*, No. 3117, Dec. 11, 1963; *Revised Regulations on Awards for Inventions (1978)*, 6 *CHINA BUS. REV.* 60-61 (1979); *Regulations for the Reward and Encouragement of Natural Sciences (1979)*, translated in *Daily Report: China, Foreign Broadcast Information Service*, [hereinafter FBIS], Jan. 7, 1980, at L-5; *Regulation on Rewards for Rationalization Proposals and Technical Innovation (1982)*, FBIS, Apr. 13, 1982, at K11.

53. Tang, *The Outline of the Development of the Patent System*, in *ZHONGGUO ZHUANLIFA JIQI SHISHI*, *supra* note 51, at 127-128.

54. When the *Regulations on Awards for Inventions* was issued in 1978, the idea of "putting proletarian politics in command" was still emphasized. See *supra* note 52. In 1979, it was officially maintained that "[i]n giving awards [for inventions], attention will be given to the principle of putting proletarian politics in command and combining honorary with material awards, with the stress on the former. . . . The regulations clearly stipulate that inventions belong to the state and that all units in the country may use whatever inventions they need." 7 *BEIJING REV.* 8 (1979).

55. See generally Xu, *On Wages Reform*, in *DANGQIAN ZHONGGUO JINGJI WENTI TANTAO* [THE EXPLORATION OF CONTEMPORARY ECONOMIC PROBLEMS IN CHINA] 118, 155 (1985).

acteristics. Both the Chinese people and foreigners welcomed the law enthusiastically.

### III. THE LIMITED ROLE OF THE PATENT LAW TODAY

The promulgation of the patent law did not change one basic fact: in a socialist country, the significance of a measure depends much upon the ruling party's policy and little upon the legality of that measure. In the U.S.S.R., for example, it is publicly maintained that the people's individual rights do not constrain state power, but rather are granted by the state for the purpose of developing the country's productive forces.<sup>56</sup> Thus an examination of the Soviet system of patent protection provides insight to the status of the patent law in China today.

#### A. The Patent Law in the U.S.S.R.

Early in 1919, the Soviet government issued a law designed to encourage inventions. The law reserved all proprietary rights for inventions to the state. As revised in 1924, it resembled the patent laws of Western countries, especially Germany's. In 1931, the government promulgated another patent act, which was subsequently amended in 1941, 1959 and 1973. The 1973 act retains the two-fold system of protection introduced in 1931; basically, it gives an inventor two choices for protecting his invention — the inventor's certificate or the patent. The inventor's certificate recognizes the inventor's honorary right to the invention and qualifies the inventor to receive payments. These payments are determined by computing the amount the user saved. All proprietary rights of the invention, however, belong to the state, which allows all state-owned enterprises or cooperative units to use the inventions freely. The patent is similar to its counterpart in Western countries, except that private enterprises can only assign their patents to state-owned enterprises.<sup>57</sup>

While in theory all inventors in the U.S.S.R. are offered these two choices, in practice almost all Soviet citizens opt for inventor's certificates. For example, from 1971 to 1975 there were 203,050 inventions registered with and protected by the proper authority, but only 4 of them were under patent.<sup>58</sup> The reason for the paucity of patents is that the Soviet government grants more privileges to certificate holders than to patentees. The privileges for certificate holders include notarization in inventors' Labor Books, an impor-

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56. See Zile, *supra* note 16, at 136.

57. S. LIU, S. LI & T. ZHANG, SHIYONG ZHUANLI JIAOCHENG [APPLIED PATENT TEXTBOOK] [hereinafter LIU, LI & ZHANG] 99-100 (1985).

58. Liu, *Comparative Study in Legal Systems Protecting Inventions*, 10 *FALU* [SELECTED LEGAL ARTICLES] 49 (1983).

tant credential for work positions; admission to universities or transfer to other enterprises for training; award of academic degrees without submission of thesis; and, in certain cases, preferential treatment in the allocation of scarce housing.<sup>59</sup> The majority of inventions are produced by state-owned organizations under centrally-determined research plans, in which the patent system serves only subsidiary purposes.<sup>60</sup> Unlike Soviet citizens, foreign inventors tend to choose patent protection.<sup>61</sup> Hence, the existing Soviet patent system predominantly applies to foreign applicants.<sup>62</sup>

It should be noted that the 1924 Soviet patent law was enacted during the New Economic Policy period (1921-1928), at which time the most pressing task was to put the war-devastated country back on its feet. To this end, the New Economic Policy allowed some private ownership and foreign investment. The 1931 patent act replaced the 1924 patent law after the first Five-Year Plan for the nation's economic development (1929-1932) had taken effect.<sup>63</sup> Both the 1924 patent law and the 1931 two-fold system conformed to the specific policies under which they were enacted. The goal of China's patent law seems different from that of the Soviet Union. The idea of enacting a patent law was not raised until the Chinese Communist Party adopted its so-called "open door policy." Patents were not officially recognized as "industrial property" until the promulgation in 1979 of the Law of the P.R.C. on Joint Ventures Using Chinese and Foreign Investment. Thus, some Chinese commentators maintain that the history and substance of the Chinese patent law prove that it is aimed primarily at foreign patents.<sup>64</sup> But the majority of experts share the view of Tang Zongshun, the advisor of the Patent Office of the P.R.C. Mr. Tang claims that the patent law has three purposes: encouraging inventions, spreading technology, and promoting the international exchange of technology.<sup>65</sup> Attracting foreign patent applicants is not among its foremost goals; indeed, of the 32,905 applications for patents received by the patent office in 1989, only 5,538 came from foreigners.<sup>66</sup>

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59. LIU, LI & ZHANG, *supra* note 57, at 100. See also *USSR Law Digest*, 8 MARTINDALE-HUBBELL LAW DIRECTORY 12-13 (122nd ed. 1990).

60. Maggs, *The Restructuring of the Soviet Law of Inventions*, 28 COLUM. J. TRANSNAT'L L. [hereinafter Maggs] 277, 278 (1990).

61. See LIU, LI & ZHANG, *supra* note 57.

62. See *id.*

63. See DAVID, *supra* note 14, at 184-88.

64. Zheng, *The System of International Intellectual Property and Our Country's Intellectual Property*, 4 ZHONGGUO FAXUE [SCIENCE OF CHINESE LAW] 168, 169 (1984).

65. Tang, *Interpretation of the Patent Law of the P.R.C.*, in ZHONGGUO ZHUANLIFA JIQI SHISHI, *supra* note 51, at 34.

66. The Statistics Office of the P.R.C., *1989 Statistics Bulletin of National Economy and Social Development*, People's Daily (overseas ed.), Feb. 22, 1990, at 3.

The Soviet Union and P.R.C. patent laws share at least one common feature: both are directly tied to the ruling party's policies. Under the leadership of Mikhail Gorbachev, Soviet specialists have proposed a Western-style draft patent law to replace the unsuccessful law of inventions. If enacted, the draft patent law alone is unlikely to significantly increase incentives to invent. Its impact depends on the fate of *perestroika*.<sup>67</sup> If *perestroika* results in a substantial percentage of economy operated according to market principles, the draft patent law would function in a way similar to its counterparts in the West. If, however, the centralized economy prevails, the draft patent law "could amount to a mere continuation of the old inventor's certificate system under a new name."<sup>68</sup> China's patent law may well face a similar fate.

### B. The Limited Role of China's Patent Law

Before the patent law took effect in April 1985, Huang Kuenyi, the then-director of the Patent Office of the P.R.C., publicly enumerated its main objectives. He made four points: first, that establishing the patent system was part of the economic reform, designed to give full play to the superiority of the socialist system; second, while the patent system was an important measure to promote technology development, it was not the only measure; third, though the patent system might contain all the same evils as the mode of commodity production, in balance it had more advantages than disadvantages; and fourth, implementing the patent law should be combined with, and subordinate to, constructing the socialist spiritual civilization.<sup>69</sup> Huang declared that as long as people are armed with the socialist spirit they shall collectively possess the greatest intelligence and strongest will with which to master nature.<sup>70</sup> In conjunction with the patent law, the State Council promulgated three sets of regulations, which were designed to encourage inventions for the inventors' certificates.<sup>71</sup> The patent law and the three

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67. See Maggs, *supra* note 60.

68. *Id.* at 289.

69. Initiated by the C.C.P. in the early 1980s, the campaign of the Construction of Socialist Spiritual Civilization essentially strove for two goals: cultural construction and spiritual construction. The former includes education, science, art, literature, the press, publications, radio broadcasts, TV broadcasts, physical culture and the people's educational level generally. The latter includes the Marxist world outlook and its theory. In particular, Socialist Spiritual Civilization refers to the education of the Four Cardinal Principles (the insistence on socialism, the dictatorship of the proletariat, Marxism, Leninism and Mao Zedong Thought, and the leadership of the C.C.P.), the criticism of bourgeois ideology, the reinforcement of patriotism, collectivism, politeness, and the spirit of self-reliance and hard struggle. See S. WANG & D. WANG, XIANFA JIANGHUA [ON THE CONSTITUTION] 102-5 (1984).

70. See Huang, *supra* note 51, at 95-96.

71. These regulations are the 1978 Regulations on Awards for Inventions (*Faming Jiangli Tiaoli*), the 1978 Regulations on Awards for Natural Sciences (*Ziran Kexue*

sets of regulations are in effect together today.<sup>72</sup> China currently has a two-fold system for invention like that in the Soviet Union

The patent law's limited role in the development of China's science and technology is evidenced in subtle ways. For instance, in September 1989, the People's Daily, the official newspaper of the C.C.P., published a special edition about recent developments in China's science and technology industries. Articles and reports enumerated the extraordinary achievements to date, and forecast an equally brilliant future. One article entitled, "The Far-Reaching Influence of the Award Regulations for Inventions" gave praise to regulations promulgated by the State Council after the founding of the P.R.C. in 1949. Noticeably absent, however, was any mention of the patent law.<sup>73</sup> Another indication of the patent law's lowly status can be found in the 1989 Statistics Gazette of National Economy and Social Development issued by China's State Statistical Bureau.<sup>74</sup> One section of the Gazette examined science and technology-related statistics, ranking them by order of importance into eight categories. Patent works were relegated to the sixth category, where the subject received only brief mention.

For a patent law to function effectively, two conditions are necessary: there must be a commodity economy and enterprises vested with managerial control. Even before its crackdown on the pro-democracy movement in 1989, the Party was reasserting centralized control over the economy. The Third Plenum of the 13th Central Committee of the C.C.P. in September 1988 set forth the policy of economic control and rectification for 1989 and 1990.<sup>75</sup> In his report of the State Council's Works to the Second Plenum of the 7th National People's Congress in March 1989, Premier Li Peng outlined the parameters of the new austerity policy. He stated that, among others issues, the purpose of the economic reform was not to change public ownership of the socialist system into private ownership, but rather to perfect socialism. He further declared that the government should strengthen its macro-control of the national economy, and in particular restrict investment in fixed assets; that banks should limit the size of loans and the issuance of currency; and that local governments must be subordinate to the Central Committee of the C.C.P. and the State Council.<sup>76</sup>

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*Jiangli Tiaoli*), and the 1985 Regulations on Awards for the Advancement of Science and Technology (*Kexue Jishu Jinbu Jiangli Tiaoli*).

72. LIU, LI & ZHANG, *supra* note 57, at 37.

73. Zhao, *The Far-Reaching Influence of the Award Regulations for Inventions*, People's Daily (overseas ed.), Sept. 28, 1989, at 4.

74. The Statistics Office of the P.R.C., *supra* note 66.

75. Li Peng, *Resolutely Implementing the Policy of Economic Control and Rectification While Deepening the Reform*, People's Daily (overseas ed.), Apr. 6, 1989, at 2 [hereinafter Li Peng].

76. *See id.* at 2, 3.

By June 1989, the overheated economy had cooled down somewhat, the overall societal demand for commodities had decreased, total supplies had increased, and rampant inflation and rocketing prices had come under control.<sup>77</sup> After Zhao Ziyang, former general secretary of the C.C.P., fell from power in June 1989, the austerity policy went into full swing.<sup>78</sup>

Since Zhao's demise, government leaders have repeatedly promised that economic reforms would continue, but have done little to substantiate their claims. In the meantime, the state has seized greater control over money markets, construction projects and distribution of valuable materials.<sup>79</sup> In his speech given at the Working Conference of Economic Structure Reforms in early 1990, Premier Li Peng claimed the government would "carry out Enterprise Law conscientiously" to deepen the enterprise reform movement; what he actually stressed, however, was the Party's leading role in overseeing enterprises, instead of the power of enterprises to manage themselves.<sup>80</sup>

More recently, the Chinese government has publicly acknowledged that the country is in serious economic straits: problems include declining production, overstocking of products, depressed markets, shortage of capital, slowed production at an increasing number of enterprises and rising unemployment.<sup>81</sup> These conditions are not conducive to technological innovation.

There are other signs that the P.R.C. economy is faltering. For instance, in early 1990 the Chinese government eased its austerity policy by granting about \$61 billion in loans to large state-owned enterprises.<sup>82</sup> Yet, "most of the loans have apparently been used to meet payroll obligations and other urgent bills rather than to finance modernization programs that would put the enterprises on a sounder footing."<sup>83</sup> Another indication of economic difficulties was Li Peng's response to proposals for a "Two-Way-Guaranteed Contract." This concept, favored by many enterprises, describes an agreement under which the state guarantees the supply of energy, raw materials, communications and transport services to enter-

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77. Li, *Economy Develops Amidst Snags*, BEIJING REV., Sept. 4, 1989, at 19.

78. *To Go Ahead Or Not*, 1405 CHINA NEWS ANALYSIS 9 (1990).

79. Delfs, *Carry on Mr. Li*, FAR E. ECON. REV., Nov. 2, 1989, at 49; WIS. ST. J., Mar. 21, 1990, at 10A.

80. Li Peng, *The Reform and Opening Should Advance Along the Healthy Road*, People's Daily (overseas ed.), Feb. 28, 1990, at 3 [hereinafter *The Reform and Opening Should Advance*]. See generally, Li Peng, *Strive for Still Steadier Development of Our Nation's Politics, Economy and Society*, People's Daily (overseas ed.) Apr. 6, 1990, at 4 [hereinafter *Strive for Steadier Development*].

81. *Strive for Steadier Development*, *supra* note 80, at 2.

82. Kristof, *China Offers New Sign that Austerity is Easing*, N.Y. Times, Mar. 8, 1990, at C2 [hereinafter Kristof].

83. *Id.*



prises, which in turn must meet fixed quotas for the supply of products, profits and tax payments to the state. Though in favor of the Two-Way-Guaranteed Contract, Li Peng noted that it might be difficult to implement and warned that the state could not give guarantees in every field.<sup>84</sup> Therefore, even if the state provided loans to finance technical innovation,<sup>85</sup> enterprises might have too many other problems to undertake the requisite work.

Perhaps the main reason that patents are seldom sought is the lack of enthusiasm for inventions among Chinese enterprises. China's patent law grants three kinds of protection for inventions: the invention patent, the utility model patent, and the design patent.<sup>86</sup> By August of 1989, Chinese patent offices had received about 100,000 domestic applications for patents, of which only 36% were for invention patents. This was a decided contrast to the 20,000 or more foreign applications for patents in China, of which 91% were for invention patents. Moreover, 54.3% of the Chinese patent applications were for non-service inventions, i.e. inventions created outside the workplace, as opposed to those assigned to employees as part of their job responsibilities. In contrast, in foreign countries the percentage of non-service inventions was about 9.8%.<sup>87</sup> This suggests that Chinese enterprises, which comprise the majority of potential inventors, lack motivation to invent. As a Chinese expert commented, "These [figures] show that the invention patent has not been generally accepted in China; particularly, large enterprises do not think much of the invention patent, nor [do they] support it with manpower, materials and capital. As a result, the majority of patent applications are amateuristic."<sup>88</sup>

In 1985, the large and medium-sized enterprises owned by the state in Guangdong Province, for example, showed little interest in developing technologically-sophisticated products, though Guangdong Province was one of the few areas where markets for such products were flourishing at that time.<sup>89</sup> In 1989, five years after the issuance of the patent law, the enterprises remained disinterested despite the fact that large state-owned enterprises were the least-efficient sector of the economy and most in need of technologi-

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84. *The Reform and Opening Should Advance*, *supra* note 80, at 3. Soon, more than 50 large enterprises owned by the state in Northeastern China were designated Two-Way-Guaranteed Contract enterprises, as a trial implementation. Delfs, *Promises, promises*, FAR E. ECON. REV., Mar. 22, 1990, at 51.

85. *See Strive for Steadier Development*, *supra* note 80.

86. *Patent Law of the P.R.C.*, 5 WIS. INT'L L.J. 164 (1987).

87. *Disproportionately Low Percentage of Invention Patents in Domestic Patents*, People's Daily (overseas ed.), Aug. 5, 1989, at 1.

88. *Id.*

89. Lu, *The Character and Tendency of the Development of the Guangdong Technology Market*, 2 KEXUE GUANLI YANJIU [THE STUDY OF SCIENTIFIC ADMINISTRATION] 26, 27-28 (1986).

cal overhaul.<sup>90</sup> Without new incentives brought about by economic reform, Li Peng's repeated call "to bring the patent system into full play"<sup>91</sup> became practically meaningless.

China's program of economic reform sought to combine a planned economy with a market economy. The patent law was enacted within this context. However, the political pendulum in China has since reversed direction, as indicated by Li Peng's unequivocal statement, "[T]he current reform should serve economic control and rectification."<sup>92</sup> The blueprint for restructuring the economy has been replaced by "an even stronger mission for central planning."<sup>93</sup> This has led to a decrease in the managerial power of enterprises, and consequently, a more limited role for the Chinese patent law.

#### IV. THE AUSTERITY POLICY

Since the fate of China's patent law depends on economic reform, just as the proposed Western-style Soviet patent law depends on *perestroika*, the question is whether the austerity policy is a long-term strategy resulting from deep-rooted problems, or merely a contingency. Hence, it is important to understand the economic problems that necessitated the austerity policy. The following discussion attempts to prove that China's economic reform had fallen into dire straits before the Tiananmen tragedy, and that the overall adjustment will have to last for years.

The austerity policy has taken a heavy toll: it has caused a decrease in industrial production, the closing of more than four million local enterprises, lost jobs and cut salaries.<sup>94</sup> Since the relationship between the Party's policy and the law is that of the principal and the subordinate, an understanding of the Party's austerity policy helps explain the plight of the patent law. The austerity policy was adopted out of sheer necessity due to the economic straits which resulted from China's program of economic reform.

The economic reform may be divided into three periods. The first period (January 1979 to October 1984) began when the Third Plenum of the 11th Central Committee of the C.C.P. adopted the "great program of the economic reform" in December 1978. During this period, the reform focused on rural areas; the so-called "System of Household Contract Responsibility" went into effect,

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90. Kristof, *supra* note 82.

91. Li Peng, *supra* note 75; *Strive for Steadier Development*, *supra* note 80.

92. *Strive for Steadier Development*, *supra* note 80.

93. Wudunn, *The Economics of Popular Discontent*, N.Y. Times, Apr. 16, 1990, at A6, col.2.

94. MacFarquhar, *Back to the Future in China*, U.S. NEWS & WORLD REPORT, Mar. 12, 1990, at 43.

giving farmers more flexibility to grow what they wanted. In urban areas experimental reforms aimed at enlarging the managerial power of enterprises. The second period (October 1984 to September 1988) commenced with the issuance of the Decision of the Central Committee of the C.C.P. on the Reform of the Economic Structure, which shifted the focus of the reform from rural to urban areas. The primary goal of this period was to invigorate enterprises. At the onset of the third period (September 1988 to the present), the Third Plenum of the 13th Central Committee of the C.C.P. put forth the policy of "controlling the economic environment, rectifying economic order and deepening the economic reform."<sup>95</sup> The third period began in fact after Zhao Ziyang was disgraced.

During the first period of the economic reform, the governmental policies induced farmers to step up production, and China enjoyed good harvests for six years.<sup>96</sup> However, during this same period, certain irrational policies seriously undermined China's agricultural industry,<sup>97</sup> necessitating imports of large quantities of grain since 1987 and imports of large quantities of cotton and edible oil since 1990.<sup>98</sup>

China has learned from experience that the growth ratio between agriculture and industry should be approximately 1:2. From 1978 to 1984, this ratio was 1:1.32, which was acceptable. But from 1985 to 1989, the ratio grew to 1:4.5. The level of consumption also

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95. Liu, *The Hardship Course of Forty Years of Economic Construction and Ten Years of Reform in China*, 9 JINGJI YANJIU [ECONOMIC RESEARCH] [hereinafter Liu] 3, 6 (1989).

96. *Agriculture: A Hopeful Future*, 4 CHINA TODAY 5 (1990).

97. Lu, *Promoting Agriculture Is A Way Out for the Economic Dire Straits*, Guangming Ribao [Guangming Daily] Mar. 17, 1990, at 3. Some of those irrational policies included: 1) Reducing government investment in agricultural capital construction from \$1.2 billion in 1980 to \$0.65 billion in 1981. Though claims were made year after year that more investment would be made, it amounted to merely \$1.4 billion in 1988. In 1980 the government investment in agricultural capital construction was 9.3% of the nation's total investment in capital construction, and in 1988 the percentage dropped to 2.9%; 2) After 1981, government investment in the agricultural industry was cut substantially, hence the great shortages of chemical fertilizers, farm chemicals, diesel oil, plastic film and other commodities in recent years. In 1987, for example, there were only 161 thousand tons of chemical fertilizer produced in China, amounting to 30% of that in 1980; 3) With the establishment of the household contract responsibility system, farmers needed many new social services, but in many areas, the local government provided no assistance. Furthermore, after 1983, various subsidies and favorable policies towards agriculture were gradually rescinded; 4) In 1984, there was a bumper harvest. The government, however, only purchased 75 million tons of grain and 4.25 million tons of cotton, leaving the rest as a substantial burden on farmers. The government also reduced the purchase price of grain and cotton, and sold 2 million tons of grain at low prices to offset the farmers' profits. Consequently, in 1985, the grain yield dropped by 7% and the cotton yield dropped by 34%. A five-year period of stagnant agricultural production followed (in 1989, the grain yield remained at the same level while the cotton yield was 66% of that in 1984).

98. *Id.*

increased considerably. Today, China's agriculture, the foundation of her economy, can no longer support this lop-sided growth ratio or people's high level of consumption.<sup>99</sup>

During the second period of the economic reform, the economic structural imbalance in various sectors became more severe. The annual growth rates in capital investment and in total wages greatly outstripped the rate of national income.<sup>100</sup> In 1983, the annual growth rate of capital investment was 14.1%, that of the total wages was 6.0%, and that of the national income was 9.8%. However, from 1983 to 1987, the average annual growth rate of capital investment was 24.29%, that of total wages was 15.14%, and that of the national income only 10.54%.<sup>101</sup> The growing imbalance between financial revenue and expenditure bodes ill in a poor but populous country like the P.R.C.. This may be a primary reason why the gap between the total supply and demand further widened from 26.5 billion yuan in 1983 to 224.3 billion yuan in 1988.<sup>102</sup>

For years, the over-heated economy rested upon financial deficit, credit deficit and foreign trade deficit. The total debt owed to banks by China's enterprises was 110 billion yuan by August 1989.<sup>103</sup> Various economic pressures finally found an outlet in inflation: in 1988 the rate of inflation grew to double figures.<sup>104</sup> In the first half of 1989, urban inflation remained at an annual rate of almost 30%, and the real incomes of state workers declined despite an almost 19% increase in nominal wages and subsidies.<sup>105</sup> This was beyond the Chinese people's tolerance;<sup>106</sup> levels of discontent began rising around the nation.<sup>107</sup>

The economic reform has changed China's basic economic structure in several ways. First, the proportion of economic output owned by the state has decreased. From 1978-1988, the total value of state-owned industrial production decreased from 80.8% to

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99. See Lu and Xu, *Comprehensive Comment on the Development of the Agricultural Economy and Society in 1990*, People's Daily, Mar. 19, 1990, at 6. See also Sicular and Hartford, *China's Looming Rural Crisis*, Asian Wall St. J., July 3, 1989, at 14.

100. Here, "national income" as an index used only in socialist countries refers to the net output value created by various production departments, excluding the output value of tertiary industry. See Li, *China's Inflation*, 7 ASIAN SURVEY 655, 657 (1989).

101. See *id.*

102. *Economic Structural Imbalance: Its Causes and Correctives*, BEIJING REV., Sept. 4, 1989, at 18; *Keep Historical Lesson in Mind*, People's Daily (overseas ed.), Dec. 9, 1989, at 1. U.S.\$1 was equivalent to 3.7 yuan until 1990.

103. Yu, *The Chain of Debt: Characters, Causes and Countermeasures*, Jingji Ribao [Economics Daily] Mar. 9, 1990, at 3 [hereinafter Yu].

104. Liu, *supra* note 95, at 7.

105. *Communist China: the Economic Background to Tiananmen Square*, 20 INT'L CURRENCY REV. 5, 7-10 (1989).

106. Liu, *supra* note 95, at 7.

107. Wang, *China's Food Problems: Systematic Shortage*, 6 XINHUA WENZHAI [NEW CHINA DIGEST] 167, 169 (1989).

64.0%, while that collectively-owned rose from 19.2% to 32.6%. The proportion attributable to other entities — the individual, private, joint venture, and foreign — rose from almost zero in 1978 to 2.4% in 1987.<sup>108</sup> Second, state-owned enterprises enjoy comparatively greater autonomy. For example, the proportion of benefits which enterprises could withhold before the reform had been less than 5%; by 1987 it had risen to 45%. Third, market mechanisms influence prices to a greater degree. In 1988 about half of the industrial and agricultural commodity prices were regulated by markets. Fourth, the measures of macro-economic control began to change from direct administrative orders to indirect economic measures. Finally, China's economy has become a more open one.<sup>109</sup>

Although the full advantages of the above changes have not been yet been realized, the reform movement has helped discredit orthodox socialist economic theory. The Chinese people publicly pointed out an ironic phenomenon: from 1953-1981 the total value of fixed assets grew 26 times, while the total value of industrial and agricultural production increased 8 times, making China's rate of economic growth during this period one of the highest in the world; however, the average standard of living for this same period only doubled, leaving China far behind other countries.<sup>110</sup> Though people disagree about how best to achieve it, most now accept the necessity of economic reform. That Chinese attitudes toward socialist economics have irreversibly changed may be one of the most significant achievements of the reform to date.

There is no denying that the current austerity policy might last for years. In November 1989, the Party declared that the austerity policy should be carried out for at least three more years.<sup>111</sup> More recently the Party has stressed that the Chinese people should not be over-anxious for quick results in economic construction and economic reform.<sup>112</sup> Yuan Mu, state council spokesman, remarked that the main tasks of the 8th Five-Year Plan for the nation's economic development (1991-1995) would still involve adjusting the economic structure, balancing the economic sectors and raising economic efficiency.<sup>113</sup>

The Chinese people further realized that China's economic reform was undertaken without adequate theoretical support,<sup>114</sup> or

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108. See Yu, *supra* note 103.

109. See Liu, *supra* note 95, at 6, 7.

110. *Id.*

111. See *Decision of the Central Committee on Economic Control*, *supra* note 9.

112. *The Forming of the Report of the State Works and its Points*, People's Daily (overseas ed.), Apr. 12, 1990, at 2.

113. *Id.*

114. See Institute of Economics Study Group, China Academy of Social Sciences, *Reflections on the Reform Theory of the Socialist Economic System*, 10 JINGJI YANJIU [ECONOMIC RESEARCH] [hereinafter *Reflections on the Reform Theory*] 3 (1989). The

the experience required to put new theories into effect.<sup>115</sup> For example, socialist economics, and Western classical economics as well, used to emphasize the importance of balanced revenue, but this theory broke down during the last decade.<sup>116</sup> The new theory was to stimulate economic growth by inflation and to maintain a high economic growth rate through a high rate of inflation. But this theory resulted in unbearably rampant inflation in China. The new theory originated from J.M. Keynes' idea of stimulating the economy through deficit finance. The point neglected by the Chinese was that Keynes dealt with the lack of social demand in a capitalist economic system and not with the over-great social demand in a socialist economic system, much less with an economy burdened for years with financial deficit. Though the Keynesian School of Thought recognized that the national economies of Western countries might allow some years with deficits and some years with profits, the School stressed the necessity of a balanced financial budget within a given financial period. The School did not ignore the significance of the balance. It merely replaced the balance of a financial year with the balance of a financial period. In fact, there is no record of any country in the world that has succeeded in supporting its economic growth through a high rate of inflation.<sup>117</sup>

China has to search for new theories of economic reform and to test the adopted theories of reform through practical experience. In 1987 the Party propagated the theory that "the state regulates the markets, and the markets guide enterprises" for the new economic system.<sup>118</sup> This theory seeks to organically unify the activities of enterprises, the function of markets, and the state administration.<sup>119</sup> Nevertheless, China's commodity economy had been underdeveloped and then tightly controlled administratively in past decades. As a consequence, China lacks experience with a

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lack of proper theory could also be seen from two facts: in 1984 the Third Plenum of the 12th Central Committee of the C.C.P. raised the theory of "socialist commodity economy" as the theoretical cornerstone of China's economic reform; nevertheless, not long before the Plenum, the idea that a "socialist economy is a planned commodity economy" had been censured, and it was not until the opening of the Plenum that the issue of how to construct a socialist commodity economy was again put on the Party's agenda. In 1988, when inflation and other economic problems had become very serious, the Party decided to speed up price reform, which caused commodity prices to skyrocket immediately. Shi & Liu, *Economists Must First Respect History and Facts — Review of Ten Years of China's Reform*, 2 JINGJI YANJIU [ECONOMIC RESEARCH] 11, 13, 17 (1989).

115. See *Reflections on the Reform Theory*, *supra* note 114, at 3.

116. Situation Analysis Group in the Economic Section, China Academy of Social Sciences, *Economic Control and Rectification Is Favorable to Promote the Reform*, 10 XINHUA WENZHAI [NEW CHINA DIGEST] 47, 48 (1989).

117. See *Reflections on the Reform Theory*, *supra* note 114, at 14-15.

118. *Id.* at 5.

119. See Liu, *supra* note 95, at 9.

market economy, or, according to the Chinese term, a "commodity economy." On the other hand, a planned economy according to Marxist theory means a proportioned economy. For a few years before the economic reform, China's economy had been proportional,<sup>120</sup> but during the reform it again became disproportional. China also lacks experience with a successfully planned economy. Therefore, it would be an extremely complicated and time-consuming undertaking to realize the formula, "the state regulates the markets, and the markets guide enterprises." One Chinese economist has asserted, "[A]t least it cannot be realized by the end of the century."<sup>121</sup>

## V. CONCLUSION

At the end of the 1970s, Deng Xiaoping initiated the Four Modernizations program to advance China along a new road. This led to a period of far-reaching economic and legal reform. The patent law emerged at the height of both the "legal revolution" and the economic reform. Americans expected China's science and technology, with the patent law as an impetus, to flourish.

A thriving patent law depends upon the existence of a commodity economy and enterprises vested with managerial power. In addition, it requires ample material resources and great enthusiasm for inventions, which, in turn, depend upon sound economic circumstances and further economic reform. Until these conditions are realized, the patent law alone is unlikely to stimulate inventions by Chinese enterprises. At least in the near future, the patent law will not bring the "renaissance" expected by some American people.

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120. Xu, *On Wages Reform*, in DANQIAN ZHONGGUO JINGJI WENTI TANSUO [THE EXPLORATION OF CONTEMPORARY ECONOMIC PROBLEMS IN CHINA] 112, 113 (1985). In the U.S.S.R. the planned economy is beset with problems. Mr. A. G. Aganbegian, the director of a Soviet economics institute, held that:

The [state plan] is in no way balanced and it would be impossible to balance it because it would require balancing 4000 different items against each other. Nor is the plan balanced in even its essential elements because if it were then one could not achieve certain goals without achieving others; to do so would cause a breakdown of the whole economy so in fact this is not done. We have an absolute lack of information. The figures published by the Central Statistical Office (ZSU) are blown up. Thus we are planning and managing the economy when we do not have any real information about the actual situation.

There is no evidence suggesting the Chinese government could design a better economic plan than the Soviet Union's.

121. See Liu, *supra* note 95, at 9.