

:WORLD BANK, CHINA -LONG TERM DEVELOPMENT ISSUES AND OPTIONS,
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Summary and conclusions:

A. China has been investing about 25-30% of GDP (more than most developing countries); per capita income grew at 4% from 1952-82; from 1979-84, increased per capita income grew at 6.8%/year. Propose to increase it from \$300/capita to \$800/capita by 2000 (ie 5%/year)=quadruple gross value of industrial and agricultural output (GVIAD),

B. To achieve target, requires increased efficiency of resource use (pp. 1-2) and restructured pattern of production and consumption; therefore need to introduce reforms to increase management responsibility and competition.

I. Growth and change:

A. . A low income country, China exhibits an unusual pattern of demand and production: low output per agricultural worker, large agricultural employment; manufacturing output per worker higher than average because of high saving rate and massive investment in basic industry (but hasn't much raised total GDP because of limited manufacturing employment. Exports and imports small in relation to total output. Services share is smaller (17%) than in low income (30%) or middle income (40%) country (p. 22-3). Inefficiency: high energy and intermediate inputs use.

B. Implications:

1. Efficiency: high investment in education plus improved technology (total factor productivity, TFP); need balanced allocation of resources among sectors, especially improved infrastructure and services. (p.23-4)

1. Consumption: public consumption is above normal level for middle income country; household consumption more concentrated on basic necessities than typical low-income country, will probably change as per capita income changes, to reduce food expenditure, increase nonstaple food, especially meat; increase clothing expenditures, and sharply raise expenditures on housing, travel and recreation and relevant services. (p.25)

2. Foreign trade: Given 0.1 ha of cultivable land/person (one of lowest ratios in world), may need to pay for agricultural imports with exports (like Japan, Korea) (p.25); exposure to trade "seems to be a necessary ingredient of rapid and efficient growth." p. 26.
3. Service sectors: 2 issues: shift from agriculture into services (as elsewhere) with more moderate increase in industrial employment, is less labor intensive; suggests China should increase service sector along with reformed system of economic management (as closely related options) p. 26: commerce expansion along with role of market regulation, increased specialization of production units and localities, requires support services include finance, accounting, and law.(p. 26)
4. Microeconomic change = increased growth via cheaper, better products and process= new technology: better seeds, faster machine tools, computerized inventory control, abandoning obsolete products and equipment=increased specialization, economies of scale, and expertise p. 26; box 1.1 =focus on US, UK experience: smaller enterprises = source of change, though some grow, others fail; profitability associated with growth (probably via reinvestment of profits plus increased borrowing capacity) (p. 27) - ie emphasis on competitive process which in China has been held back by state sector to maintain profits, capacity utilization and employment in less efficient enterprises reflect emphasis on production targets and local self-sufficiency w/o adequate incentives to improve quality, reduce costs = extensive (rather than intensive growth) with limited longrun potential. p28.
5. Inequality: "China's past strategy and present system have created, on the whole, an extraordinarily equal society" (see also first World Bank economic report on China) p. 29; though substantial minority have low incomes, especially in rural areas, they have higher living standard than in most developing countries: agricultural collectivization prevented impoverished class of landless laborers; state guarantees minimum food supply; primary school enrollment is high; basic medical care and family services are available to most people; life expectancy averages 67 years in 1980 ("probably the best single indicator of the

extent of real poverty" p. 29). Rural reforms have increased rural incomes without so far greatly increasing rural inequality, but have had other unfortunate consequences: decline in cooperative rural medical insurance from collective welfare funds, since individual households= reluctant to contribute; decline in children inschools, especially girls, as families withdraw them to increase production - especially poorer families (p. 30-31); anticipate rural responsibility will increase income inequality before long, and probably in urban areas, by "making diligent workers and successful individual business proprietors richer, and the idle or unlucky poorer" and benefitting some localities more than others plus losses that microeconomic change may inflict on certain families, enterprises and localities; but "if important features of past system are preserved (including social ownership of land, widely dispersed access to basic education and health care, and a guaranteed minimum food intake), China should be able to maintain a much lower degree of inequality than in the typical developing country....And in the longer term, regardless of the precise pattern of distribution, the great majority of China's people will unquestionably gain substantially from rapid growth...."(p. 31)

II.: Chapter 2: Illustrative projections

- A. Methodology: econometric model for projections, based on assumptions for three alternative approaches:
1. Quadruple growth with present structure, with high saving-investment rate, assuming increased foreign borrowing to 15% debt service ratio (p. 34);=growth rate of 6.6% (p. 36)
 2. Moderate growth with same aggregate saving rate, but less optimistic view of efficiency increase (as in USSR)=reduced growth by 1% (p. 34-5)=growth rate of 5.4% (p. 36);
 3. Balance growth= alternative approach giving greater weight to more labor intensive service sector (especially commerce, miscellaneous business and personal services as in Japan), changing household consumption = reduced circulating capital, specialization, and larger

scale enterprises with lower capital costs, and greater payoff to agricultural investment. (p. 35)=growth rate of 6.6%. with greater consumption, both public and household. (p. 36),

- B. Note assume relative prices/sector are determined by sectoral costs, including intermediate input costs, wage costs and capital costs Box 2.1, p. 42 (ie implicitly= assume perfect mobility of factors; and do not examine the institutional constraints either in the domestic or international market; simply assume constraints in domestic market via government intervention-as)

III. Agricultura prospects and policies:

- A. Production possibilities in relation to model projections (p. 44-5):

1. Experience with reform changes projections by (unpredictable) amounts; but continued effectiveness depends on inputs (land and irrigation, fertilizer, improved seed, and support services):

a. Land: 3-5 m. ha may be developed in medium term for annual crops; annual loss to non-agricultural uses=1 m. ha (including rural construction), unlikely to be offset by increased irrigated land

b. Nutrients: organic fertilizer probably won't meet government's projected 1/2 of nutrient offtake by 2000, but china can design and construct nitrogenous chemical fertilizer plants if raw materials are available, though require resources now (and still need to import phosphorus and potassium)

c. Research and education: need to increase research up to 2% of agricultural output value, improve facilities and staff; have improved extension education, but need research links; and strengthen ag ed

d. Rural transport, processing, storage and

distribution= limiting specialization and ag restructuring; government contracting approach, increased price flexibility and greater role of collective and individual enterprises in ;marketing are helping; need rural savings in support of investment in needed infrastructure.

2. specific crops:

- a. grain and industrial crop targets (overall 2%/year) = attainable, but need more investment, improved price policies for forestry.
- b. livestock targets constrained by grass and feed supplies, weak transport, processing, distribution systems, lack of investment funds; pigs and poultry = more favorable but need feed and attention to cost-price relationships.

3. Potential demand-supply imbalances= exploration of options via model:

- a. Assumption re planned targets: increase in meat, poultry, fish, eggs and dairy products in average diet (from 6 to 15% of caloric intake by weight), with decreased grain consumption; assume self-sufficiency in animal products and processed food
- b. Alternative outcomes: Larger population would change forecasts, raising direct and indirect grain requirements by 8% (40 m tons)/0.1 m. increase; reduced efficiency (by 0.7%/year) could lead to substantial deficits (eg growth of 2.9%/year would require 9% of domestic demand = imports, unless income growth also failed to grow as projected; redirection of crop output to animal feed could cause demand-supply imbalance.
- c. Foreign trade= possible solution to imbalances: more economic to import feedgrains than animal products (since China's wages = below main animal exporting countries and

China could import them without undue price effect due to surplus output of grain-supplying countries), but = risky to depend too much on imports; also must earn foreign exchange, possibly thru exporting other grains (but world rice market is limited).(p. 49)

d. Production pattern could be changed (instead of relying on international trade): switch rice land to coarse grain or other crops for export to pay for coarse grain imports; need more research especially re rainfed upland rice; and change present self-sufficiency/district approach plus improve internal transport (north south: grain to poultry areas; north livestock south; etc) (p. 50)

e. Could also change consumption pattern - but need to avoid social dislocations; avoid subsidizing meat products which could become added expense couldn't sustain, so ensure prices cover cost (p. 50-3)

4. Managing household agriculture

a. Issues: how stimulate household agricultural production, increase economic efficiency, and ensure desired output composition = how use prices and other economic levers

(1) Abolition of price control and compulsory procurement and production quotas for grain and cotton should be extended to all products,

(2) State role: in state farms and directly productive units, especially in meat and dairy production; plus contract system for procurement of large portion of farm output (p. 53-4)

b. Output pricing and marketing

(1) Shouldn't use wholly administered price system (=inefficient, not feasible), but government regulation by state-set floor price for contracted state procurement, letting above contracted amounts respond to market forces; prices for minor products fluctuate freely;

(2) Alternative: for major products, government could let D&S determine prices, intervening only to prevent

excessive fluctuations, ie beyond range set by willingness to purchase for addition to its stocks at lower end and sell from its stocks at upper end (p.54)=complex, tied to export-import policies; could involve financial loss; could not be used to directly influence income distribution (as two tier system does), but could raise rural incomes by reducing government's role, saving scarce state resources for other purposes, including food and other ag product processing (p. 54)

c. Input pricing and allocation:

- (a) Should eliminate controls for input prices, letting farmer decide use in terms of marginal productivity- eg for fertilizers where individual farmers know better the variations in plots of land, crop needs than government
- (b) Similar arguments for market allocation of other inputs- pesticides, animal feed, farm machinery, etc.;
- (c) Re credit: shouldn't subsidize interest rate because leads to excess demand for available funds; to let market allocation determine interest would make it harder to discriminate against households in favor of collectives; would discourage uneconomic mechanization (especially given labor surplus in rural areas) (p.55)

d. Agricultural incomes policy:

- (1) "Economic forces are, by themselves, unlikely to lead to an early reduction " in the gap between urban and rural incomes; experience elsewhere suggests widens (p. 55)
- (2) Government intervention may be needed to prevent "unacceptably wide" gap; either raise agricultural prices - but that could interfere with D&S/particular products; use two-tier price system to raise basic farm household income (though farmers near urban centers might raise their incomes too high causing objections from non-ag sector); alternative or as supplement: to increase government budget spending for rural social services, especially education and health, subsidies for

rural social insurance schemes, etc.

IV. Chapter 4: Energy Development

A. Energy=key to development, but uncertainty re China's energy re potential economies, modernizing technology, changing industrial structure, without compromising living standards.

1. Demand and Supply: Trends and balances:
 - a. Coal=3/4 of primary commercial energy cons, 1/2 total (incl. biomass, which = 2nd largest source (25%))
 - b. Oil=1/5, natural gas, 3%;
 - c. Electricity=18% (1980)= far less than most countries
2. Industry, esp. metallurgy, chemicals, building mats, accts for 1/2 final cons. of coal, oil, gas; 3/4 of electricity cons; Households and commerce acct for only 20% of final cons in 1980, but, incl biomass, 43% of final energy use; transport-8%, low for LDCs because of small road transport (p.
3. High energy consumption per unit of GDP compared to other countries, partly explained by high share of industrial output and space heating requirements; but per unit of gross output value in industry is also high due to energy-intensive output and relatively backward technology, small scale of industrial plant, and type of fuel (coal); low energy prices also=insufficient cost consciousness (. p58-9)
4. Recent efforts via regulations to improve efficiency, introduce better technology; now providing financial incentives, and some effort to improve price structure (p. 59)=impressive reduction in energy use per economic activity (down 7%/GVIAD, 1979-81, 3%, 1982-3, est'd 7%, 1984) (p.59)

B. Demand and Supply prospects: With projected models, require 3.4 to 5.5% average annual growth rate to 2000.(p.59); balance model would require substantially less (1,270-1,600 million Tons of coal equivalent -TCE)- compared to quadruple (1,385-1765m TCE) but not less than moderate (1,180-1,500)(p. 60, table 4.1)

C. Notes re constraints:

1. Coal: China has abundant reserves, mainly in North (2/3, Shanxi=1/3); remainder in SE; enough for 300 years at 1980 levels; low costs, but must improve transport; use of small local mines (lessmechanized, lower cost) helps meet local requirements, but need improved technologies; but main problem = transport from north via large-scale, interregional coal transport; could shift from coal to electric or diesel traction; increase

use of coal-fired and hydroelectric projects with long-distance transmission of power to load centers (the rail coal transport probably = less expensive); need feasibility studies, but optimal coal strategy should incorporate measures to reduce transport - eg link mines to use centers; improve coal-use efficiency, reduce pollution (but continued coal use=serious pollution problems); note possibilities of co-generation for industry and district heating, ie electricity plus thermal energy (Box 4.1: Europe: accounts for 30% of electric power capacity split between industrial and district heating uses, esp. for paper-pulp, steel and chemicals industries -p. 63)

2. Oil and gas:

- a. Largest oil fields passed peak productivity, now using infill drilling and second recovery; new reserves must provide large % of total output/2000-probably (largely unexplored, complex) offshore fields needing foreign technology and capital; should improve production practices to ensure maximum recovery; should analyze transport needs, though not a serious problem (p. 65)
- b. Natural gas: yr 2000=double present output, mainly from Sichuan Basin and new onshore and offshore finds 3g Zhongyan and Hainan Island (p. 65) plus other possibilities; primarily for high value industrial uses like feedstocks, possibly initial uses in electric power generation to develop gas production and pipeline networks, also for household cooking and heating (p. 66)
- c. Petroleum refining: Demand for oil products to increase from 34 m. tons/1980 to 90-140 m in 2000; could use imports or improve refinery yields to make up-short fall; increased road traffic would raise demand for transport fuels from 10 m. tons/1980 to 30-50 m. tons/2000, even if improve energy efficiency=1/4 of targeted oil output; most Chinese oil - relatively heavy, more than 70% residuals (though have improved refinery complexity to reduce to 35%-high compared to most countries except US)=problem re matching output to demand; conversion of crude to transport fuels=capital intensive, expensive; alternative=trade with other refineries in region, elsewhere (including contracting with international refineries with excess capacity), but would require more 'rational' prices. (p. 66-7)

3. Electric power: Rapid expansion (76,000 megawatts 1983 vs. 2000 megawatts/1949) ; 1965-79=10.7%

growth rate, slowed to 5.8%/1979-84, no longer meeting demand projected at 6-7.5%/yr to 2000; expect electricity to supply 26-27% of energy use/2000 (excluding cogeneration in industry). Expect nuclear power = 4% of output, hydropower = 18-19% (22-23% including small plants); thermal power = rest, based on coal. Hydropower mainly to come from 4 large-scale river basin development schemes under study (largest potential in world, mainly in SW, NW, require transmission of 1,200-1,500 km to major load centers; 8-10 years gestation/large plants, may be extended by unexpected geotechnical problems, shortages of funds, etc; high infrastructure costs/inundation; coal to provide 3/4 total generation/2000 (see above). Demand exceeds supply in all existing grids, costs of connecting them may not be justified by reserve requirements, but hydropower development will make interconnection more compelling; also will permit use of modern large-scale generating equipment with improved technical and economic results; need careful planning re costs/long term. (p.68)

4. Rural energy and biomass: Rural households use 220 m. TCE/1980 offuelwood, crop byproducts (1/2) and dung=85% of energy/households; further use will have serious environmental effects, need major alternatives: now stimulate private woodlots in uncultivated areas; use local coal resources; solar cookers; small-scale hydropower + electricity for cooking; improved digestors for dung; better rural cooking stoves=40 m in use/1984 (potential varies/area) (p. 68-69)
5. Investment, planning and prices: energy=capital intensive, efficient use = key: expect investments to increase from Y11 bil/1981-5 6th FYP to Y30-40 bil/1986-2000 7th FYP: Table 43 (p. 70) shows: Coal mining=Y50-70bil (12-13% of energy investments); petroleum=80-120 bil, 20-21%; Electric power Y280-370 (66-68%); Additional costs=Coal transport, Y40-50 bil; refineries, Y20-40; need greater decentralization of decisionmaking and price use to achieve optimal energy use; also improve longterm planning, including economic evaluation of alternatives (p. 70); also improved technology transfer since investments=longterm use, need conservation of energy, especially re thermal plants and cogeneration potential. Energy prices now reflect neither scarcity nor cost; two tiered prices system spurred production, but administered prices=low re economic costs except for petroleum products and electricity for residential consumers; recommend phasing out quota

system=difficult to administer; give greater autonomy to enterprises, reflect real scarcity=higher prices, reduce use (=worldprice plus or minus transport margins, unless imports or exports are limited)

V. Ch. 5: Spatial issues

- A. Regional income and production differentials and low efficiency of industries: eg income differences/cap: between Jiangsu and Gansu=1.4 to 1; between Wuxi County, Jiangsu, and Dingxi County, Gansu, 2.8 to 1; and between Qianzhou Township, Wuxi, and Dongye Township Dingxi, =10 to 1. (p. 76)
- B. Specialization and trade:
 1. Past emphasis on local self-sufficiency/29 provinces=wide range of local production activities including foodstuffs, materials, iron and steel products and consumer durables (p. 73); concentration would=economies of scale (now =wide variations/province in profitability/industry) shown in Tables 5.2,3; map 5.1 (pp. 74-5)
 2. Agricultural specialization: in recent years altered non-grain ag location, some provincial specialization re industrial crops (perhaps more than India); land costs near cities=higher, but transport costs=lower for ag inputs and markets so latter should specialize in eg vegs, perishable fruites=high returns/ha and transport costs; box 5.1 re dairy production suggests greater specialization=greater efficiency to meet growing demand, improved quality of roughage = large rural areas vs. market demand/cities; dairy byproducts and manure might justify location in urban areas linked with fish farming and fruit production. (p. 77); need improved incentives/price reforms (p.78)
 3. Industrial specialization and location:
 - a. Transport problems, shortcomings in commerce and material supply, price distortion, barriers to competition and fiscal system hinder specialization (p. 78)
 - b. Heavy industries=located w/o 'economic rationale'; smaller less efficient ones closed in recent years, tho small many iron and steel industries operate at high cost; medium and large heavy ind. plants =concentrated in large cities (Table 5.3) tho have large spatial needs, create environmental problems, and don't require services, etc., of large cities; could concentrate heavy-industries, while spurring other rural industries (incl. coal mining, cement and bricks, agroprocessing and light industries) p. 79

- c. Light industry location depends on non-raw material inputs and markets more than raw materials; land cost, living costs=high in cities (tho cities may offer other benefits including skilled labor, markets, diverse environment). High tech industries =better off in urban areas, while others could be transferred to smaller cities and towns(p. 79)
 - d. Reforms should reflect higher urban costs, (eg for land=taxes), differences in living costs, etc.
4. Transport:
- a. need improved road system - but no strategic plan yet exists; finance via bonds + road user charges based on vehicle and fuel taxes (p.83); development of smaller, more efficient trucks, reduce diesel subsidy to get 'walking tractors' off roads;
 - b. Railways=most efficient for raw materials, heavy-industry products over long distances; but need to improve industrial specialization and materials supplies=reduce interprovincial movements; shift to diesel or electric power (p. 84-5)
 - c. Water transport via coastal shipping and inland waterways could be improved, especially if located more heavy industries to avoid land transport
 - d. Other choices: containerization; prices and tariffs reflect full costs + competition between modes; increased personal mobility via private vehicles plus more buses and aircraft reducing use of railways.(p. 85)
5. Commerce: needs to be more flexible, responsive and diversified=changes in organization and management; now employs only 5% of population; have improved choice in retail trade, efficiency of wholesale trade, especially re key materials, by reducing central administration, but still involve small % of sales; provincial or county level allocation replaced central allocation, but still = bottle necks, especially for small collective, commune and brigade enterprises seeking materials.(p. 86)
- D. Development of towns and cities:
- 1. Main features of China's urban-rural strategy: past neglect of small towns, now being reversed; small percent of urban population in cities under 100,000 (32% v. India, 47, Brazil 42, USSR, 41);
 - 2. Need better infrastructure and support services in small town, including transport, markets, public utilities (water, electricity, phones);; improve education, health, social services and housing

3. Improve financial mechanisms; now rely on retained profits and social labor of rural households; need to replace with taxation and prices/services; special attention re broader reforms/local finance, including reduced productive expenditure, increased social services/community (instead of enterprises); reliance on land taxes (or rents), income taxes; charging user fees/services.
- E. Rural poverty and regional inequality:
1. Reforms and policy changes have reduced rural poverty - eg E & S areas, previously grew foodgrains in unsuitable agroclimatic conds, now switched to other crops (eg cotton)=better returns; but some areas haven't benefitted; other effects of reforms and investments/specialization and exchange -infrastructure of ag, ind'l inv stimulated=agroprocessing indus, expansion of commerce, etc. (p. 92)
 2. Other aspects of reforms -negative effect on poor areas, esp. with poor resources, low human resource development - eg Donxi (Bob 5.5: earliest ag/civilization area of China, continuous farming caused environmental problems, needs reforestation, irrigation, improved pastures/rainfed areas, more education/research;) increased outside competition may worsen situation unless offset; primary and secondary school enrolments aggravated by production responsibility system (p. 93) as families take children out to help with farms; high pop. density may need outmigration - needs study (pp. 93-4); need attention to wage (or wage subsidy) incentives for skilled workers; use of taxes and subsidies to encourage/discourage activities; protectionist measures = last resort (p. 96)

VI.Ch. 6: International Economic Strategy: China's exports of goods, nonfactor services=9-10% of GDP (above that of India, similar to US, Brazil); encouraging foreign investment and borrowing, technology purchases, overseas training, etc.=Q: how?

- A. External environment: ind'l ecs to grow 3.5%/yr, lower rates of inflation (5-6%), but world trade expected to grow faster than production=greater interdependence; mfr exports/LDCs to grow 8-10%/yr. (Treat global projections cautiously: "Previous long-term projections have often been wrong"(p. 98) Depends on "reforms" + cyclical fluctuations (=unpredictable); but large Chinese economy ensures greater stability
1. To benefit, need more modern technology, efficiency=benefit from external contacts; specialization and exchange on international scale; new products, standards, technologies, ideas, and assistance in mastering them (p. 98); could also have disadvantages re internal objectives: stifle infant industries,

primary price volatility, general inflation, fluctuations in world demand for industrial goods, increased regional inequalities, and emergence of large trade deficits or surpluses and unwanted inflows and outflows of capital (p. 99); soften trade off by appropriate management via indirect regulation of decentralized external trade and finance system - in addition to all other benefits internally, provide more appropriate relationship between domestic and world prices to improve economic rationality of decentralized export and import decisions (p. 100); may use tariffs (rather than quantity control) to protect infant industries, tho slow infant industry exports; taxes on exports may reduce danger of Chinese exports lowering world prices; use stabilizing taxes to prevent worldprice fluctuations from affecting national economy (p. 100); adjust currency value to avoid over or under valuation's impact on trade and pattern of imports (101)

B. Foreign trade prospects and policies:

1. China's foreign trade composition is similar to other LDCs, specializing in textiles and primary products, and tourism in exchange for machinery, transport equipment and other manufactures and services (tho has a higher % of manufactured exports) (p. 101-2)
2. Primary price products fluctuation; given coal, China probably should remain self-sufficient in coal and oil (with some exceptions); re ag. raw materials, falling real prices, but still might export some - eg rice (even if causes fall in world prices p. 102-3), tho not well endowed in agricultural resources; CEROIL (state food trading agency) is astute grain buying-selling operator, saved substantial foreign exchange; others less efficient; therefore will decentralize and specialize trading corporations, develop incentives (p. 103)
3. Manufactures: Expanding textiles (5% of world exports) and other manufactures exports=trade surplus offset deficits on machinery and equipment; could increase textiles export, but already affected by voluntary export restraint agreement with US and EEC members, and Multifibre Arrangement, should upgrade quality and press relaxation of restraints of trade (p. 104), expand other manufactured exports, including machinery and metal products (85% to LDCs now), may include import and assembly; arrange network of contracting and other cooperative agreements with foreign enterprises via greater flexibility, competition=necessity to improve products; growth in exports will facilitate import of specialized

intermediate goods and machinery (p.105); need to open up consumer goods imports to increase efficiency (p.106); use tax and price, exchange and other regulatory levers.

4. Services: including transport, insurance, banking and financial services; main China receipts=transport and tourism, some overseas construction contracts; would benefit from more imported technical information and services from DCs, licencing or buying technological assistance(p.106-7)
- D. External balance and finance: China could afford more overseas borrowing (including trade deficits) to provide additional capital=75% of exports (debt service ratio=15%); but use "judicious policy intervention...to induce foreign investors to link their activities to those of local enterprises" (eg auto industry laws requiring % of local components),but mainly use price reform rather than restrict foreign investment since = technology, management; Increased use of concessional and nonconcessional lending from Japan, World Bank Group, but need careful evaluation (p. 108)
- F. Regional issues: open orientation benefits coastal areas more than interior, the measures to stimulate poorer regions would enable them to gain more from international trade (eg economic charges for land use, wage differentials to reflect interregional variations p. 109); Establishment of special zones less subject to tariffs and other import restrictions, with good infrastructure and services, and specialize in export production can help develop more open external orientation for whole economy; but spread of new technology and ideas tends to be limited since are limited zones, so should be opened up(p.109)
 2. To make decentralization of external economic management a success, in coastal and interior provinces alike, need internal reforms to motivate and guide enterprises respond rationally to challenges of more open economy.

VII. Ch. 7: Managing Industrial Technology

A. Technology in perspective

1. "China has made tremendous strides in industry since 1949. With one of the highest sustained industrial growth rates in the world (8.5 percent per year in 1957-82), a full range of production has been built up in nearly every industrial sector. This has been accomplished despite prolonged international isolation, by mastering available technology, improving it, and modifying it to suit local conditions." (p. 110)
2. Problems:
 - a. 20% of tech=1960-70s vintage, 20-25%=backward

but can serve present needs, remainder should be replaced. (p. 110)

b. Self-sufficiency on ministry, provincial, even enterprise level=wastes physical capital and human resources (eg all purpose machine tools/ent=underutilized)

c. Capital productivity decline offset increased labor productivity/worker

d. Product innovation and quality improvement=slow=unchanged designs since introduction decades ago; eg Liberation truck = USSR model, based on 1930s' US model; Ch. ball-earnings last 1/5 as long as best foreign ones; 40% of Ch. nitrogen fertilizer-low quality and unstable ammonium bicarbonate (p.110)

3. Other determinants of efficiency and quality (aside from technology):

a. Work practices and quality of material supplies: eg workers hold metal pieces for drilling instead of using clamps; measure pieces manually, not mechanically; and move partially assembled pieces by hand rather than using a conveyor; improving these practices would do more than introduction of sophisticated controls (p. 111)

b. Management and organization/ind may determine relative performance more than superior equipment; eg. Tianjin Watch Factory has better equipment and nearly as many workers as Shanghai Watch Factory, but produces only 35% as many watches, cost 27% more; in sewing machinery industry, one model in the highest cost enterprise costs 5 times the lowest, even for those of 124,000-135,000 units cost differential = 1 to 2. (p. 111-2)

c. Failure to exploit economies of scale growth: eg 1978, 130 enterprises in 26 provinces under several ministries produced 150,000 motor vehicles; if consolidated, standardizing parts and allowing longer production runs/individual parts, with more specialized machine tools, could increase productivity at lower cost; likewise for bicycles, refrigerators, watches (tho note transport costs could offset economies of scale in some industries) p.112

4. Economically efficient technology: no quick tech. fix;

a. some innovations could increase production costs, especially if substitute expensive and electricity-intensive imported machinery like fully automated loms, for inexpensive and abundant labor power;

b. distorted prices sometimes make enterprises make wrong choices from perspective of national economy -- and in long run, some automation could

be economically rational if manufactured machines in China, and used initial imports as models for domestic producers (requires investigation) p. 112
c. Problems of absorbing foreign tech. in ch. and elsewhere: of 9 large and medium-size projects imported, 1980-82, 6 had poor results; a study of 30 turnkey projects/1970s showed 1/3 = short construction, high utilization, and good operations results; takes time to learn, need improved technological knowledge and skills/ent and specialized agencies; cumulative effect of small innovations=preferable to completely new products/process, so should stimulate those; and large gap in every industry and country between newest 'best practice' technique and average which if reduced is vital to cost reduction and product improvement as leaders acquire new technology (p. 112)

5. Planning for technological development: China faces strategic choices: how to break out of low productivity circle? import foreign technology or upgrade producer goods technology? for which industries import, which use domestic R&D? Which product lines should it import?

a. Study industry by industry, all stages of production from producer goods, to intermediate components, to final goods, comparing these alternatives; eg textiles = relatively mature, should upgrade textile machinery, then upgrade textile production generally (probably true for most industries)p. 114)

b. In high tech industries like electronics, distinguish between use and production of electronics products: Use of products offer greaterst potential productivity gains, whereas electronics production=secondary (US: hitech=3%of new jobs created in last 15 years); since China is behind, could use imported electronics equipment, eventually introduce production using most advanced techniques (since advance is occurring rapidly) p. 114-5. (like S. Korea, Box 7.3)

c. Sectoral investment strategies -lessons from Japn: Ministry of International Trade and Industry facilitated information flows among producers and reducing risks of investments; but did not force producers to conform to plans - and some followed their own approaches= different from govts.; also had failures....; criteria for success: ability to compete in international market after period of infant industry protection; and enterprises bore risks of failure and reaped rewards of success-ie flexibility plus incentives (p. 116)

B. Make or buy decision=complementary, ie use both if have

strong R&D capacity as China does

1. Intermediate options:

a. can import unpackaged technology elements eg licenses, designs, key equipment, consultants to solve management, marketing, engineering problems; retain flexible import policy, focus on what and why import;

b. informal means of obtaining technology via overseas buyers, copying imported equipment (though must consider economic as well as technical aspects); international subcontracting and sending students abroad as well as attracting back overseas Chinese with technical or business experience

2. Research and development:

a. State Science and Technology Commission (and other central govt agencies and ministries)=good agencies for informing bureaus, corporations, and enterprises re technological developments abroad and in progressive Chinese enterprises; monitor costs and provide enterprises with feedback re their performance vs. best (domestic & international) practices

b. Bottom-up innovation=potentially important: a 1953-73 study of US innovations showed 80% of new ideas came from within enterprises that produced the innovation, 3/4 from the producing division or department itself; less than 5% from universities and government laboratories; European study showed 0% of main ideas came from within the innovating co., mainly from commercial rather than technical staff (Table 7.2)

c. User feedback=important, but China's system doesn't allow enough interaction between machinery users and producers; therefore design much of their own machinery; freedom to choose suppliers including foreign suppliers would be economically rational (could also produce their own)

d. Possible improvements include contract research, technical assistance on fee-paying basis and joint research production teams (tho not at expense of links between enterprises); pilot plants (a technique used by Japan's government; and relocate R&D in enterprises to respond to users needs (linked to small scale but significant internal innovation)(p. 118)

C. Incentives for Innovation and Diffusion:

1. Past system = biased vs. innovation: production targets for physical output or gross value of production; secondary targets for cost reduction, material use, product quality couldn't offset bias vs. innovation; market pressures = ineffective since price differentials/quality =small or non-existent;(p.119) enterprises had no responsibility for sales; =sellers'

market. Require more radical changes: enterprise and managerial accountability for financial performance with heavy penalties for poor performance, rewards for success; rationalization of prices so profit and loss reflect cost efficiency and economic benefits; increased competition among enterprises (See Ch. 10)

2. Diffusion of technology:

a. China's innovations spread very slowly to rest of industry; followed Soviet model/free flow of knowledge with specialized research institutes that develop innovations; diffusion of new ideas at no charge

b. Reason for slow diffusion=lack of incentives; fact that technology=whole method of doing job, requires understanding associated work procedures and organizations which can be assimilated only with much effort, cost, sometimes adaptation

c. To remove barriers to diffusion: improve communications between ministries, regions, and enterprises; provide incentives to diffuse new technology to other producers; greater labor mobility especially of experienced technicians and managers (in Japan, instead, government brings together top personnel to share experience, develop consensus on future development and informal contacts among personnel who went to school together, etc.; encourage specialization, consultants, to provide cross industry fertilization. (p. 120)

3. Role of small enterprise:

a. Elsewhere, small firms=innovative, even in large scale industries (eg chemicals); but in China, assume small firms=technologically backwards so deny skilled manpower, modern equipment and foreign exchange to small collective and individual enterprises

b. Social problems/incentives=less for small enterprises than large ones; failures affect few workers, small amounts of capital.

4. Obsolescence and scrapping:

a. Little scrapping of equipment, abandoning old products in China

b. Need guidelines/scrapping and replacement: if total cost of production using new equipment, including interest and depreciation on new capital, =less than capital cost of upgrading investment, or operating cost+upgrading exceeds product price;=hard to apply because of price distortions=another reason for restoration of market prices (p. 121-2)

c. Perspective on employment consequences: replacement can occur w/in enterprises (eg Japan); plus closure of old enterprises stimulates technologically more advanced enterprises=new

jobs/workers (old ents=drag on progressive ents, depriving them of materials, skilled lab, cap, markets)

d. Should introd. policies and institutins to alleviate economic hardship of displaced workers, assist in retraining and reemployment (p. 122)

VIII. Ch. 8: Human Development

A. Human development policies (ed, ee, wages) must take account of need for structural change; China must change "rigid, compartmentalized approach to development and use of human skills"= "major obstacle to rapid and equitable growth"(p. 123)

B. Education and training issues:

1. Because of Cultural Revolution, although China has higher % of population with primary ed than most LDCs, it has a smaller % of people with advanced qualification (table 8.1, p. 124)=need to restore academic standards, expand formal and informal higher ed,

a. primary ed=essential to spread of development (over emph on higher ed, eg. Mexico, Brazil, contributes to inequality, capital-intensive, not very efficient industry) p. 123-4

b. Educating women facilitates family planning, improved education and health of children

2. Problems in China:

a. Decl. in primary & secondary school enrollment rates in rural areas/1980s/result of production responsibility; esp.= probl. for secondary school, girls in poor areas (p. 125)

b. Problem = aggravated by local financial self-reliance in basic education (Chs. 5, 10, and p. 125) govt should direct more funds to rural areas to reduce fees, built more schools, better staff maybe make attendance compulsory (p. 125)

c. Key-school policy, which deliberately increases policy differences among schools by concentrating resources in better schools, "unnecessarily increases inequity and widens the gap in educational access between rural and urban areas." Note educational differences perpetuate economic advantages and disadvantages from generation to generation; tendency aggravated by uneven quality of seconary and higher ed (p. 125); but given low enrollment ratios, poorly qualified or over-age staff, library shortages, obsolete equipment of higher education, nevertheless, might concentrat university resources in key institutions (p. 125), but= questionable at secondary level (p. 126)

d. Special vs general education:

i. Policy=to limit general secondary ed, increase vocational schools = questionable in

light of ed research (p. 126)

ii. Vocational training should-wide range of adaptable skills to ensure labor force flexibility; but isn't;

iii. Shortage of skills, fall in enrollments at mainly enterprise run schools training skills may reflect emphasis on profitability=problem, since need more skills associated with practical enterprise development (p. 126); might achieve by local govt schools in close touch with enterprises=broader training + economies of scale (p. 126-7), might fill gap left by phasing out apprenticeship training program (2 m. workers), tho both E & W Germany find apprenticeship training effective way to train workers (p. 127)

e. Role of manpower planning:

a. linked to manpower forecasting (not accurate in capitalist countries cited, p. 127)

b. Given difficulty in manpower forecasting, post secondary schooling should offer several routes to given ed. qualification - eg university engineering courses plus two year technician courses plus 2 years=engineer; correspondence schools, television universities provide greater flexibility of courses

C. Employment and productivity:

1. Growth of Chinas' labor force: 10 m. jobs/year, 1980-2000; plus existing labor surpluses=danger of widespread unemployment, both rural and urban

2. Productivity and growth: to stimulate growth, must increase productivity, but will lead to loss of particular jobs; need to replace with new, better ones, some w/in existing ents, others in new ents; can maintain labor intensive development w/o emph. on capital-intensive development (p. 128)

3. Urban unemployment:

a. mixed picture: oversupply of unskilled, not enough skilled=mismatch due to rigid labor allocation & wage pols, unbalanced sectoral and institutional structure of production

b. Small service sectors, esp. commerce, miscellaneous business and personal services=more labor intensive, could create more jobs, reduce overall urban labor surplus - esp. among women (=52% of commerce, fin, bus and misc. servs, 30% of mfrg workers) plus unskilled males (p. 128)

c. Individual sector, 1984=2.5% of urban labor force (compared to 31% in Abidjan, 40% in Jakarta, 30-40% in Lima, 8% in Romania, 11% in GDR, 17% in

Hungary, 29% in Yugoslavia; complements, rather than threatens state sector; should expand, provide better premises, materials, skilled labor, credit, plus access to public services - eg housing, health care, pensions (p. 129; see also ch. 10)

4. Underutilized rural labor:

a. Scope to expand services, individual non agricultural enterprises = great, since forecast decline in employment from 70% to 59% of labor force in ag in quadruple model (tho increase in number to 56 m.), to 52% in Balance model with incr'd number by 13 m. even tho increase service sector = unavoidable rural surplus; shift in ag structure may employ some, but not enough = low marginal productivity (p. 129-30)

b. Public works/labor = partial solution, but = slow, involve unutilized capital assets, wages = cost which, if not inflationary, require taxes - ie need cost-benefit analysis; not panacea, but could provide rural infrastructure (p. 130)

D. allocating and motivating workers:

1. Employment choices of enterprises and workers:

a. Individual ers & ees in china have less freedom of choice even than USSR, E. Eur = assigned to jobs w/o regard to their preferences and ents couldn't discharge workers

b. Changes in recent years: ents may examine prospective ees assigned by labor bureaus; jobs - advertised; u grads may chose own jobs; experiment w. job contracts between ents and new employees = 3-5 years, dismissal for unsatisfactory work; rapid growth of collective and individual ent sectors - little administrative regulation - but basic system still in tact

2. Individual choice of jobs: system doesn't account for individual preference or performance = little motivation = need change:

a. USSR, E. Eur allow some choice of assignment for best students, last only 3 years; may then move (p. 132)

b. allowing workers to change jobs facilitates technological innovation - dissemination = move to jobs where skills contribute more (p. 132)

c. 2 possible disadvantages:

i. labor won't go where priorities require it; but wider system reform should ensure prices/profits determine allocation;

ii. Disrupt production, prevent ees from gaining experience, training; but Japanese model of lifetime commitment (considered element in success) relates to only 25% of labor force; 13% turnover annually exists) (p. 131-2)

- d. Enterprise choice of workers:
- i. for unsatisfactory performance: = needed to ensure efficiency; use appeal tribunal w. worker reps to avoid unfairness (p. 132)
 - ii. for workers not needed for production: weigh efficiency vs. waste of unemployment (also = wasteful (p. 133); reduce hardship via unemployment insurance, transferring responsibility for housing, pensions, social services to government (p. 133) (Note: dilemma = low = suffering; high = little incentive to work; should try to shift workers as quickly as possible to new jobs; but "increases in unemployment in industrial countries since about 1970 are not encouraging...over 13 percent in Belgium, the Netherlands, Spain and the United Kingdom...There is also appalling urban poverty in some developing countries." (p. 133)
- e. Efficiency, fairness and stability in wage determination:
- i. China's wage system = rigid like labor allocation system: centrally determined basic wage scales, varying among occupations, industries, localities; no ent. mngmt discretion + large % of remuneration in kind (housing, social services, subsidies) p. 133
 - ii. Changes recently: basic wage plus 20-30% linked to profit or output of firm, performance targets/individual job - but haven't basically changed system; management doesn't have discretion/ worker; centrally-prescribed wagesystems = "more egalitarian than in other countries" = little incentive (p. 134)
 - iii. High wages: 2 different forces increase relative pay of indivs, occupations: a) unpleasant work (eg mining, remote locations) = higher + working longer hours; (p. 134) b) market forces in conditions of scarcity (artists, sportsmen, businessmen) = harder to defend; use of progressive personal income tax can help to reconcile efficiency and equity (China has one, aimed primarily at resident foreigners, could extend it, but must compromise between incentives vs. equity (p. 135)
 - iv. Low wages: conflict between efficiency and equity = sharper, harder to resolve/ low wages, esp. since unskilled labor = surplus supply; past Chinese sol = hire unskilled at above economic wage, more than need = not altogether inefficient, since 'unwanted'

workers perform low productivity activities as if hired at lower wage; but = disadvantages re reform: counters making ents manage own affairs, cut costs, compete vs nonstate ents, causes admin. restrictions + budgetary burden; if let wages decline, profit oriented employers wouldn't fire workers, those laid off could get other jobs; but = socially and political unacceptable drop in wage levels, no perfect solution: could gradually reduce relative unskilled wages = tension between old, new workers; set legal minimum wage, not raise it in real terms for 20 years while increase skilled workers' wages; raise costs of other inputs, making skilled labor more attractive (eg tax capital, raise interest rates, make fewer grants); reduce link between low wages and household poverty by varying labor force participation or providing direct state supplements to poor households. (p. 135)

v. Wage stability: flexible wage system may cause excessive increases in average, total wages = aggravate instability; efforts to control at enterprise level = social conflicts; difficult to link wages to profitability or profit due to difficulty of assessing (especially given price irrationality, lack of competition) = need to work out compromise between administrative restraint on total wage bills and need for microeconomic flexibility and incentives

E. Population issues beyond year 2000:

1. Low pop growth = one reason for favorable per cap income, reflects female literacy, primary health care, birth planning; but to achieve 2000 target of 1.2 bil. = further drop in rural fertility (present rate = 1.7 bil. in 2100 = serious problem): (p. 137)

a. Changes in age structure: lower rate = less expenditures for education;

b. Population of working age: Declining birth rate = negative labor force growth rate = more rapid increases in productivity through abandoning old plants, economising on use of labor, but might = costly in terms of geographic and skills relocation, etc. (p. 138)

c. By 2100, about 50% of population = over 65, starting at low income levels = issue of financial support + health care

d. Birth planning policy: to avoid over-age population, should increase birth rate after 2000; but how make transition = problem (p.

140-1)

e. Financing elderly = issue: retirement in China = 60/men, 55/women cadre, 50/women workers; = young, perhaps should provide parttime jobs, government pension funds - recommends enterprise funded schemes (p. 141-2) = payments as of right; but problems: no funds for retirees in first decade or two; uncertain re wages of current workers; problems of paying for fund, either contributions/employees or via taxes; issue = when, how include peasant families given urban rural gap. problem compounded if failure to plan in advance. (p. 142)

IX. Ch. 9: Mobilizing Financial Resources

A. China must save and invest about 30% (26-36%) of national income to achieve long run growth targets

1. Macro-economic accounting framework (Figure 9.1, p. 144) = 3 institutional sectors = divisions and uses of national income/sources of income (p. 143):

- a. Government/ taxes and remitted profits/finance some household consumption (via transfers, subsidies) and public consumption, and savings
- b. Enterprises/retained profits/self-financed investment + indirect savings (via government grants and loans to enterprises, bank deposits relent to enterprises, bond sales, etc.)
- c. wages and other earnings

2. 30% = comparable to Japan, East European socialist countries, and China over last 3 decades

- a. Till now govt/China = main saver = overlap between saving and public finance (unlike capitalist countries, Table 9.1, p. 145)
- b. Possibly, increased market regulation etc. make it preferable to increase enterprise and household saving; amount depends on advantages and disadvantages of each (p. 145)

3. Government saving:

a. Advantages:

- (1) "proven and reliable means of achieving a high and reasonably steady aggregate saving rate ... that is unquestionably

consistent with social ownership of the means of production created through saving...." (p. 145)

- (2) =essential for infrastructural investment and permits close control of other investments (not compelling argument since past government saving = underinvestment in economic and social infrastructure which elsewhere = financed by ent and hsg savings via government bonds) (p. 145)

b. Disadvantages:

- (1) Strain on public finance: higher tax rates, lower expenditures on public consumption and support of household consumption (??-AS) (p. 145)
- (2) High taxes discourage incentives to cut costs; innovate, increase tax evasion; high administrative tax collection costs; (p. 145)
- (3) Reductions in other public expenditures of social, economic importance which enterprise and household spending cannot or should not finance (p. 145)
- (4) May conflict with expanded enterprise decision-making autonomy, though might channel government saving to ents via financial intermediaries (see ch. 10) (p. 145)

c. Extent of government saving depends on components of investment -- eg:

- (1) If govt saving finances only 60% of investment in energy and transport; 75% of education and health; 90% of public admin and defense, share in total saving/yr. 2000=20%;
- (2) If govt provides 100% of investment in above 3 categories, 75% in industry, and 50% in commerce and housing, it would account for 70% of total saving/yr. 2000 (p. 146)

4. Enterprise saving: In more developed capitalist countries, enterprise savings = 10-12% of NI (p. 146)

a. State ents:

- (1) St. ent savings (related to govt saving, can substitute one for other via profit tax rate, remittance of profits,

- depreciation funds) = advantages over other govt savings:
- (a) Gives ent managers stronger incentive to cut costs, increase profits;
 - (b) Enables ent to op as autonomous units, finance some investment internally rather than borrowing;
- (2) Disadvantages, especially if other aspects of reform lag:
- (a) inappropriate motivation, distorted prices = bad investment decisions;
 - (b) profits diverted to bonuses, benefits for workers (p. 146)
- (3) Future/Ch deps on state ent profits, which affect taxation levels and patters needed to achieve govt revenue targets
- (a) In Ch. state ents generated substantial profits; will reform reduce average profitability? = hard to predict (p. 146)
 - (b) Price reform likely = redistribution of profits among sectors: from mfrg to mining and commerce (already = towards ag); reduce overall st. ent profits if non-st ents predominate in those sectors
 - (c) In all sectors, efficiency of st. ent = crucial determinant (ie cost consciousness, ee of surplus lab, etc could reduce st ent profits) (p. 146)

b. Non-st ents:

- (1) Collective, individ, private, and mixed ownership could provide large fraction of savings,
- (a) contribute to increased efficiency; but to do so must be allowed to make substantial profits (tho some will lose) and to invest, expand freely = incentive to reduce costs, attend to consumer demands, and save and reinvest (p. 146)
 - (b) Essential = certainty govt will allow them to operate indefinitely w/o expropriation, punitive taxes (p. 146)
- (2) Disadvantage:
- (a) potential impact on income distribution; a considerable %, maybe 50%, = for consumption or incentives for ents reduced or

eliminated;

- i) =OK for collectives,
- ii) poses problems for individual
ents; elsewhere govt taxes to
influence decision re inv. vs.
cons (p. 147)

c. Household savings:

- (1) Low inc. countries = mainly reinvested
in peasant ag; in Ch, rural production
responsibility system = incentive to
reinvest (note: in '88, reports
suggested farmers build better housing-
AS)
- (2) Household savings elsewhere = largely
for consumer durables and other
unanticipated expenses; much for
housing, retirement
 - (a) In Ch, could finance urban housing,
partly through cooperatives, with
less provision via enterprises;
 - (b) govt could provide housing directly
only to minority who can't afford
to pay; assist others by selling
off housing, site & service
schemes, technical assistance,
limited subsidies or tax
concessions to cooperatives (p.
147)
- (3) Saving for retirement could be via funded
pension schemes, payment of bonuses to
workers 1-2 times/year (as/Jap, link
bonus to profits)

C. Subsidies and transfers

1. Past subsidy programs:

a. confusion re definitions:

- (1) term/Ch = wage supplements; government
payments to reduce prices and keep
inefficient enterprises operating;
- (2) Reduced taxes or profit remittances =
subsidy
- (3) Estimates vary, but 1981 est = Y48 bil
(table 9.2, p. 148): major ones=
 - (a) price subsidies77%
including:
 - ag. inputs.....4.5%
 - imported ag. prods.18.3%
 - Dom.prod.foods.....31.3%
 - Other commods.....14.1%
 - Housing.....10.4%
 - (b) subsidies to money losing
enterprises.....21.2%
including
 - Industrial ents.....8.7%

Commercial ents.....6.0%

- b. With transfer payments (very small) added, total share of budget revenue = only slightly higher than for LDCs, well below industrial market economies; but expressed as % of GDP, = larger share, since budget = 30% of GDP (in most LDCs=20%); food subsidies (p. 148)

2. Future options for price subsidies:

- a. Price subsidies in principle not bad (p. 149)

- (1) Can = useful economic levels to stimulate production, consumption of goods and services of which would otherwise be too little from ec.or social viewpoint (eg research, training, books, arts);

- (2) to improve distribution of living standards; eg food subsidies for lower income groups who spend bigger % on food; or stabilize living standards given fluctuating producer prices (p. 149)

- b. Disadvantages:(esp as in China now):

- (1) complicate fiscal planning by fluctuating unexpectedly, esp. if arise from commitment to hold prices constant

- (2) Adversely affect ec. effic by distorting price signals (eg subsidized coal discourages fuel efficient stoves; low rents = inadequate housing maintenance

V. (3) Crude instruments for income redistribution since =low prices for rich as well as poor (compared to income supplements targeted at poor); may have perverse effects; eg urban Ch: lower paid temporary workers from country and in small town collective enterprises have less access to subsidised food and housing than higher paid permanent state enterprise workers; and in rural Ch, higher grain procurement prices benefit richer hsholds disproportionately since have marketable surplus, whereas poor may = netpurchasers of grain

VI. (4) For price stabilization, encourage govts to postpone minor price increases til required increases= disruptively large (p. 149)

- c. Could modify instruments over next few years:

- (1) Reduce food subsidies, regulate by adjusting ag procurement prices; reduce govts role as buyer and seller of ag

produce; est. rational relations between retail and producer prices of food, other ag. products;

(a) Now/Ch, elim food subsidies=50-60% incr. in urban grain price, 80% incr. in edible oil pr; would require urban income to rise 25% on av. , 45% for poorest, to maint living stnds; elim. rent subsids, need income incrs =30% to 50% for poorest;

(b) should compensate for loss via wage (and pension) increases; individual and small urban collective workers' earnings, not subject to admin rgulation, would "tend to be pushed and pulled up by the higher wages of other workers" (p. 150)

(c) Given differing ratios of dependents to workers (and pensioners), would need to supplement via income transfers to high-dependency households + supplementary interest payments on saving deposits which would lose part of their real value (finance these by corresponding special levy on borrowers whose loan repayments would decrease in real terms) (p. 150)

(d) Debate whether should make changes all at once or incrementally; but once normal commercial margins=restored, rises and falls in producer prices of particular goods = reflected in corresponding changes in retail prices, contribute to national economic efficiency by encouraging consumers to buy less of things in short supply or where product costs increased, and more of abundant ones or with falling production costs (should not continue to offset price increases via general wage or income indexation = inflation (p. 151)

i) (NOTE-AS: but as everything remains scarce until productivity increases -- only possible in long term-- general inflationary trends=inevitable if try to ration by prices

alone?)

- (1) Future options for transfers:
 - (a) Could increase over next decades because:
 - i) Supplementary income payments to poor households
 - ii) Extension of social security benefits to non-ag labor force, even part of ag pop
 - iii) Increased labor mobility = some form of unemployment compensation
 - iv) Increased pension costs for growing elderly population (p. 151)
 - (b) In 1981, transfer payments = less than 2% of GDP (Table 9.4, p.151); by yr 2000, transfers could = 3%; but govt spending on transfers + subsidies varies depending on policies p. 151-2)
 - i) Increased transfer payments could reduce supplementary incomes payments to families
 - ii) Shifting transfer payments to government could = budgetary burden since not easy to recover costs via taxes on enterprises (which formerly provided them) (p. 152)

D. Revenue needs and sources:

1. Issue = to weigh social and economic benefits of higher government expenditures vs. distortions and disincentives associated with higher taxes (may = more significant in reformed economic system than in past)
 - a. p. 153; table 9.5 for alternative scenarios
 - b. Figure 9.2 shows alternative scenarios effect on revenues under quadruple vs balanced models (p. 154)
 - c. Table 9.7 shows implications for savings patterns
2. Tax reform: scenarios suggest important choices among tax categories:
 - a. Indirect taxes -
 - (1) Ch. now relies heavily on indirect taxes with differentiated rate structure (3-66%)
 - (2) Advantages:
 - (a) revenues rise automatically with production;
 - (b) easy to collect since = few

enterprises
(c) Rate differentiation used to achieve income distribution objectives, discourage consumption of items eg cigarettes

(3) Disadvantages:

(a) Taxation of intermediate products encourages uneconomic vertical integration,

(b) can make effective tax rates (eg on earlier production stages) diverge from nominal tax rates

(c) taxation of intermediate transactions bet. st. ents may not incr. budget revenues

(4) Reforms might include:

(a) drastic decrease in rate differentiation

i) = 3 categories for consumer goods (low-0 for food; moderate for most goods; high for luxuries);

ii) little or no tax/intermediate goods or investment goods (except to restrain investment demand, discourage uneconomic automation)

(b) Wider use of Value added tax (vat):

i) advantages:

a) revenue increases as fast as nat. inc;

b) avoids distortions caused by tax of intermediate goods,

c) provides incentives to increase exports, economise on imports

ii) disadvantages: little use for reducing inequality in living standards (p.157)

b. Profit and asset taxes:

(1) Present system = unsatisfactory due to variation in effective profit rates/enterprise, determined largely by bargaining

(2) Reform

(a) requires

i) improved financial discipline/ent,

ii) changed relation with government agencies supervising them (p. 158 also see Ch. 10);

(b) Main issues then become:

- i) appropriate rate of tax = trade off between revenue needs and incentives/ents; charge on govt financed investment could raise revenue, strengthen incentive to use capital economically (=tax on capital assets; or int. on govt loans; but could make after tax or int payments fluctuate more) (p.158)
- ii) Should after tax profits be remitted to government?
 - a) Profit tax on non state ents likely to be increasing source of revenue; can ensure adequate share of sector's surplus is channeled to society; use exemptions, differential profit tax rates as economic levers;
 - b) In long run, equalize tax rates for state, non-state ents for admin convenience and prevent distortions in taxed mixed ownership ents. - but achieve gradually to avoid discouraging non-st ents. (p. 158)
- iii) Relation between ent taxes and taxes on indiv incomes: to tax both profits and personal incomes=double taxation;
- iv) Excess profits taxes can absorb differential rents - eg mining ch has resources tax=useful revenue source w/o distorting incentive; but need distinction between rent and high profits = efficiency or risk)

c. Personal income and wage taxation:

- (1) Neglected in socialist countries; China introduced recently a personal progressive income tax, mainly for foreign residents; could extend to cover highest 1/4 of chinese wages, earnings frm indiv ents, and ag could =regulator of income inequality (a lternative = expenditure tax) p.158-9)

- (2) Could extend income tax to all wage workers=cheap to collect (deducted from wage), but may = greater disincentive than indirect tax; = 25% US revenues, 39% in FRG, 44% in Fr

d. Ag taxation:

- (1) Neither income tax or commodity taxes = very effective, esp when % of produce= consumed in kind
- (2) Indirect taxes on procurement of ag prods can discourage output
- (3) Personal income tax probably best means of taxing high ag incomes=equity plus revenue; but difficult to collect (p.159)
- (4) Present tax, essentially land tax based on est'd income earning potential, = incentive for increased production, could be higher, moreflexible as a standard percentage rate applied to all land and 'taxable value'/each plot (subject to reassessment) (p. 159)

X. Ch. 10: DEVELOPMENT MANAGEMENT:

A. Bulding "socialism with Chinese Characteristics"

1. Past reforms in 5 years:

- a. rural areas: "remarkable impact on production and income"; urban reforms began in 1984= acceleration to "integrating the basic tenets of Marxism with actual conditions in China." (p. 160)

b. Next 2 decades: consistent, comparable progress :

- (1) Increase ec dynamism and efficiency through market regulation;
- (2) Strengthen, reform social instruments to safeguard and improve social welfare and equity;
- (3) strenthen ec. management through coordinated use of indirect and direct controls

2. State and individual:

- a. China's success/limited inequality in income distribution and assistance to pocrrest, provided by work units, with limited state role

- (1) Health, disability benefits provided thru labor insurance shceme, but pensions = part of production cost, housing provided by employers

- (2) Many social and distributional objective met by state ;manipulation of economic instruments - eg wages, supplemented by price subsidies; guaranteed employment/enterprise; restricted migration; subsistence level grain provided topooorest households
- (3) Benefits vary per enterprise

b. Issues of income disparity:

- (1) Prosperity comesun evenly in course of economic development; reform means new thoughts re income inequality,including from entrepreneurship=essential to change, requires risk taking
- (2) Use supplements and taxes to offset inequality w/o distorting price incentives; note that use of fringebenefits instead become known, lead to corruption (p. 161)

c. Social security and welfare:

- (1) Enterprise costs should be limited to production costs, not welfare, so prices can reflect production possibilities and costs
- (2) Social security = state programs (west-15-20% of NI, including socialsecurity medical care , education, etc., to reduce inequality of industrial market etc) op. 162)
 - (a) Benefits go to those in need (unlike price subsidies); in China can build on detailed information available via household registration system = basis for grain, other rationing (in rural areas- former communes, brigades, teams could administer collective social services) p. 162)
 - (b) Minimum living standard provided by supplement for poorest provides guaranteed floor, designed in relation to national situation (p. 162); reduced costs since = only for minority of population (p. 162)
 - (c) Might decentralize admin to local authorities (p. 163)
- (3) social security and services in rural areas
 - (a) Consolidate urban social security

- and pension schemes into state run system = avoid inequities
- (b) rural social security = more complex = conflict between equality and limited administrative and financial resources
 - i) long run goal = national scheme;
 - ii) immediately, might combine grain support and 5guarantees into rural social security program for needy households - basic food + small cash income, increased as productivity increases, merge with urban program in long run (p. 164)
- (c) Disturbing aspect of recent rural reform: weakened cooperative health system and declining school attendance (p. 164);
 - i) state should finance increased % of social service costs in poor areas, match grants to townships or villages below certain ave income level;
 - ii) should not extend costs recovery principle to social services - eg education - in rural areas (p. 164)

B. State and enterprises:

1. Control and management of state-owned enterprises:
 - a. Past principle: ownership by people = operation by state; now recognize "ownership right can be duly separated from operating right" (p. 165), move towards more complex system of management with multitude of state agencies + enterprise assume various responsibilities
 - b. state retains authority to determine division of responsibilities among various state organs, including enterprises, so retains ultimate control (p. 165) = issue of degree of autonomy; how should state regulate activities of autonomous enterprises via external environment that ensures self-interest of enterprises guides them in directions consistent with national interest via appropriate prices, wages, interest rates, competition, a well-specified legal framework and regulatory levers like taxes, subsidies, credits (p. 165)
 - c. To avoid too much power in workers' hands (which may diverge from national interests)

or managers' hands (which may maximize power, individual wealth, not national interest), might introduce boards of directors

- (1) Tried in Hungary;
- (2) Board includes directors of society at large + workers, but mainly of representatives of institutions interested in maximizing profits/ent (p. 165)
- (3) To prevent board from perpetuating government direct control of ent, might spread ownership among several different institutions, each in "some way representing the whole people, but with an interest mainly in the enterprise's profits rather than directly in its output, purchases or employment." (p. 166) eg: central and local governments, banks, pension funds, insurance cos., other ents.

d. Competition to promote efficiency and innovation: so "enterprises will be directly subjected in the markets to the judgment and evaluation of the masses of consumers, so that the superior will survive and the inferior be eliminated." (p. 166)

- (1) Ensure free entry: ents can freely use retained profits, other sources of finance, inew activities as well as existing ones; compete for markets, investment funds, land, foreign exchange
- (2) Poor performers = ousted; new laws and regulations re ents in financial difficulties
 - (a) Provide state asst. to necessary firms in trouble via subsidy for fixed terms=regular review
 - (b) For firms not needed, need some sort of bankruptcy law: permit court or govt appointed administrator take over management, define rights, responsibilities of board of directors, managers, workers; legal proceures for closing plants, disposing of assets; treatment of workers, managers
- (3) Avoid creating trusts, large holding companies, that impede competition (p. 166);
 - (a) discourage local govts from restricting internal trade, competition; impvoe transport, commerce, communications = unified

national market (see ch. 5);
increase competition from imports
and of Chinese goods in export
markets (ch. 6)

- (b) Develop comprehensive system of
commercial and contract law and
institutions and personnel
(accountants and auditors +
lawyers) to implement it (p 167-8)
to provide for founding, closing of
ents, regulating ec. activs;
product and worker safety;
environmental production; etc. and
prohibit specified monopolistic or
exploitative behavior (p. 168)

(4) Motivation of workers and managers:

- (a) Medium-term profit maximizing =
direct stimulus for peasants,
individual and small collective
ents; more complex for medium and
large firms
- (b) Distinguish between workers and
managers: for workers, takes time
to pay/work done; problem of
linking to profits= difficult
assess
- (c) Managers should be held accountable
for ent performance, rewarded for
performance/response to market
demands via profits (need reforms
re prices, including for capital,
skilled labor, natural resources,
and urban land; + accounting and
auditing)

(5) Management of strategic enterprises:

- (a) Need to categorize state
enterprises:
 - i) some= state control: defense,
basic public services, rail
transport
+ Economically large
scale= monopoly + key
enterprises;
but should increase
management responsibility, incentives;
eg 3-5 yr contracts/performance targets,
govt finance obligations, etc.
(distinguish between economic and social
obligations)

- (b) Diversification of ownership; gradually decrease direct state regulation, independent enterprises become bulk of state sector + create dynamic nonstate enterprises to assist, put pressure on state enterprises to improve efficiency and upgrade technology = "diversified economic forms and various methods of management" (party decision)
- i) include personal services (restaurants, repairs); retailing and wholesaling; small-scale construction and transport; high quality consumer goods; specialized services to industry (consulting, R&D) small order parts and components not suitable for assembly line production;
 - ii) Provide equal access to social services and welfare benefits; credit from banks and other financial institutions; simplify taxation of smaller collectives and individual enterprises to minimize bookkeeping needs; ensure access to materials and premises
 - iii) Establish simple, unambiguous and stable regulations on establishment and operation of these types of enterprises, backed by enforcement and appeal arrangements to protect them from misguided or corrupt officials
 - iv) Collectives and individuals - close link between financial performance and workers' rewards (since = owners)
 - v) As small enterprises grow, might require sale of majority of shares to state (or state enterprises or banks) once reach specified size; minority owners continue as managers

- a. Investment decisions and financing:
- (1) Govt control of infrastructure, ed, health, defense;
 - (2) in ag, investment decisions made by hsholds, collectives;
 - (3) ind=question who makes inv. decision
 - (a) Mngment decis = greater resp,
 - (b) also nec. to impr. effic: mngrs understnd sit better than st. admin; make continuous reassessments; have direct fin'l stake in success (administrators don't)
 - (c) helps achieve balance between infrastructure and production (past bias in Ch/production, neglected infrast): to attract investment, govt must improve infrast.
 - (d) Probs w. lvg ents shr of profits for investment:
 - i) distorted prices, shortages led to irrational, inefficient investments
 - ii) benefits to workers from increased fixed assets = more bonuses, collective welfare, prestige="investment hunger_"
- b. Alternative channels of investment flows:
- (1) Traditional socialist system = vertical mobility of savings: mobilized via st. budget through profit remittance, taxation, etc., allocated according to plan via budget (grants) st banks (credits);(p.172)
 - (2) in reformed syst (Ch. 9) should be more horizontal flows
 - (a) Ents enter new activities = incr'd competition + flows of capital, labor;
 - (b) Direct investment between ents; occurring now to ensure materials (eg Jiangsu ind ents inv in Shanxi coal mines);
 - (c) need new intermediaries to stimulate these flows:
 - (i) mobilize investment funds via deposits, issue financial instruments;eg bonds with

interest reflecting scarcity of capital funds; or shares to permit sharing risks = economic relationship only, not administrative;

(ii) provide technical assistance in financial management and information re technology, marketing, etc. (p. 173)

iii) Diverse organization forms, ownership forms/FRG, overlapping and competing institutions = desirable (p. 173; see box 10.1, p. 174)

(d) State intervention = complex issue

(i) Need regulation to reduce risk for savers (deposit insurance, restrict scope of operations, assets/institution) so Peoples Bank of China = specialized central bank

(ii) Kind of intervention = controversial: Japan and Korea = allocated credit to specific sectors, ents, mostly exerted indirectly, by offering low int rates and favorable repayment terms to particular activities of ents (p. 174)

(e) Evolutionary choices: continued experimentation and exploration = evolution with experience and development of institutions

i) Savings via st = infrast, energy, social sectors

ii) st indir control overall level and content of inv/ents and hsholds (p. 175); generate incr'd savings = incr'd indep, linkages bet managers personal interests and outcome of investment decisions with rational prices, interest rates, other signals

iii) Increased role of intermediary institutions as system develops (p. 175)

3. Price reform:

a. Need rational system, but making reform = difficult; deficiencies of system hold back success therefore;

- (1) Minimize nonallocative role of prices thru greater reliance of taxes, transfer payments, etc. related to social, fiscal goals - ie prices signal relative costs, needs, scarcities to enterprises and households
- (2) Give market forces of S&D greater role, including more flexible ag prices (Ch. 3), energy sources (ch. 4), cons. goods (ch. 9), spatial allocation of resources (ch. 5), stronger connections with world prices (ch. 6)
- (3) Re energy and raw material price adjustments= most distorted:
 - (a) Sooner reform = better, since distortions affect rest of economy (p. 185)
 - (b) adverse effects on state revenue, but since st = producer and user, = possible to reallocate costs, adjust respective tax rates/ents; but probs re accounting, auditing (p. 176)
 - (c) Ripple effects on other prods = OK, since = improved use of energy and raw materials as result of higher prices (p. 176); to avoid too much dislocation, st. could work out plan for strategic ents to vary prices per need; let other ents compete with greater flexibility/prices (p. 176)
- (4) Market prices:
 - (a) Danger of inflation: avoid macroeconomic mismanagement;
 - (b) overcome past mismanagement = 'sellers' market= problem in socialist economies: chronic shortage "appears to be universal and permanent feature of the traditional system of socialist economic management" so reform "creates necessary preconditions for price decontrol" (NOTE: scarcity = economic conditions of socialist transition; issue is whether ration goods by price or by administration - AS);
 - (c) Increased prices would eliminate shortages by stimulating supply; eg China's agricultural reform led to increased output; should make changes gradually to avoid

inflation (macroeconomic
mismanagement) (p. 177)

- i) (NOTE - don't yet know if
= result of increased
efficiency or "luck" of
climate, etc; need more
evidence, since now
reports indicate
declining agriculture
investment as wealthier
farmers build private
houses or shift
investments into other
fields - eg transport-
AS)

(5) Price decontrol

(a) Govt strategy of producer goods:=
reduced adminin control of prices,
gradual dismantling of annual
planning and allocation

- i) Already happened to
signficiant degree many goods
no longer controlled
- ii) for many, only part of output
= allocated for high priority
purposes; but = inequities
among using enterprises, so =
transitional, eventually
eliminate

(b) of consumer goods:

- i) govt hesitant to end
controlsof consumer
necessities, tho minor items'
prices now fluctuate freely;
fear inflation, esp. since
household bank
deposits/1984=35% of year's
retail sales (p.177)
- ii) Shouldn't fear inflation if
fiscal and monetary policies =
prudent; people can live with
moderate inflation, could
index living standards of
vulnerable goups, allow
greater household ownership
of real assets likehousing (p.
177)
- iii) Increased home ownership could
lead to: state acquisition of
share of household bank
deposits by selling housing;
increased rents would

stimulate people to buy;
better housing maintenance;
provide asset = hedge against
inflation (p. 177; NOTE: this
assumes they could sell it,
and/or that housing costs =
high percent of spending,
which presently don't! AS)

2. Economic Planning:

a. New approach to planning:

- (1) Past = 3 instruments: physical planning of production, centralized allocation of materials, budgetary grants for fixed investments
 - (c) Did not control provincial production ; eg provincial coal mines
 - (d) Provincial plans did not include rural communes and brigades; eg their mines' output; no did they include central government investments or those of collectives
- (2) Need indirect measures:
 - (e) Farmers can now make own investment decisions
 - (f) Enterprises will be able to make own decisions re supplies, markets;
 - (g) Could reduce central control over investment decisions = control environment affecting decisions
- (3) Considerations:
 - (h) direct controls = limited scope; indirect controls influence entire economy
 - (i) Uncertainty? depends on degree of clarity and stability of medium term policies = core of plan; but cannot precisely predict behavior so need flexibility and responsiveness (p. 178)
 - (j) Planning and markets can co-exist; planning is strengthened if exercised to let market forces reinforce rather than oppose it
 - i) Manage demand as well as supply; ie rising level, changing structure of demand reflects rising prosperity of society
 - ii) Mandatory planning = essential for infrastructure regulating part or all of production and

use of certain commodities;
iii) but growing % of objectives-
realized via guidance,
including taxes, credits,
to influence profitability of
different sorts of production
and investment

b.. Annual plans:

- (1). End physical plans: Pace depends on benefits of present system vs. costs, including incentives for governments and enterprises at all levels to persist in self-sufficiency
- (2) Annual plans become step-wise implementation of medium term plan, using fiscal, monetary and exchange rate policies - learn from other countries through contact with IMF (p. 179)

c. Policy planning = central top planning system dependent on indirect guidance (p. 179)

- (1) Requires govt agency coordination
- (2) cannot expect immediate effect, need 3-5 year time horizon; takes time to have desired results
 - (a) Base policies on analysis of alternative scenarios (NOTE; Methodology assumes what is to be proven - ie = positivist, rather than analyzing institutional and resources factors for causes of inevitably contradictory results AS)
 - (b) medium term plan = main responsibility of State Planning Commission; requires improved statistical and analytical capability

d. Provincial planning:

- (1) Division of responsibility between central and local governments: complex, probably central govt should concentrate on policy planning, while infrastructure and social services development take place at lower level
- (2) Seems to fit with China's decentralization policy (p. 180)
 - (a) Provincial govts can monitor and project growth of production, new employment opportunities, generation of incomes within provincial boundaries; identify

problems and remedies quickly
(b) = large enough to remove
bottlenecks by reallocating
resource, promote promising
investments, ensure fair
distribution of benefits

(3) Increased interprovincial trade - need
for central govt to promote increased
consistency among provincial production
and investment plans; monitor and
regulate savings and investment in
different provinces, flows of investment
funds among provinces

e. Long term planning:

(1) Need long term perspective plan =
framework for all planning efforts,
especially for new investment/long term
technological strategy (eg 2-25 years)

(a) Anticipate possible problems to
enable policy adjustments to avoid
bottlenecks, imbalances

(b) Sector plans should not be limited
to targets re output, efficiency,
profitability, but also address
changing organization of production;
number, size and location of
enterprises/sector; research
capability and training of skilled
staff

4. Tools for planning: need analytical capability
to handle inflows, outflows of information

a. Information systems:

(1) Existing horizontal flows not adequate;
aggregating data at each level hinders
analysis of details, different
aggregations at higher levels; Data
passed up vertically, not distributed
horizontally

(2) Users - economic researchers, policy
analysts, planners, need major voice in
deciding data collected, have access to
data base

(3) Need behavioral data re actors in
economic process - esp. re consumers,
supply response to prices and other
market forces

b. Analytical tools:

(1) Need models for policy analysis/medium
term planning

(a) designed/specific objectives - ch.
2 model not appropriate for
sectoral analysis

- (b) Should collect data/accounting matrix to make models possible
- (2) "The quality of economic planning in China will thus depend largely on the commonsense and good judgment of planners, on improved economic training (not only for planners, but also for decisionmakers throughout the economy), and on wider dissemination and discussion of economic and social information." p. 181 (NOTE: but assume neoclassical, positivist approach!)

D. Overview:

1. Tension between 3 objectives: greater efficiency and dynamism, concern about fairness, and about the very poor so reform must be careful:

"On each of these fronts, there are promising ways forward, but also problems and hard choices to be faced. In addition, it is hard to overstate the importance and difficulty of striking a correct balance among the three. Very few countries have combined state and market regulation in such a way as to produce rapid and efficient growth, and few still have also managed to avoid intolerable poverty among substantial segments of their populations. On the contrary, there are far more countries in which unhappy combinations of plan, market and social institutions have produced neither rapid growth, nor efficiency, nor poverty reduction.

There is a vital need to guard against losing the strengths of the existing system -- its capacity to mobilize resources, as well as to help the poor -- in the course of overcoming its weaknesses. This...argues for a gradual advance, with experimentation and evaluation at each step.....

In system reform, and in many other areas covered by this report, both the potential for progress and the problems involved are so large, and there is so much that is without historical precedent, that an even-handed and credible conclusion may be impossible. At a minimum, though, China's long term development objectives seem attainable in principle, and if recent experience is any guide, there is a good chance that they will be attained in practice." (p. 182)