

IMPLICATIONS OF ECONOMIC POLICY FOR TECHNOLOGY AND DEVELOPMENT

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3 WAYS OF LOOKING AT PRODUCTION

1. VALUE ADDED (=VALUE OF OUTPUT – COST OF CURRENT INPUTS)
2. SUM OF ALL RESIDENTS' INCOMES
3. EXPENDITURE ON CONSUMPTION AND INVESTMENT

ALL THREE METHODS OF CALCULATION GIVE THE SAME SUM

VARIANTS OF THE CONCEPT

- GROSS VS NET: NET IS GROSS MINUS DEPRECIATION OF FIXED ASSETS
- NATIONAL VS DOMESTIC – NATIONAL INCOME IS INCOME OF ALL RESIDENTS OF A COUNTRY, DOMESTIC INCOME IS THEIR INCOME FROM DOMESTIC PRODUCTION; THE DIFFERENCE IS INCOME FROM ABROAD – WHICH MAY BE POSITIVE OR NEGATIVE
- AT FACTOR COST OR MARKET PRICES [SELLERS' OR BUYERS' PRICES]
- [GROSS OR NET] [NATIONAL OR DOMESTIC] [PRODUCT OR INCOME OR EXPENDITURE] [AT CONSTANT OR CURRENT PRICES] [AT FACTOR COST OR MARKET PRICES]
- $2 \times 2 \times 3 \times 2 \times 2 = 48$ DIFFERENT CONCEPTS
- MOST USED: GROSS DOMESTIC PRODUCT AT FACTOR COST AT CONSTANT PRICES

GROWTH AND DEVELOPMENT

- GROWTH IS INCREASE IN GROSS NATIONAL OR GROSS DOMESTIC PRODUCT AT CONSTANT PRICES (DECREASE IN IT IS DECLINE)
- DEVELOPMENT IS A [DESIRABLE] CHANGE IN ITS COMPOSITION

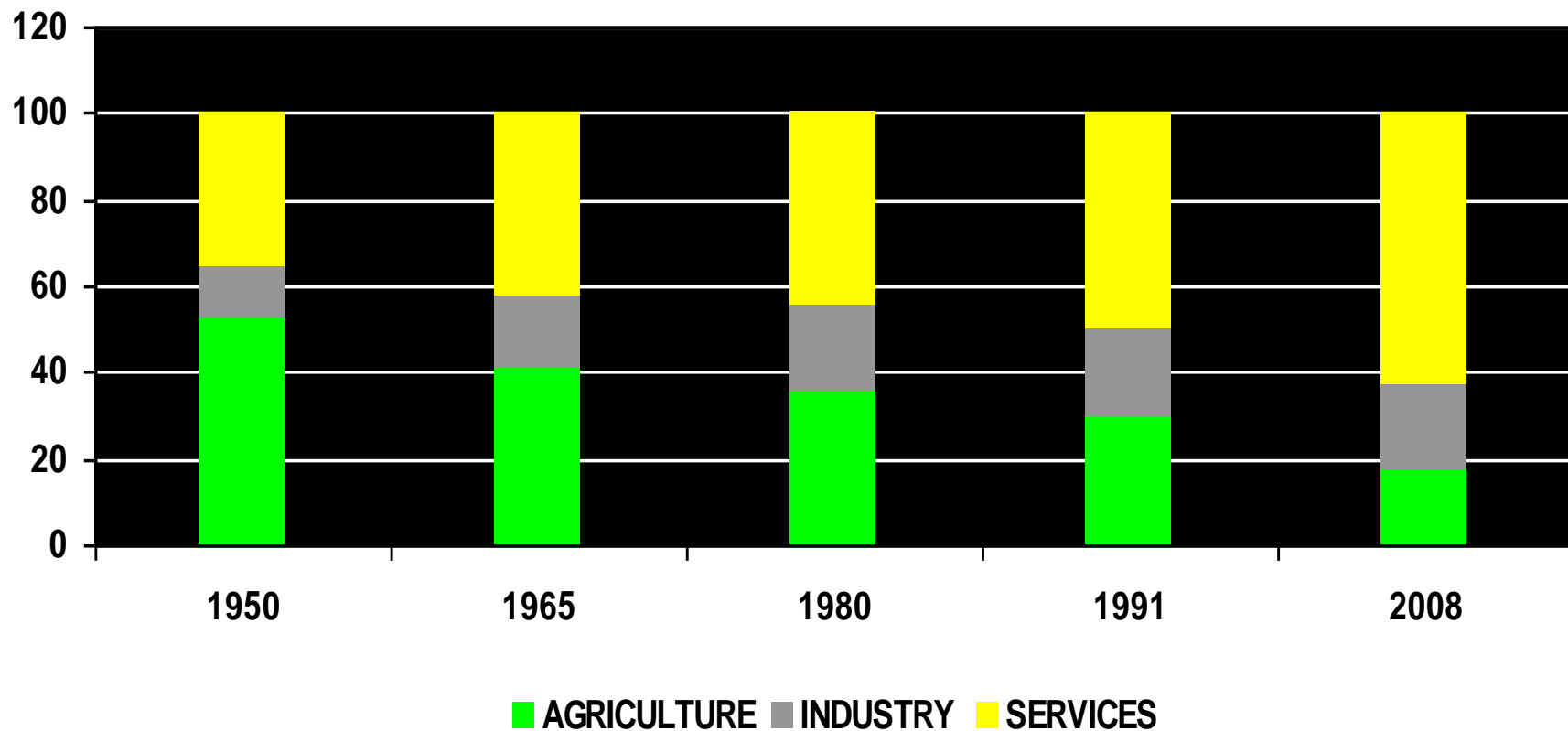
WHAT IS DESIRABLE?

- DEVELOPMENT IS A CONCEPT INVENTED AFTER WORLD WAR II, WHEN COLONIES WERE BEING GIVEN INDEPENDENCE
- BIG DIFFERENCE – IMPERIAL NATIONS WERE INDUSTRIALIZED, COLONIES WERE NOT
- SO DEVELOPMENT = GROWTH + INDUSTRIALIZATION [SHIFT FROM AGRICULTURE TO INDUSTRY] – BECOMING LESS COLONIAL AND MORE IMPERIAL

THE SHOCK OF THE 1990S

- INDIA STOPPED “INDUSTRIALIZING” – SHARE OF INDUSTRY IN GDP STAGNATED
- BUT – INDIA WAS GROWING FASTER – 3.5% TILL 1978, 5.5% IN THE 1980S AND 1990S, 7-9% IN RECENT YEARS
- SHARE OF SERVICES IN GDP WENT UP – JUST AS IN INDUSTRIALIZED COUNTRIES
- “DEVELOPMENT” FORGOTTEN – JUST CALLED GROWTH NOW

SERVICES COMPRISE 62 PER CENT OF GDP



WHAT CAUSES GROWTH?

- GROWTH IS AN INCREASE IN GDP
- NO ONE WANTS GROWTH IN POPULATION; WHAT MATTERS IS GROWTH IN GDP PER HEAD
- WHICH IS THE SAME AS GROWTH IN PRODUCTIVITY – PRODUCTION PER HEAD
- WHICH CAN OCCUR FROM TECHNOLOGICAL, INSTITUTIONAL OR STRUCTURAL CHANGE

DIFFERENT TYPES OF CHANGE

- TECHNOLOGICAL CHANGE IS CHANGE IN TECHNIQUES OF PRODUCTION, TRADE, TRANSPORT, AND FINANCE
- INSTITUTIONAL CHANGE IS CHANGE IN THE WAY PEOPLE WORK TOGETHER AND ORGANIZE PRODUCTION
- STRUCTURAL CHANGE IS CHANGE IN COMPOSITION OF PRODUCTION (AS IN OLD-STYLE DEVELOPMENT]

OLD QUESTION: HOW TO DEVELOP A COUNTRY?

- OLD ANSWER: INDUSTRIALIZE
- BAN IMPORTS OF INDUSTRIAL GOODS, PRODUCE THEM IN THE COUNTRY
- IF BANNING IS TOO DRASTIC, “PROTECT” DOMESTIC PRODUCTION
- IMPORT TECHNOLOGY TO PRODUCE INDUSTRIAL GOODS
- “PROTECT” DOMESTIC TECHNOLOGY

THE HEYDAY OF ISI – 1947-91

- IMPORT LICENSING – NOTHING THAT COULD BE PRODUCED AT HOME SHOULD BE IMPORTED
- HIGH IMPORT DUTIES
- EXCHANGE CONTROL
- PRICE AND DURATION CONTROL OF “COLLABORATIONS” – TECHNOLOGY IMPORTS
- PROLIFERATION OF GOVERNMENT LABORATORIES
- TAX REBATES FOR CORPORATE R&D
- FREEDOM TO COPY FOREIGN PATENTS

MY RESEARCH SHOWED

- MOST R&D WENT INTO IMPORT SUBSTITUTION, IMITATION AND PATENT BREAKING
- IMPORT SUBSTITUTION IN GOODS REDUCED COMPETITION AND PROTECTED OBSOLETE TECHNOLOGY
- IMPORT SUBSTITUTION IN TECHNOLOGY MADE IMITATION PROFITABLE AND DISCOURAGED INNOVATION
- COMBINATION OF INDUSTRIAL LICENSING, CONTROL OF CAPITAL ISSUES AND TECHNOLOGY LICENSING DESTROYED COMPETITION, CREATED OLIGOPOLIES

THE END OF THAT ROAD

- PAYMENTS CRISIS OF 1991: FAILURE OF IMPORT SUBSTITUTION
- A MILLION IMPORT LICENCES, RS 6000 CRORE IN EXPORT SUBSIDIES
- MY SUGGESTION: GIVE IMPORT LICENCES TO EXPORTERS, LET THEM SELL THEM, ABOLISH EXPORT SUBSIDY

THE REFORMS OF 1991-93

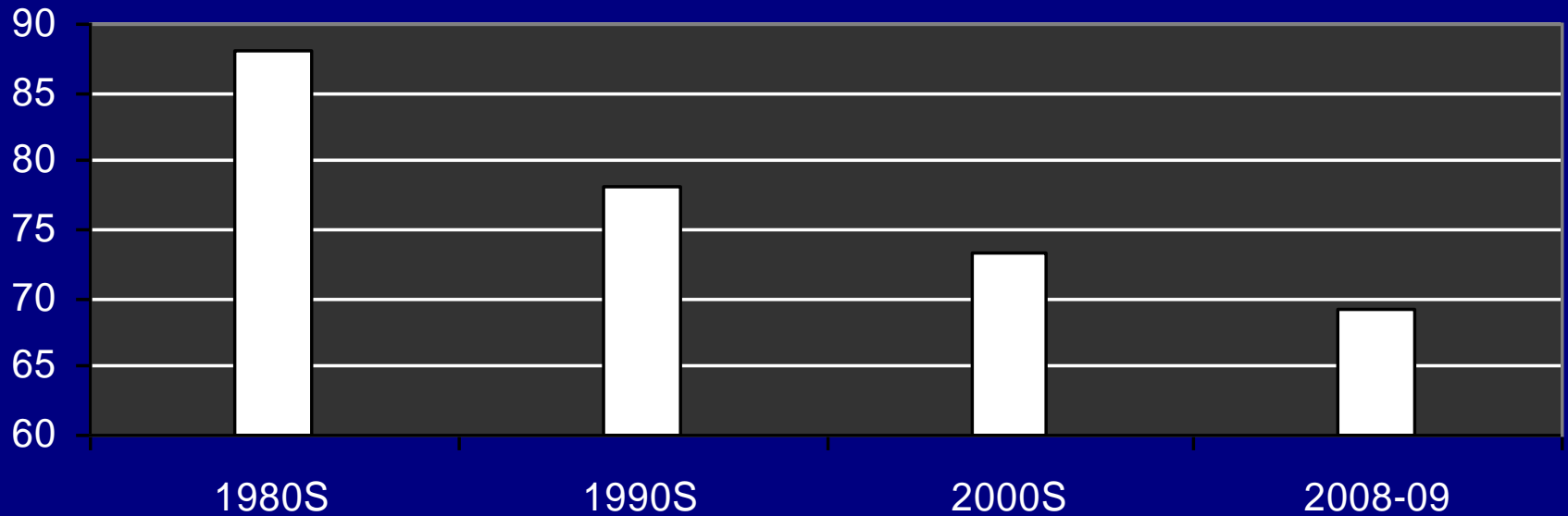
- CHIDAMBARAM ABOLISHED IMPORT LICENSING EXCEPT FOR CONSUMER GOODS
- IN FINANCE MINISTRY, WE REDUCED IMPORT DUTIES, INCOME TAX RATES, ABOLISHED CONTROL ON CAPITAL ISSUES
- IN GENERAL, WE DISMANTLED INDUSTRIAL POLICIES, LEFT ENTREPRENEURS ALONE TO GROW
- AMONGST THE INDUSTRIES LEFT ALONE WAS INFORMATION TECHNOLOGY – TODAY A MAJOR EXPORTER

AS A RESULT, GROWTH HAS ACCELERATED

	GDPFC	PER HEAD	GDPFC	GDPPH	POPN
	RS TRN	RS 000	GROWTH	GROWTH	GROWTH
1950/51	2.2	6.2			
1965/66	3.8	7.7	3.7	1.5	2.3
1980/81	6.4	9.5	3.5	1.4	2.1
1991/92	10.8	12.6	4.9	2.6	2.3
2008/09	33.3	28.5	6.8	4.9	1.9

PEOPLE ARE SAVING MUCH MORE

SHARE OF CONSUMPTION IN PERSONAL DISPOSABLE INCOME (%)



ESSENTIALS TAKE AWAY MUCH LESS OF PEOPLE'S INCOME

SHARE OF INCOME SPENT ON NECESSITIES

	1970S	1980S	1990S	2000S
FOODGRAINS	24	17	12	7
OTHER FOOD	30	29	26	20
CLOTHES & SHOES	7	6	5	4
RENT AND WATER	16	11	7	6
FUEL AND POWER	3	4	3	3
	80	65	53	40
NON-ESSENTIALS	20	35	47	60

COMPETITION IS THE SECRET OF GROWING PROSPERITY

- COMPETITION CREATED HUNGER FOR GROWTH
- MORE EFFICIENT FIRMS MADE BIGGER PROFITS, GREW FASTER
- FIRMS HAD MORE CHOICE OF TECHNOLOGY
- FREEING OF TRADE BROUGHT COMPETITION FROM OUTSIDE
- MORE SUCCESSFUL FIRMS COULD ATTRACT CAPITAL MORE EASILY

BUT NOW WE NEED TO DO BETTER

- CHINA HAS GROWN CONSISTENTLY FASTER – ITS GDPPC THE SAME 30 YEARS AGO, 3 TIMES INDIA'S TODAY
- CHINA THE WORLD'S MOST EFFICIENT MANUFACTURER; INDIA IS NOWHERE CLOSE
- OUR SAVINGS RATE OF 40 PER CENT IS NOT MUCH LOWER THAN CHINA'S, COULD SUPPORT FASTER GROWTH

WHY CHINA BEAT INDIA IN MANUFACTURING

- ENTERPRISES FACE NO FINANCIAL CONSTRAINT IN CHINA
- CHINA KEEPS THE CURRENCY UNDERVALUED
- CHINA HAS NO CONSTRAINTS ON ACQUISITION AND AGGREGATION OF LAND
- CHINA LEARNT BRITISH-STYLE ADMINISTRATION FROM THE BRITISH IN HONG KONG, APPLIED IT TO PORT CITIES
- CHEAP URBAN HOUSING DREW MILLIONS OF VILLAGERS TO WORK IN THE CITIES, KEPT WAGES LOW

WE WOULD DO BETTER IF

- WE REPLACED THE PRESENT STATES WITH ONES CENTRED ON PORTS AND CITIES
- WE ALLOWED COMPETITION IN BANKING, AND MADE IT POSSIBLE FOR BANK DEPOSITORS TO TAKE RISK
- OUR GOVERNMENTS STOPPED RUNNING DEFICITS AND TRADING IN FOODGRAINS
- WE MASS-MANUFACTURED CITIES OF TWO-ROOM TENEMENTS AND SUBURBAN TRAINS
- WE REMOVED IMPORT CURBS, ESPECIALLY ON FOOD PRODUCTS

THAT IS MY FIRST TAKE

■ YOU CAN IMPROVE ON IT

GOOD LUCK!