

STRUCTURAL DYNAMICS AND ECONOMIC GROWTH IN DEVELOPING COUNTRIES



UNITED NATIONS

DESA

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METHODOLOGICAL ISSUES

∅ Proximate vs. ultimate determinants

- § Factors that ignite vs. those that sustain growth
- § Framework conditions vs. determinants of change in the *momentum* of economic growth

∅ Causes or results of economic growth?

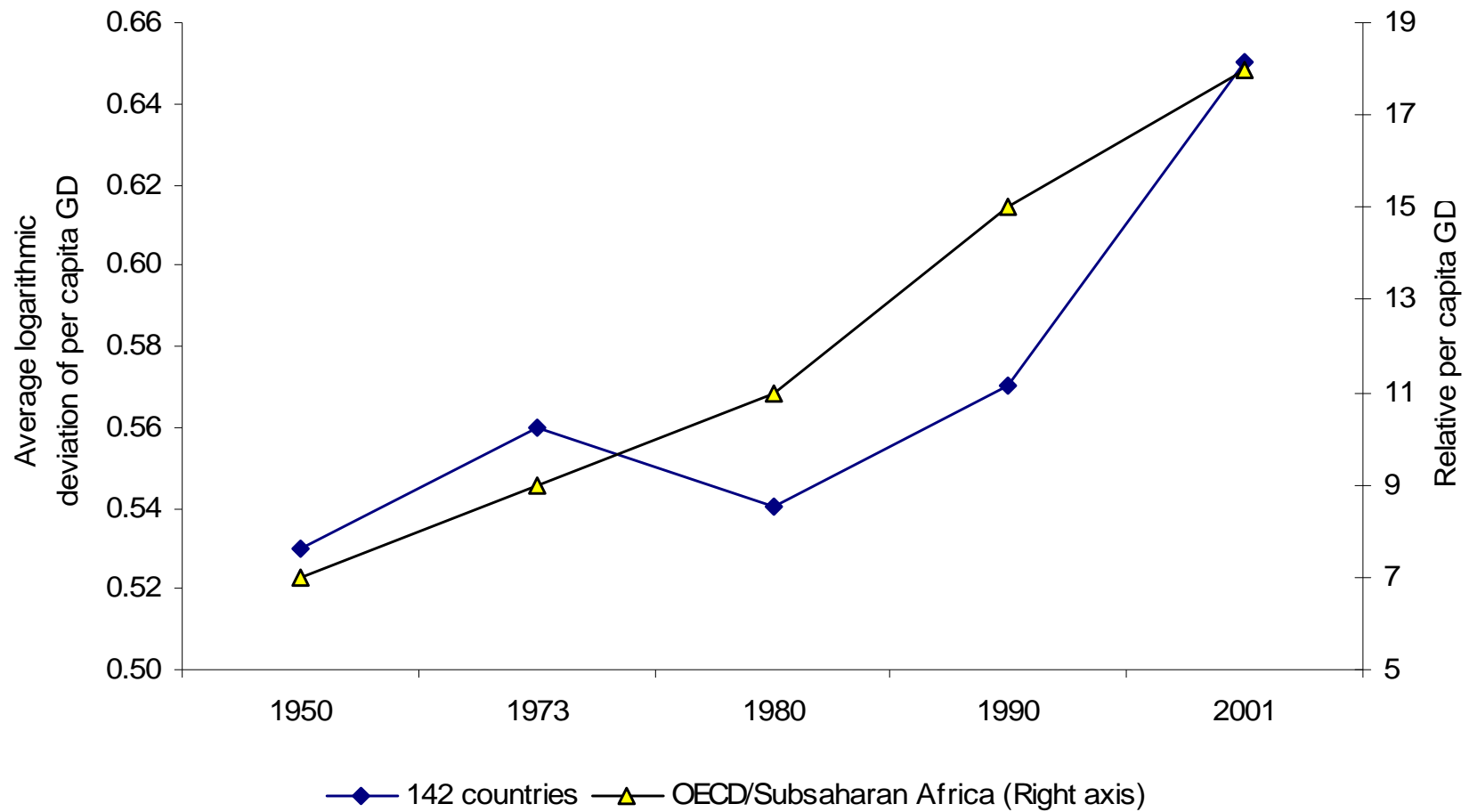
- § Disentangling leading and lagging factors
- § Aggregate supply vs. Demand effects (Kaldor-Verdoorn)
- § Structural dynamics (Schumpeter, Hirschman)

STYLIZED FACTS (1):

DIVERSE GROWTH PATTERNS, PERSISTENCE OF LARGE INEQUALITIES

- Ø High variance of growth experiences in both low and middle income countries (divergence, stagnation at low or middle-income levels, truncated convergence).
- Ø The world economic hierarchy changes at best very slowly.
- Ø “Dual divergence” rather than convergence.

INCREASING INTERNATIONAL INEQUALITY



PERSISTENCE OF LARGE INEQUALITIES:

THE INTERNATIONAL ECONOMY IS AN UNLEVELED PLAYING FIELD

- Ø Basic financial/macroeconomic asymmetries: different degrees of autonomy to adopt countercyclical policy
- Ø Prohibitive entry costs into technologically dynamic activities
- Ø Entry costs into mature sectors
- Ø Asymmetries between leader firms and suppliers in global production chains

STYLIZED FACTS (2):

GROWTH COMES IN SPURTS/ STRUCTURAL CHANGE MATTERS

- Ø “Balloon” vs. “structural” views of economic growth
- Ø Ability to generate new dynamic activities/innovations
- Ø Patterns of international specialization matter
- Ø Repetitive phenomenon of creative destruction
- Ø Success in structural change is the key to successful economic development

STYLIZED FACTS (3):

PATH DEPENDENCE ASSOCIATED TO LEARNING PROCESSES

- Ø Dynamic economies of scale associated with learning
- Ø Opportunities determined by production experience
- Ø Comparative advantages can be created
- Ø The loss of productive experience can have cumulative effects on growth

SUCCESS IN INCREASING MARKET SHARES AND SPECIALIZATION PATTERNS

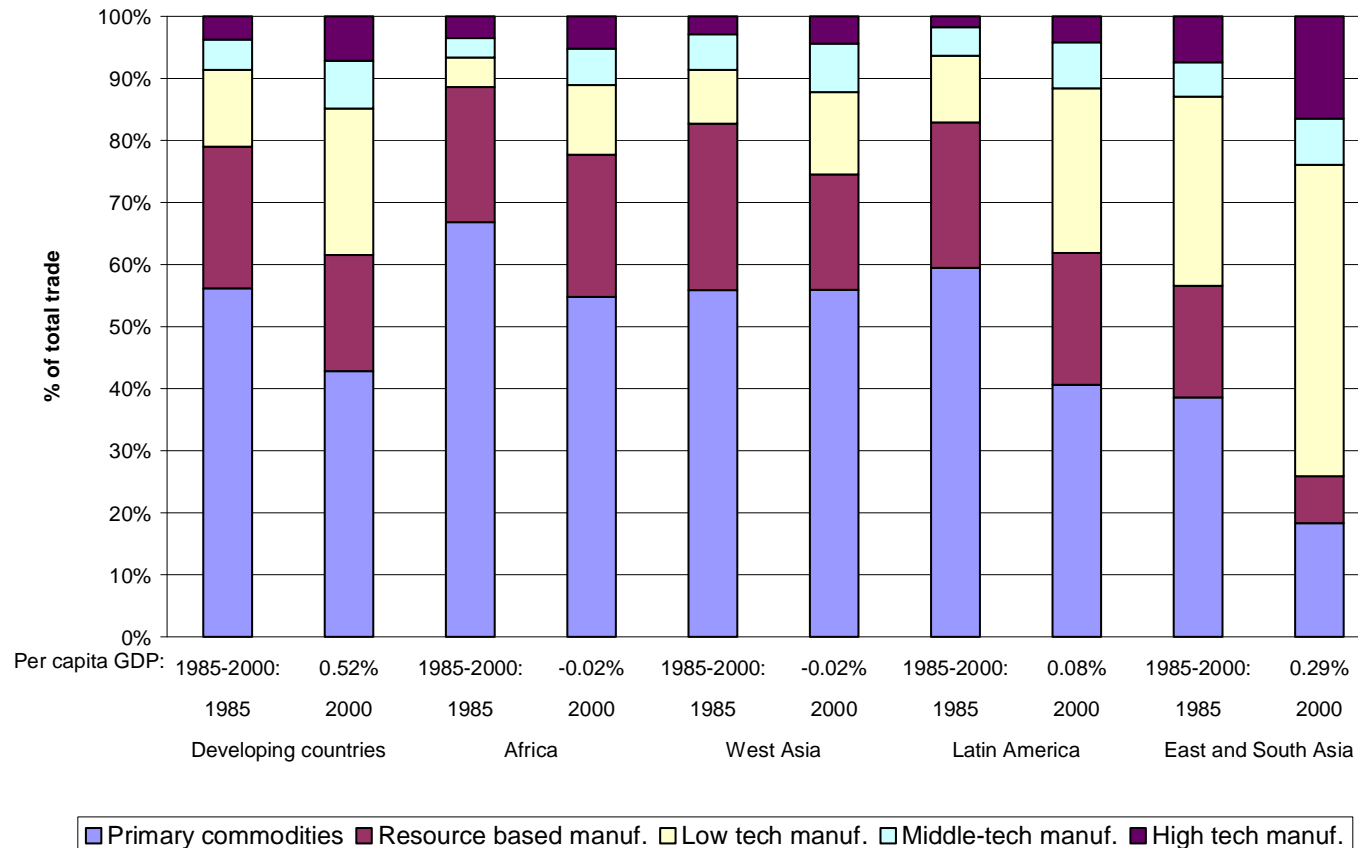
- ∅ Most countries that have failed in increasing market shares are exporters of primary goods and natural resource-intensive manufactures
- ∅ Success in increasing market shares in these sectors has been associated to weak growth
- ∅ There are countries that have extracted rapid or fair growth out of a specialization pattern based on low-tech manufactures or by mixing it with natural resource-intensive goods
- ∅ But most developing countries that have grown fast have been increasing market shares in mid or high-technology exports
- ∅ The East Asian “regional technology cluster” has an effect on top of those captured by the patterns of export diversification.

THE NATURE OF GLOBAL MARKETS ALSO MATTER

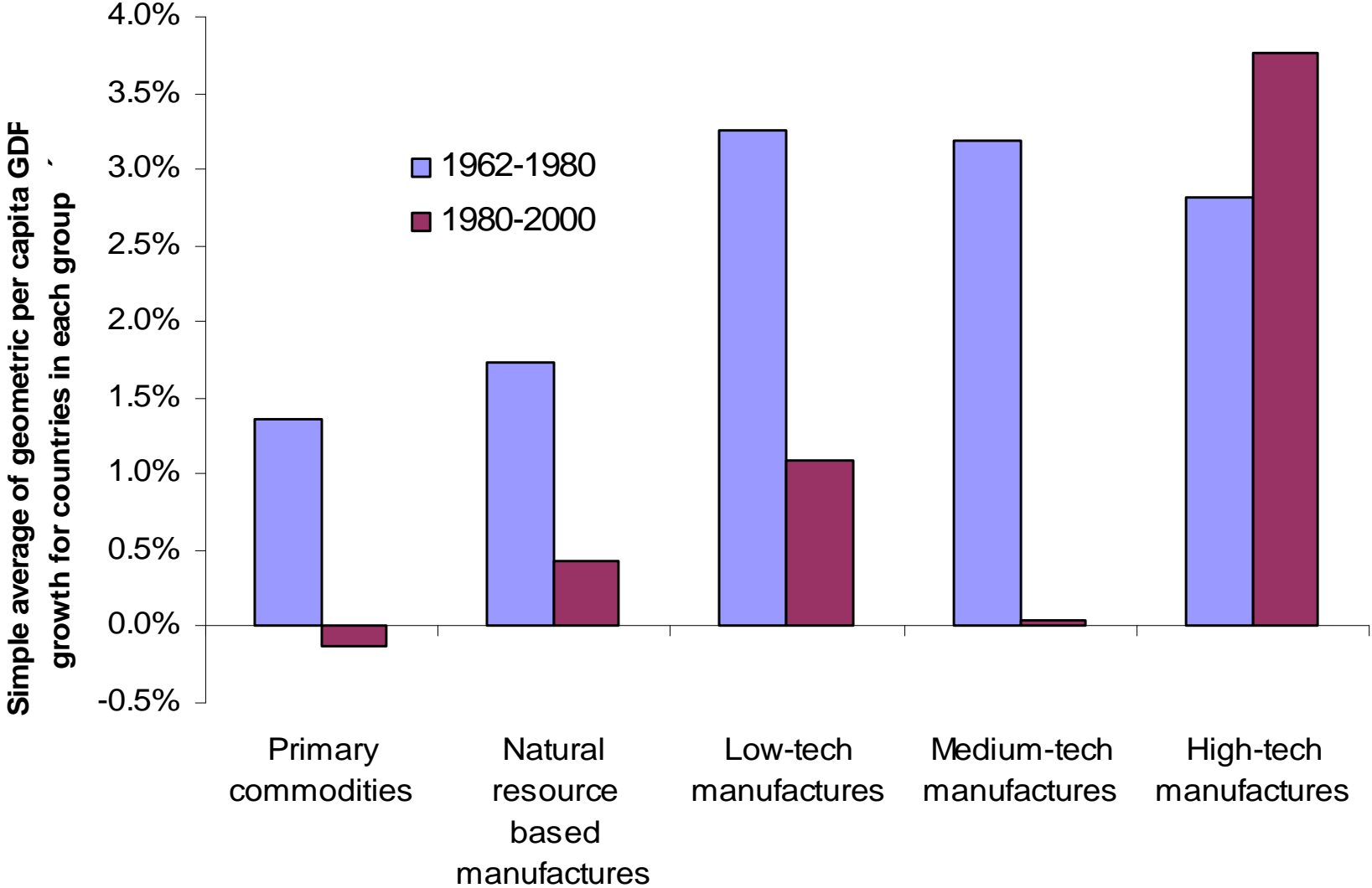
- ∅ Non-dynamic markets face “fallacy of composition” effects.
- ∅ Dynamic export markets are the result of:
 - ü High income-elasticities of demand
 - ü Economies of diversification (i.e., high and rising demand for diversity of designs)
 - ü Transfer of activities to the developing world due to cost factors (particularly wage costs)
- ∅ Strong dynamic economies of scale that characterize sectors with large technological content. Specializing in these sectors will lead to faster growth
- ∅ The spatial agglomeration that may result from static or dynamic economies of scale

ALL DEVELOPING COUNTRY REGIONS HAVE DIVERSIFIED INTO THE MORE DYNAMIC EXPORT SECTORS, BUT EAST AND SOUTH ASIA DIVERSIFIED MUCH FASTER

Trade specialization and growth



PATTERNS OF SPECIALIZATION MATTER



STYLIZED FACTS (4):

ROLE OF ELASTIC FACTOR SUPPLIES

- Ø Ability of innovative activities to attract factors is essential for them to operate as engines of growth
- Ø Economic growth is partly the result of improved efficiency in the use of available resource
- Ø Rapid development is the result of reallocation of labor towards high-productivity activities subject to increasing returns to scale

DYNAMICS OF PRODUCTION STRUCTURES

Interaction between two basic forces:

- ∅ **Innovations:** New activities and new ways of doing previous activities and the **learning** processes that characterize the materialization of their potentialities
- ∅ **Complementarities, linkages or networks** among firms and production activities and the **institutions** required for the full development of such complementarities

Elastic factor supplies for innovative activities

INNOVATIONS AND ASSOCIATED LEARNING AND DIFFUSION PROCESSES

- Ø Critical mix between creation and destruction or between substitution vs complementary effects of innovations
- Ø In the industrialized world, technical change is the engine
- Ø In the developing world, transfer of sectors from the industrialized world is the engine
- Ø How this process generates the accumulation of technological capabilities is crucial

INNOVATIONS AND ASSOCIATED LEARNING AND DIFFUSION PROCESSES

- § Climbing up the ladder in the world hierarchy entails shortening transfer periods and gradually becoming a more active participant in the generation of technology
- § Attributes of technical change, organizational and commercial knowledge:
 - ü Incompletely available and imperfectly tradable
 - ü Proficiency cannot be detached from production experience
 - ü Private-public attributes

COMPLEMENTARITIES AND THE ASSOCIATED INSTITUTIONAL DEVELOPMENT

- Ø Development of networks of suppliers of goods and specialized services, marketing channels and organizations and institutions that disseminate information and provide coordination among agents
- Ø Demand effects: macroeconomic multipliers
- Ø Supply effects: positive externalities, basis of mesoeconomic dynamic economies of scale that determine competitiveness of production activities

COMPLEMENTARITIES AND THE ASSOCIATED INSTITUTIONAL DEVELOPMENT

- Ø Efficient provision of non-tradable inputs and specialized services
 - ü Knowledge, logistic and marketing services
 - ü Specialized financial services
 - ü Adequate infrastructure
- Ø Institution-building is imperfectly tradable, closely associated with experience and has dominant public good attributes

INTERPLAY OF INNOVATIONS AND COMPLEMENTARITIES

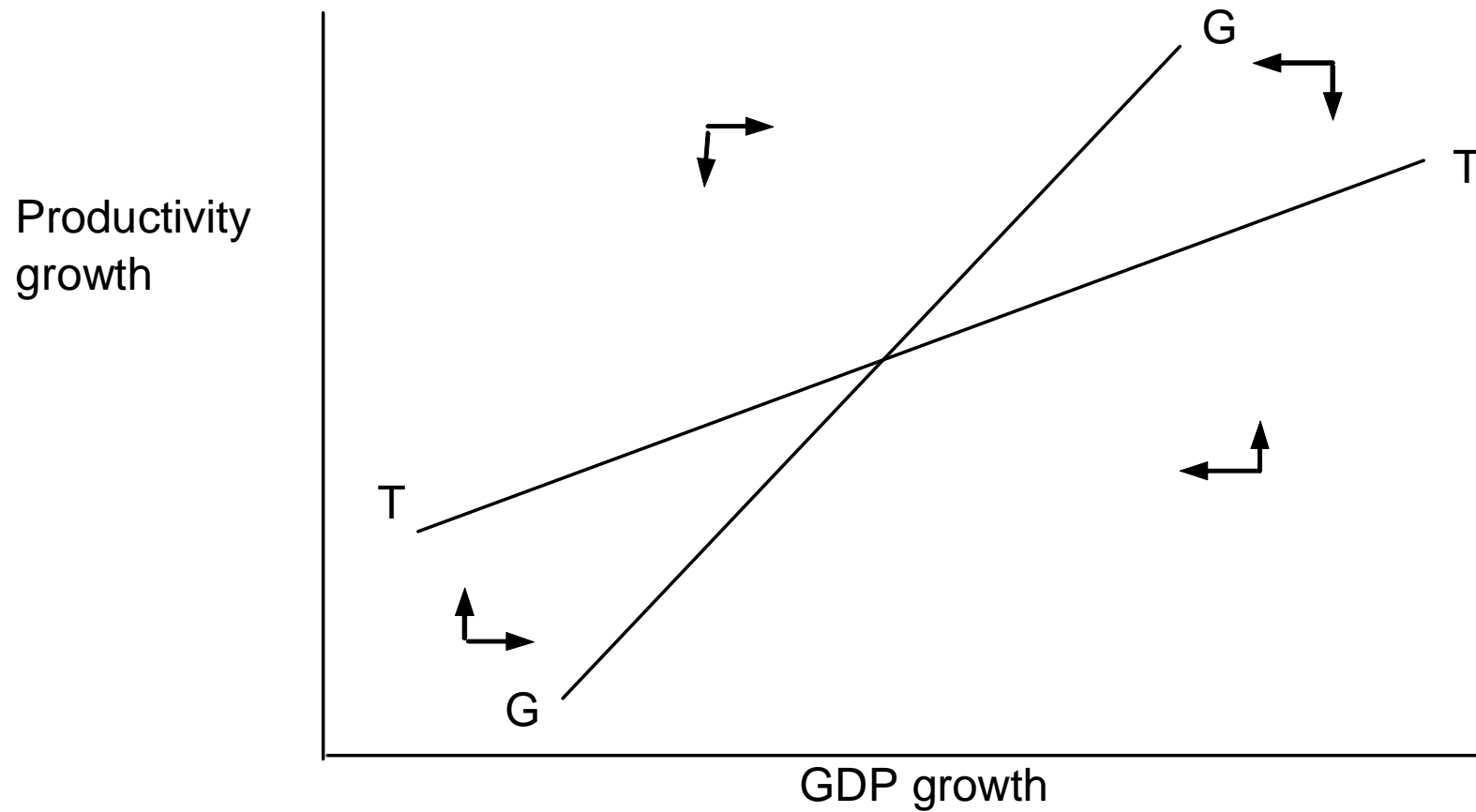
Learning process	Complementarities	
	Strong	Weak
Strong	Deep	Short breath
Weak	Labor absorbing	Shallow

ELASTIC FACTOR SUPPLIES

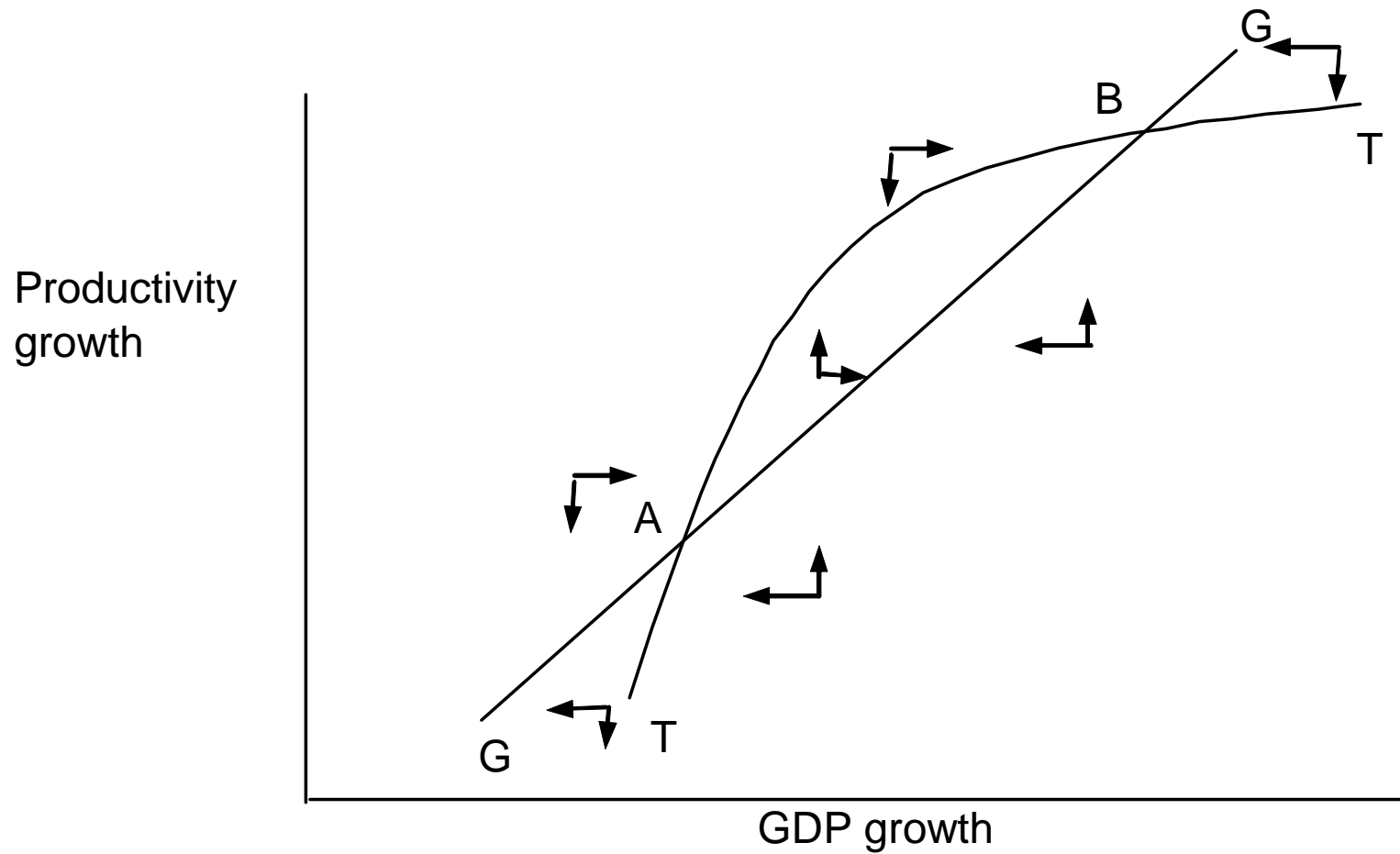
- Ø Crucial role played by the availability of finance for innovative activities
- Ø Structural heterogeneity guarantees an elastic supply of labor in the developing world
- Ø Kaldorian growth-productivity links
- Ø The dynamics of aggregate productivity is a result of dynamic economic growth, rather than a cause
- Ø There might be a divergence between micro and aggregate productivity trends

FORMALIZATION OF LINKS BETWEEN STRUCTURAL AND MACROECONOMIC DYNAMICS

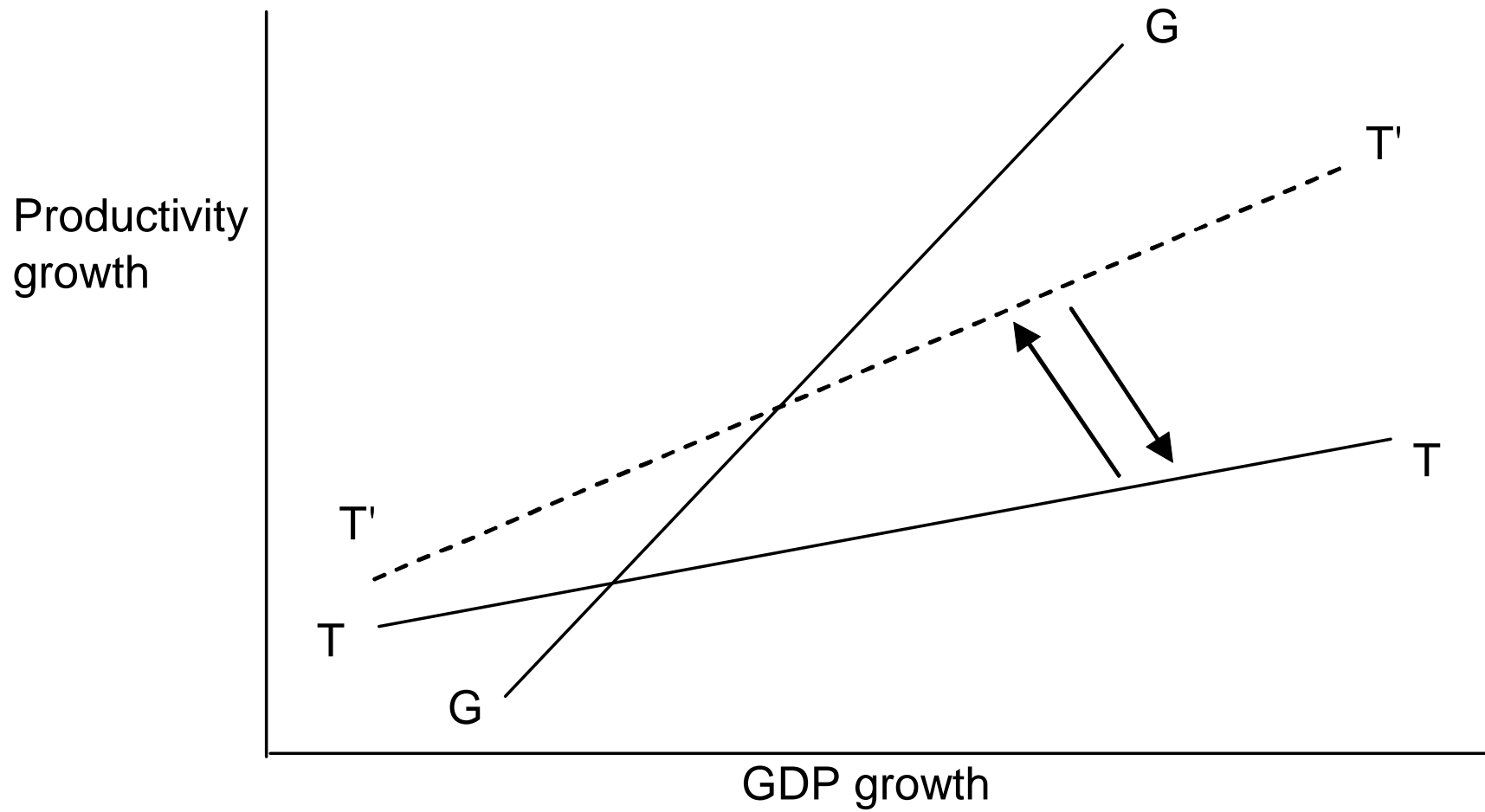
SINGLE EQUILIBRIUM



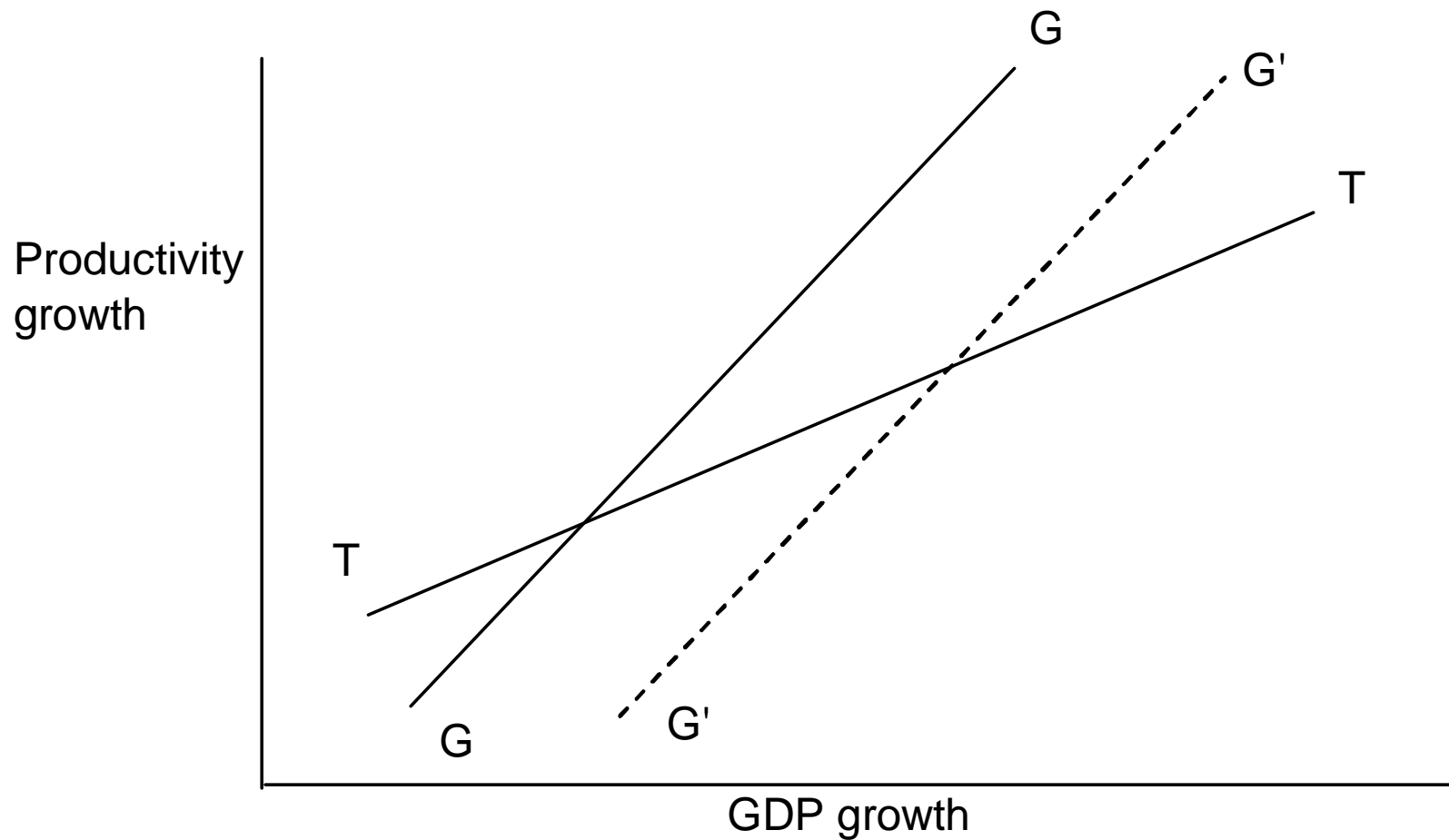
MULTIPLE EQUILIBRIA



EFFECTS OF A NEW WAVE OF INNOVATIONS

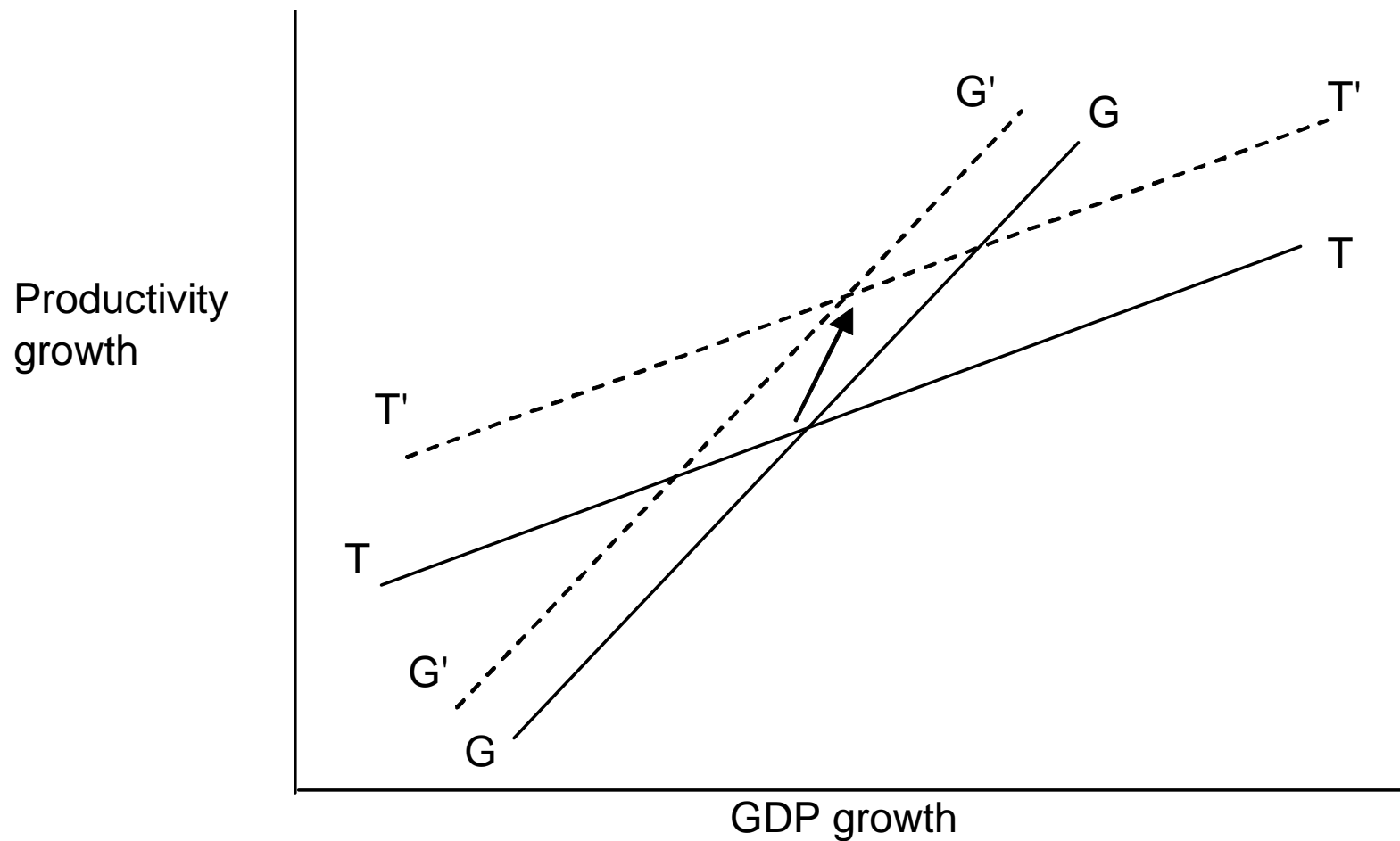


EFFECTS OF A FAVOURABLE MACROECONOMIC SHOCK



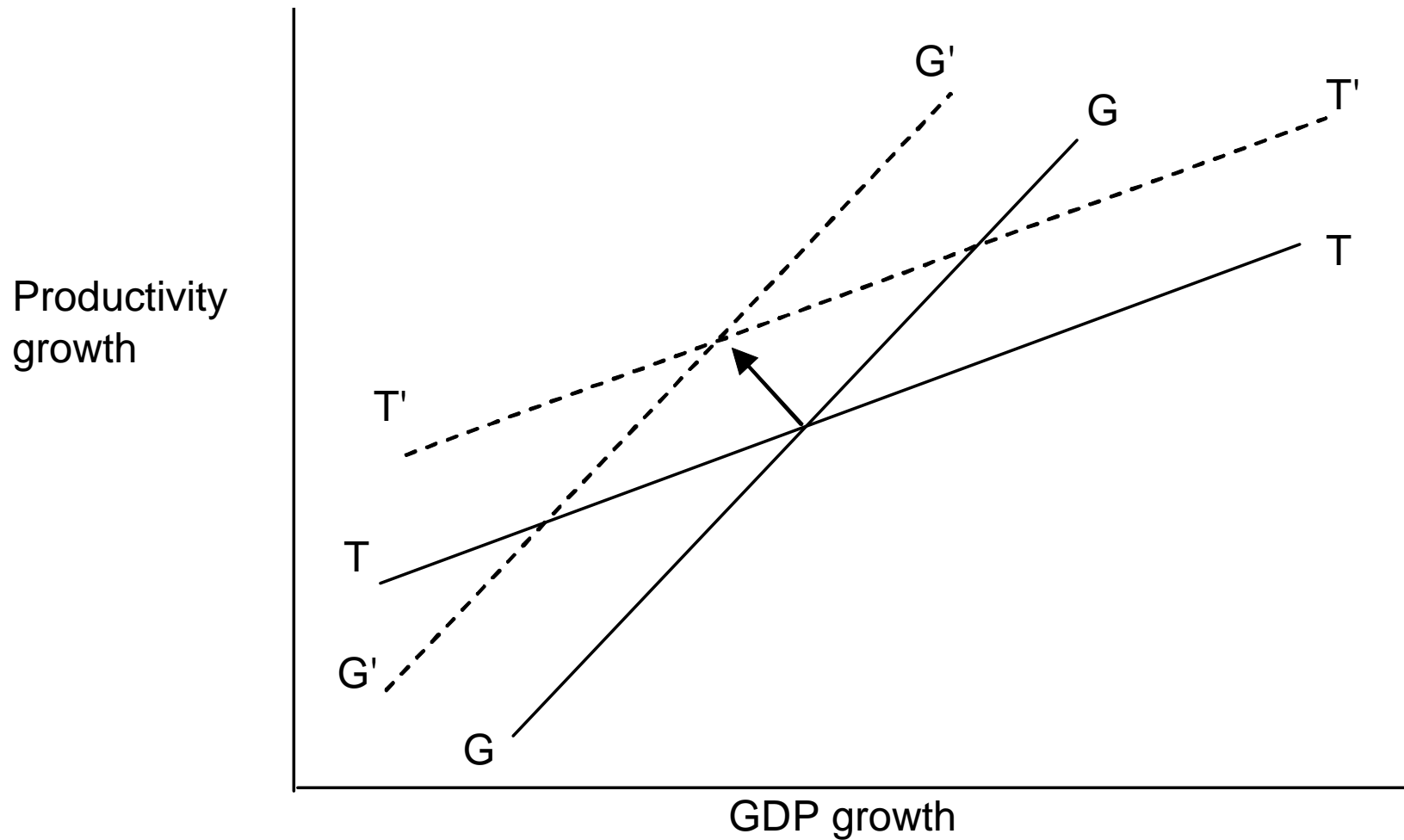
EFFECTS OF STRUCTURAL REFORMS

STRONG TT, WEAK GG EFFECTS



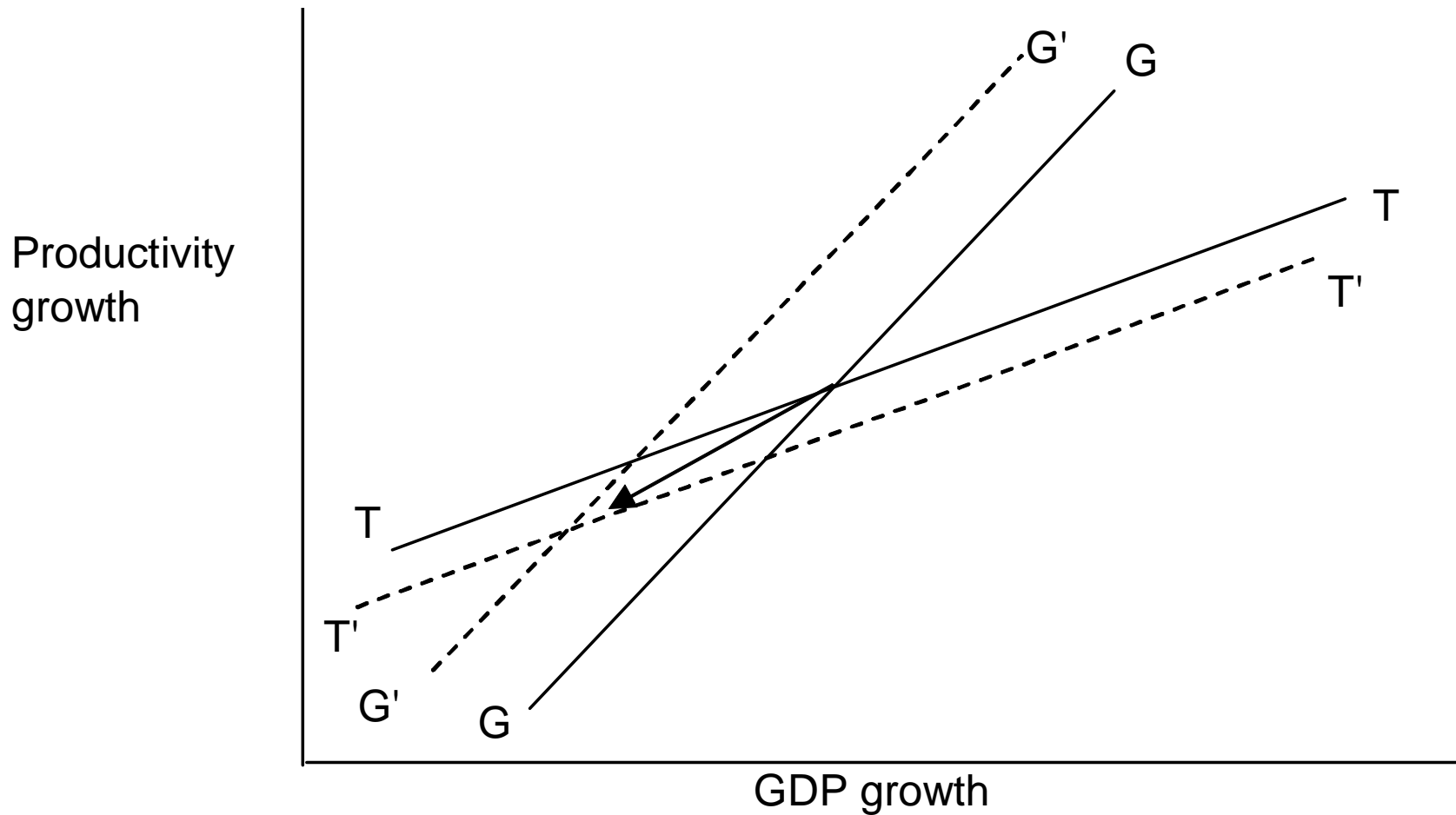
EFFECTS OF STRUCTURAL REFORMS WEAK

FAVOURABLE TT, STRONG GG EFFECTS



EFFECTS OF STRUCTURAL REFORMS

ADVERSE TT AND GG EFFECTS



STRUCTURAL TRANSFORMATION POLICIES

- ∅ High quality infrastructure and human capital are “framework conditions”
- ∅ Support for structural transformation of production
 - ü Diversification of the export base
 - ü Production linkages of exports and activities in which there is an FDI presence
 - ü Formation of production clusters
- ∅ Innovation systems that accelerate the cumulative formation of technological capacities
- ∅ ... And appropriate international rules / “policy space”

TWO EXPORT STRATEGIES

- ∅ Increasing market shares in sectors where a specific country has an established position
- ∅ Diversifying into higher technology products
- ∅ The actual strategy of an individual country may involve a mix between them
- ∅ The first strategy is widely available. The second will be available only to a limited number of developing countries
- ∅ Individual countries can succeed in any of these strategies
- ∅ But, as a group, developing countries can only succeed in the first if developed countries lose market shares –and, obviously, if such a process is not hampered by protectionism in the developed countries– and if the demand is elastic enough

ANCHORED VS. SHALLOW INDUSTRIES

- ∅ The development impact of the strategy of a given country would depend not only on success in entering markets but also on the capacity to capture a high or small share of the value added in the production chain
- ∅ This is in a sense obvious and even tautological, as GDP is nothing else but “value added”
- ∅ But can have broader implications, as those activities with limited value added (e.g., maquila) are likely to be footloose
- ∅ In the terms used by Palma (2004), unless the industries are firmly “anchored” in the domestic economy, their growth-enhancing capacity evaporates. Ocampo (2005) refers to these specialization patterns as “shallow”

SUCCESS IN INCREASING MARKET SHARES AND SPECIALIZATION PATTERNS

- ∅ The conclusions are not necessarily very encouraging.
- ∅ The basic reason is that diversifying into mid and high-technology exports is not available for many developing countries, and there may be agglomeration forces at work that benefit the already dynamic East Asian regional cluster
- ∅ So, most developing countries would have to compete in primary goods, natural resource or low tech manufacturing exports, where they are likely to face “fallacy of composition” effects
- ∅ The best option in this case is continued opening of the markets for these products by industrial countries

POLICY IMPLICATIONS

- Ø Combination of strategies aimed at the dynamic transformation of production structures with appropriate macroeconomic conditions and stability
- Ø Encourage innovation
- Ø Strategy of diversification of the production structure

POLICY IMPLICATIONS

- Ø Encourage the development of complementarities
- Ø Proper balance between individual entrepreneurial initiative and the establishment of institutions aimed at increasing information and coordination
- Ø Mix of horizontal and selective policies
- Ø Reciprocal control mechanisms

POLICY IMPLICATIONS

- Ø Structural transformation is not a once and for all process
- Ø Promote the transfer of infant activities to the developing world as counterpart of intellectual right protection in developed countries
- Ø The process of transformation is not smooth (destruction is a companion of creation)
- Ø Structural heterogeneity is a persistent feature

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