

WHAT IMPEDES STRUCTURAL TRANSFORMATION IN ASIA?

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Structural transformation – the movement of workers from low productivity to high productivity activities – is an essential ingredient of inclusive growth. In the present paper, evidence on why the pace of structural transformation has differed widely across countries in Asia is reviewed, with a specific focus on China, India and Thailand. It is argued that government failures relating to the functioning of labour, land and product markets, and market failures relating to coordination of investment, credit market imperfections and human capital formation have been the primary causes of the slow pace of structural transformation in several Asian countries. In the paper, it is suggested that emphasis be placed on reforming policies that impede the functioning of labour, land and product markets and strengthening industrial and education policies to tackle specific market failures pertaining to investment coordination and human capital formation.

JEL classification: P51, O14, O53

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I. INTRODUCTION

Structural transformation – the transfer of workers from low productivity to high productivity sectors or activities – is a necessary and sufficient condition of economic development (Herrendorf and others, 2013; UNIDO, 2013; McMillan and Rodrik, 2014). In low-income countries, workers are stuck in low productivity sectors, such as agriculture. The movement of workers from low productivity activities to high productivity sectors, such as manufacturing and some components of services, has led to an increase in overall productivity and income (Duarte and Restuccia, 2010). The speed at which that structural transformation takes place differentiates successful countries from unsuccessful ones (Felipe and others, 2015).

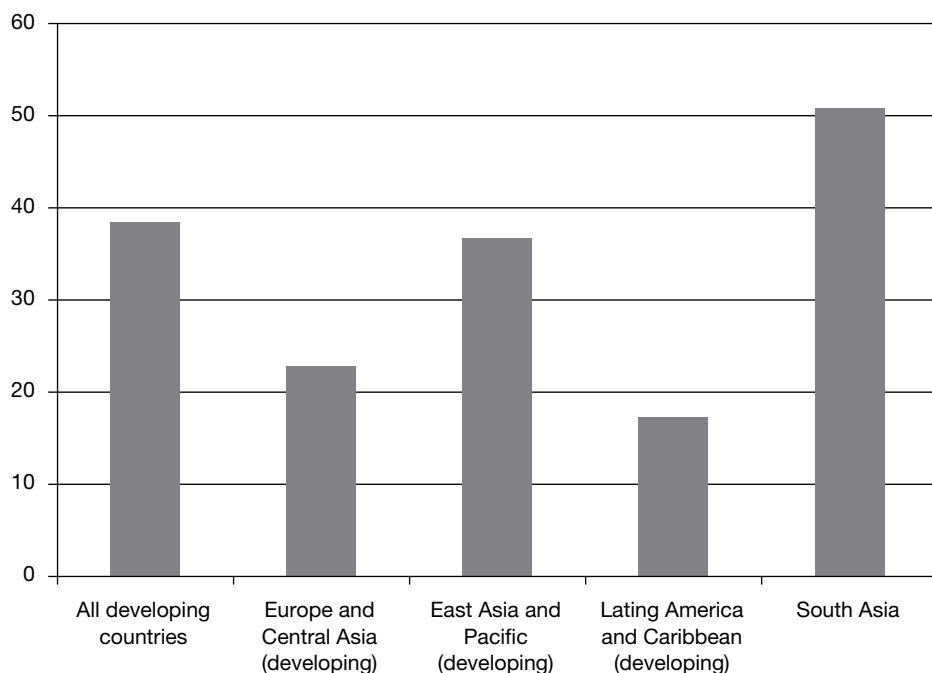
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Large differences in productivity not only exist across sectors but also within sectors. Recent research has highlighted the existence of significant productivity differentials within such sectors as modern manufacturing (World Bank, 2013). Large productivity gaps can exist among firms and plants in the manufacturing sector as well; those productivity gaps are typically larger in developing countries than in developed countries. This implies that the reallocation of labour and other resources across and within sectors can be an important source of growth and structural change. Countries that have experienced such growth-enhancing productivity are more likely to achieve sustained economic growth that is accompanied by a steady decline of workers in the low productivity sectors, such as agriculture (Bah, 2011).

In the Asian context, the pace of structural transformation has differed widely across countries (Felipe and others, 2014). Among the early industrializing Asian economies, such as the Republic of Korea and Taiwan Province of China, the transfer of workers from agriculture to manufacturing was rapid, leading to a very sharp increase in economic growth that was sustained for a prolonged period of time (Commission for Growth and Development, 2008). The pace of structural transformation was slower in the late industrializing Asian countries, which implied that a large proportion of the workforce was still employed in agriculture, even after rapid economic growth was attained in several of those countries. As indicated in figure 1, while the average share of employment in agriculture in 2010 was 38 per cent across all developing countries, the shares of developing countries in Europe and Central Asia, and Latin America and the Caribbean were relatively low, at 23 and 17 per cent respectively. In contrast, the share of employment in agriculture was 37 per cent in developing countries in East Asia and the Pacific and 51 per cent in South Asia. This suggests that in spite of a successful record of economic growth, Asian countries have not done equally well with regard to structural transformation. Within Asia, large shares of employment in agriculture in 2010, even after several years of economic growth, were prevalent in China (38 per cent), India (51 per cent), Indonesia (38 per cent), the Philippines (33 per cent), Sri Lanka (33 per cent), Thailand (38 per cent) and Viet Nam (48 per cent). In contrast, very low employment shares of agriculture were prevalent in the Republic of Korea (7 per cent) and Malaysia (13 per cent) (table 1).

Why have several Asian countries performed poorly in terms of structural transformation, even though they enjoyed growth success? In this paper, the evidence on the determinants of structural transformation pertaining to Asia is reviewed to assess the most likely causes for the slow pace of structural transformation in the late Asian industrializing countries. The paper also contains case-study evidence from three Asian countries – China, India and Thailand – to illustrate the main arguments. The paper concludes with a synthesis of the main findings and some lessons drawn for policymaking.

Figure 1. Share of employment in agriculture (percentage of total employment), 2010



Source: World Bank (2015), World Development Indicators.

Table 1. Share of employment in agriculture, individual Asian countries (percentage)

Bangladesh	38.2
China	36.7
India	51.1
Indonesia	38.3
Philippines	33.2
Sri Lanka	32.7
Thailand	38.2
Viet Nam	48.4
Republic of Korea	6.6
Malaysia	13.3

Source: World Bank (2015), World Development Indicators.

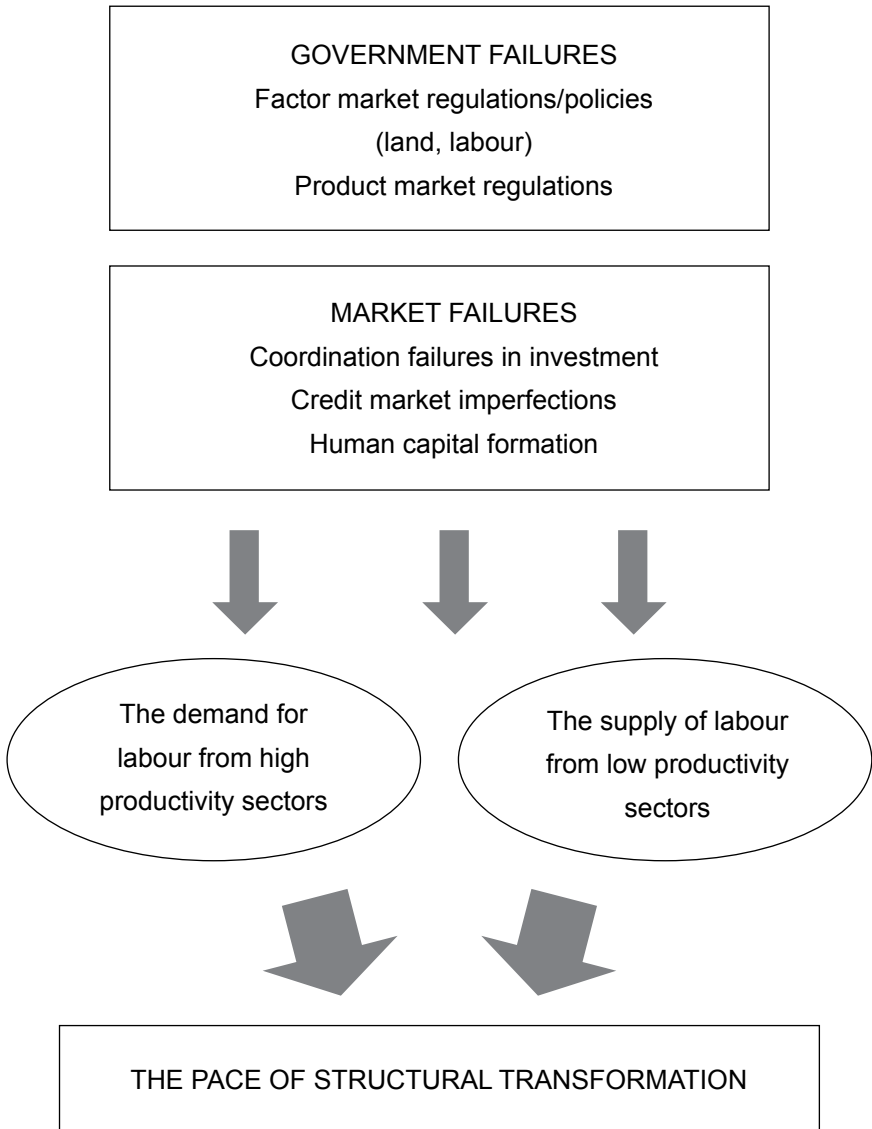
II. THE DETERMINANTS OF STRUCTURAL TRANSFORMATION IN ASIA

Structural transformation – the movement of labour from low productivity to high productivity sectors – is an outcome of two independent sets of factors; one of them influences the demand for labour in high productivity sectors, and the other one influences the supply of labour from low productivity sectors. The pace of structural transformation increases as the demand for labour in high productivity sectors rises and labour from low productivity sectors can move more easily to high productivity sectors. In related literature, two broad sets of determinants of the demand and supply of labour are identified. The first set is related to government failures that impede the functioning of factor and product markets and the second one is related to market failures, such as coordination problems in investment and technological acquisition and learning externalities that push the private return to below social return, leading to under-investment in areas of potential dynamic comparative advantage (McMillan and Rodrik, 2014).

Government failures can affect the demand for labour from high productivity sectors and the supply of labour from low productivity sectors. Policies that constrain the growth of high productivity sectors, such as product market and labour regulations, can adversely affect the demand for labour in the high productivity sectors (Dabla-Norris and others, 2013). Policies that affect the movement of labour from low productivity to high productivity sectors, such as land reforms and those pertaining to migration, affect the supply of labour from the low productivity sectors.

Similarly, market failures can also affect the demand from high productivity sectors and the supply of labour from low productivity sectors. Market failures that depress the growth of the manufacturing sector, such as coordination problems in investment, adversely affect the demand for labour in the high productivity sectors. Credit market imperfections that prevent potential borrowers in high productivity sectors from attaining access to loanable funds at reasonable rates can also lead to a level of investment in high productivity sectors that is lower than what is socially desirable, inhibiting the demand for labour in those sectors. With respect to the supply of labour, market failures in human capital formation that lead to a low level of skill and education in the workforce affect the supply of skilled labour required for rapid industrialization. The relationships between government and market failures, the demand and the supply of labour and the rate of structural transformation is set out in figure 2 followed by a discussion of the types of government and market failures, using examples from Asia to illustrate this argument.

Figure 2. The determinants of structural transformation



Source: Authors' illustration.

Government failures can impede the functioning of labour, land and product markets, all of which, in turn, can affect the reallocation of labour from low productivity to high productivity sectors.

Two types of labour policies can affect the rate of structural transformation. One type involves the regulation of the labour market, such as employment protection legislation, minimum wage legislation and rules that govern trade union activity. The other one involves the nature of migration policies that may affect the movement of labour from the rural sector to the urban sector. Those sets of policies are discussed below.

Labour regulations: Regulating the labour market with a view to protecting the interests of workers can impede the smooth functioning of it. Labour regulations typically add adjustment costs to hiring and firing labour and to making modifications in the organization of production. Firms respond to strict labour regulations market by substituting capital for labour in the first instance. If the labour regulations are particularly onerous, they may decide not to expand the size of their workforce. Furthermore, labour regulations can increase the bargaining power of workers, deterring investment if investors choose not to invest over concerns that workers will expropriate a greater part of the returns ex post (Besley and Burgess, 2004). The net result of strict labour regulations is reduced demand for labour from the manufacturing sector directly, as firms substitute capital for labour and indirectly, as firms do not make the investment they would have otherwise chosen to make to increase the scale of their operations and by not making investment for growth.

As demand for labour from the manufacturing sector declines, the rate of labour movement from the agricultural to the manufacturing sector slows, impeding the pace of structural transformation. An extensive amount of literature has provided country level and cross-national evidence on the detrimental effect that stricter labour regulations have on growth of the formal manufacturing sector and on the pace of structural transformation (Fallon and Lucas, 1993; Heckman and Pagés, 2002; Besley and Burgess, 2004; Botero and others, 2004; McMillan and Rodrik, 2014).

Labour markets have been flexible in economies that have experienced rapid structural transformation, such as the Republic of Korea and Taiwan Province of China. In those economies, the respective Governments placed greater emphasis on the flexibility of labour markets than most other countries of the world (Agarwal and others, 2000). Employers had no problem firing workers when there was a need to do so, such as in instances in which there was technological change or when the firm wanted to cease or cut back production. In other economies of Asia, there were government sponsored mechanisms for dismissal, or permission from the government was required to terminate an employee's employment. In South Asian economies, job security legislation has created disincentives for the expansion of

firms in the formal sector, especially in India, Nepal and Sri Lanka. In much of South Asia, job security laws are often too restrictive, compliance too complicated, and enforcement too weak and discretionary (World Bank, 2012a).¹ In South-East Asia, on the other hand, labour markets are, on the whole, lightly regulated. There are, however, wide differences within the subregion, with Indonesia, the Philippines and Thailand having the most tightly regulated markets. In Indonesia, in particular, high rates of redundancy payments mandated by the Indonesian Labour Law of 2003 has put Indonesia at a higher ranking in terms of redundancy costs than its neighbouring countries (Manning, 2014). In addition, increases in the minimum wage higher than the rate of inflation has had a negative effect on the demand for labour in the formal urban sector in Indonesia (Suryahadi and others, 2003). As made clear in figure 3, several economies in Asia have more tightly regulated labour markets than the countries in the region that have experienced rapid structural transformation, such as Malaysia and the Republic of Korea.²

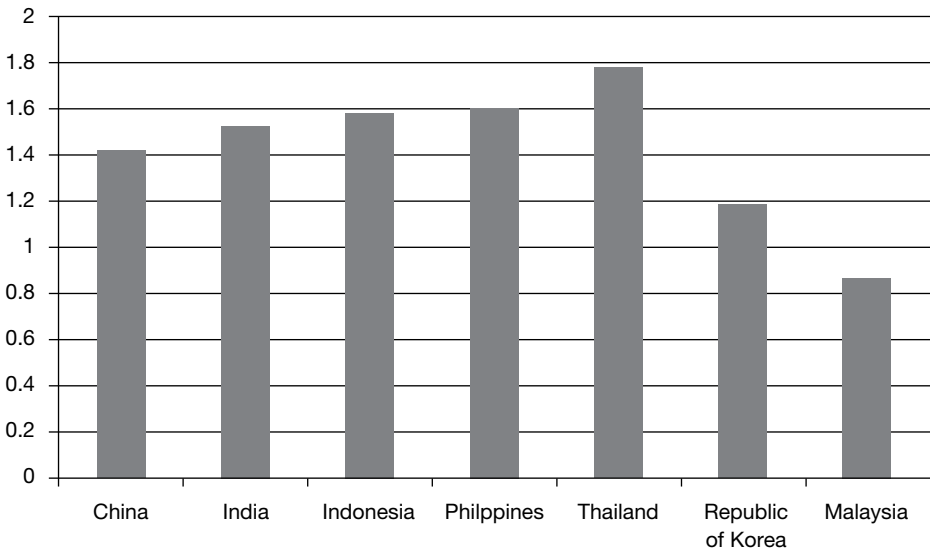
Migration policies: Governments can impede the flow of labour from rural to urban areas directly or indirectly. An example of a policy that affects the flow of labour directly from rural to urban areas is the *hukou* system set in China, which is explained in greater detail in the next section in a discussion of the factors behind the relatively low pace of structural transformation in China (as compared to Malaysia and the Republic of Korea). Such direct government-induced impediments to movement of labour from the countryside to the city has not been commonly imposed in other Asian economies. Government policies that indirectly affect rural-urban labour migration by making it less attractive for rural residents to move to urban areas are more prevalent. The foremost example of such government policies is social insurance schemes, which, if they are not fully portable, can constrain the movement of labour from low productivity to high productivity sectors (World Bank, 2012a). Social insurance schemes that are not fully portable lack the ability to preserve the actuarial value of accrued pension rights when moving from one job to another job (Pasadilla and others, 2011). Portable social insurance systems have been particularly difficult to implement in low-income Asian economies where there is a large proportion of agricultural, casual wage and informal workers (Park and others, 2012).

¹ The difference in the stringency of labour regulations between East Asia and South Asia can be attributed to the low political strength of trade unions in economies, such as the Republic of Korea and Taiwan Province of China, in the early stages of industrialization, as compared to the strong political voice unions enjoyed in the governments formed in South Asian economies, such as India and Sri Lanka immediately after independence (Agarwal and others, 2005).

² The data on labour regulations comes from Campos and Nugent (2012), who provide time-series data on 140 countries on (a) cost of increasing hours worked, (b) cost of firing workers, (c) dismissal procedures and (d) alternative employment contracts (part time or fixed term versus regular full-time). The higher the score on labour regulations, the more regulated is the labour market.

In addition to the lack of portable social insurance in most low-income Asian economies, another set of government failures have been evident in the severe urban housing, infrastructure and service deficiencies and the various forms of urban congestion that have constrained the ability of migrant workers to obtain housing at reasonable rates and access services, such as water and sanitation, when they have moved from rural to urban areas (Tacoli and others, 2015). Among developing Asian countries, South Asian countries have not fared well, with rankings that are only slightly better than those of countries of sub-Saharan Africa with respect to the proportion of urban households with access to safe drinking water, and among the lowest with respect to improved sanitation (Ellis and Roberts, 2016).

Figure 3. Labour regulations in selected Asian countries



Source: Campos and Nugent (2012).

Note: Data are for the period 2000-2004. Higher scores indicate more regulated labour markets.

Government policies related to land transfer and acquisition are relevant for structural transformation in two important ways. First, land reform – purposive transfer of land ownership from households with large landholdings in rural areas to those with little or no ownership of land or the provision of security of tenure to tenant cultivators – can lead to higher agricultural productivity because of the inverse relationship between size of land holdings and farm productivity (Berry and Cline, 1979). This, in turn, frees up labour in the countryside to move to manufacturing or

services jobs in urban areas. Second, an egalitarian distribution of land that leads to greater income for the poorer sections of the rural population can create a larger home market for manufacturing goods, facilitating the expansion of the manufacturing sector.

Redistributive land reform played an important part in the rapid growth in the Republic of Korea and Taiwan Province of China after World War II and the rapid growth in China and Viet Nam in the 1970s and 1980s (Putzel, 2000). The land reforms in the Republic of Korea and Taiwan Province of China also led to a rapid structural transformation in three ways. First, the land reforms resulted in higher income among poor farmers in the two economies, who then were able to invest some of the income in the schooling of their children.³ This led to the expansion of the skilled workforce in the two economies, which was required in the effort to achieve rapid export-oriented industrialization. Second, the increased income in rural areas resulted in the expansion of the domestic market for the manufacturing sector, fostering rapid industrialization. Third, the more egalitarian land distribution provided a stable political environment, which allowed the political leaders of the two economies to focus more heavily on rapid industrialization (Ban and others, 1983; Putzel, 2000; Studwell, 2013).

In contrast to the successful land reform experiences of the Republic of Korea and Taiwan Province of China (as well as of China and Viet Nam), in the Philippines, land reforms were not implemented despite several attempts to do so (most land in the country is cultivated by landless peasants) (Hayami and others, 1990; Studwell, 2013). Similar unsuccessful attempts at land reforms occurred in other Asian countries, such as India and Pakistan. As a consequence, high inequalities in land ownership in rural areas remained in those countries, limiting the potential for the agrarian change necessary for rapid structural transformation (Herring, 1983).⁴

A second set of policies relating to land that are relevant for structural transformation are those that govern the manner in which agricultural land is acquired to set up factories or for infrastructural projects. In land-scarce Asian countries where population densities are high, obtaining agricultural land for industrialization is essential for the manufacturing sector to expand. Burdensome land acquisition policies can increase the price of land artificially by providing generous government mandated

³ The increase in agricultural productivity in the Province of Taiwan was particularly striking, with yields of traditional crops, such as rice and sugar, increasing by 50 per cent, and that of fruits and vegetables doubling (Studwell, 2013).

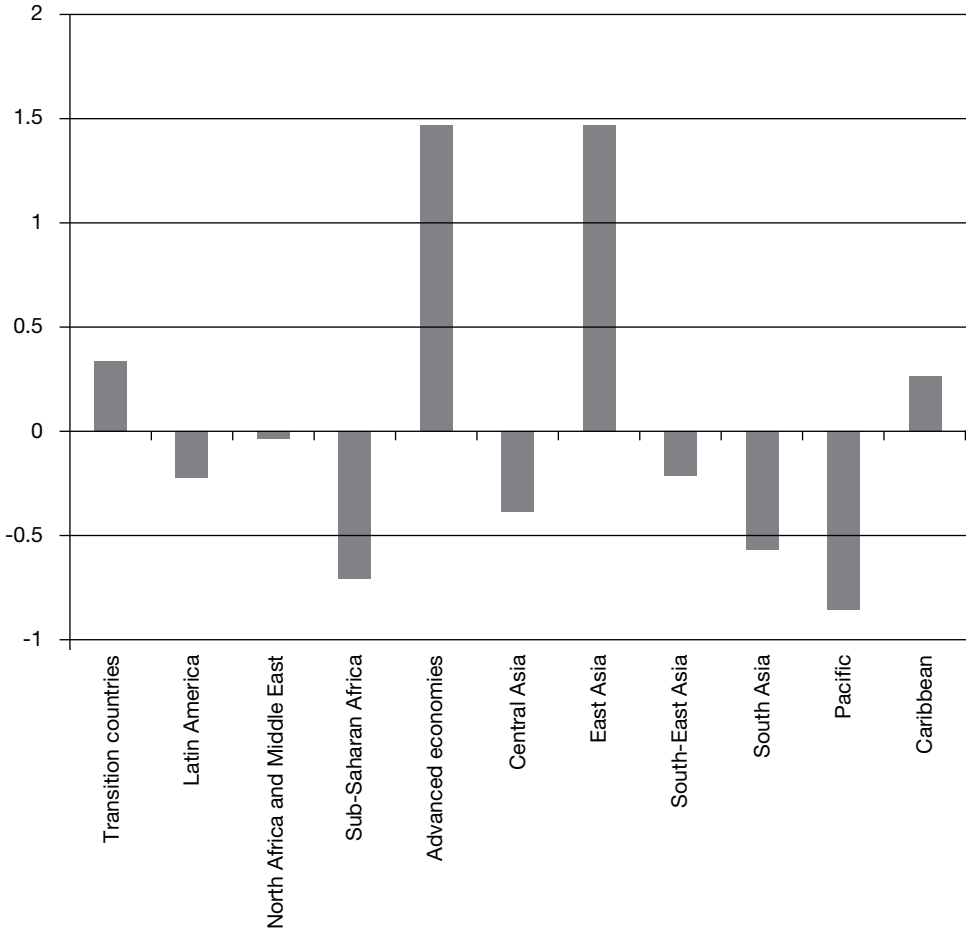
⁴ As Studwell (2013) notes, “in the wake of the Second World War, progressive politicians in Northeast Asia recognized the capacity of land reforms to deliver simultaneously on both the economic and political fronts” (p. 66). In contrast, “elites in South-east Asia (and South Asia, our insertion) were sufficiently co-opted by colonial rulers (before and after independence) that they lost their ability ... to think clearly about national economic development” (p. 70).

compensation packages for sellers of land (usually poor smallholder agriculturists) or make the process of acquiring land bureaucratically complex and cumbersome may discourage potential investors from investing in the manufacturing sector. In addition, essential infrastructural projects (whether in the public or private sector) that are critical inputs for the growth of the manufacturing sector, such as power plants or road and rail transportation networks, may not take place in the light of inefficient land acquisition policies.

The experience of Asian countries regarding land acquisition policies has been uneven. In some countries, such as China and Viet Nam, existing legislation allows the State to requisition land owned by farmers' collectives, which enables the State to forcibly acquire land for industrialization or infrastructural projects if needed. In other countries, such as Indonesia and India, land acquisition processes are more complex and time-consuming, and have led to significant delays and widespread corruption in acquiring land for large infrastructural projects (Reerink and Bakker, 2015).

Government policies and procedures that increase the cost of doing business or create artificial barriers to firm entry in the high productivity sectors, such as formal manufacturing and tradable services, are likely to depress private investment in those sectors and constrain growth of the high productivity sectors (World Bank, 2015). Regulatory reforms that make it easier to start a business or to close down an unprofitable enterprise are strongly associated with the more rapid reallocation of labour from low productivity to high productivity sectors (World Bank, 2013). The performance of Asian economies in term of ease of doing business varies widely, with Singapore and Taiwan Province of China ranked first and fifth among 189 countries. In contrast, the Philippines is ranked 103rd, Indonesia 109th, India 130th and Bangladesh 174th. Across the different dimensions of product market regulations, some subregion of Asia perform better than other subregions in some dimensions and worse in other dimensions. With respect to the ease of starting a business, it is quicker and cheaper in South Asia than it is in East and South-East Asia. On the other hand, it is less costly and timely for businesses to export and import in East and South-East Asia than in South Asia. The sharp variations in regulatory quality within Asia is indicated in figure. 4, where the quality of regulations set in East Asia is equivalent to that of advanced economics, while the quality of regulations in Central Asia, South Asia and the Pacific are worse than that of Latin America.

Figure 4. Regulatory quality, in different subregions of the world or country classifications



Source: World Bank (2016), World Development Indicators.

Note: A higher score implies better regulatory quality.

Market failures

A common market failure in low-income countries are coordination failures resulting from the high costs of collecting and processing information for new products, technologies and industries in low-income country settings (Rodrik, 2004). By investing in new information collection and processing and making information about the relevant new industries freely available to firms, the State can play a facilitating role in the introduction of new products and the move to new industries. As a consequence, the State can spur structural change and technological upgrading in the economy (Lin and Monga, 2010). Coordination failures also result from the fact that private returns to investment in sectors that offer the potential of dynamic comparative advantage may be less than social returns, as firms need to go through a learning process to build their capabilities to become competitive in new industries (Stiglitz and Yusuf, 2001). As this learning process may involve substantial financial losses at least at the initial stage, the private return to such investment may well be negative, even though the investment may lead to significant positive spillover effects and the building up of social and human capital. Risk averse entrepreneurs with low wealth endowments may not be willing to invest in such investments that have high sunk costs, and prefer to invest in activities with a high short-term possibility of profits, but offer less possibilities for technological upgrading.

The divergence of the private and social returns to investment may be particularly evident in more modern manufacturing activities or in knowledge-based services as compared to unskilled labour-intensive manufacturing or primary commodity production. As the economy moves into those modern sectors, economies of scale and scope become more important, and reliance of firms on highly skilled labour and access to long-term finance to make the lumpy investments in equipment, working capital and export financing increases. Consequently, there is need for the State to play a coordinating role in directing scarce investible funds and limited foreign exchange (to purchase imported capital goods and technology from abroad) to the most productive firms and facilitate the upgrading and diversification of individual firms (Lin and Monga, 2010).

A key determinant of the rapid pace of structural transformation witnessed in East Asia was the adoption of interventionist industrial policies by the Government of the Republic of Korea and the government of Taiwan Province of China, after those economies had moved past the labour-intensive manufacturing phase in their industrialization processes (Pack, 2001). Interventionist industrial policies allowed them to overcome coordination failures in investment decisions of private and State firms, as those firms moved into more technologically complex sectors, such as automobiles and electronics, and activities. Such industrial policies included dynamic strategies to advance the prospects of individual sectors by enabling them to exploit

economies of scale, technological spillovers and possibilities of learning, and to coordinate their own investment with downstream producers (Stiglitz, 1996).

In contrast to the Republic of Korea and Taiwan Province of China, there is limited evidence of interventionist industrial policy in the other Asian economies (barring India, which is discussed later). Most of the South-East Asian countries have followed a hands-off policy towards the industrial sector and encouraged labour-intensive export-oriented industrialization with the aid of export subsidies and competitive exchange rates, rather than selective intervention (Hill, 1996). In economies of South-East Asia and South Asia that tried to adopt a more interventionist industrial policy, such as Malaysia, with an emphasis on heavy industry, greater corruption and rent-seeking occurred rather than rapid industrial growth driven by technological adoption, as was the case in the Republic of Korea and Taiwan Province of China (Perkins, 2013).

A second type of market failure observed in low-income country settings is the inability of credit markets to allocate funds to projects that have a high social rate of return though they may not have sufficiently high private rates of return. Financial markets are characterized by asymmetric information that exists between the providers of capital and those seeking capital (Stiglitz and Weiss, 1981). In a low-income country setting, with weak property rights in land and other assets that may be offered as collateral and lack of information gathering agencies, such as credit rating agencies, banks and development finance institutions may typically ration credit to small and medium firms that offer the highest possibility of technological development and productivity growth in the manufacturing sector (Sen and Vaidya, 1997). Government interventions may be required to address such credit market failures to ensure that projects with high social rates of return are adequately funded. Again, in the East Asian case, governments have typically directed credit at preferential rates of interest to exporting firms in technology-intensive industries, allowing those firms to obtain long-term loans to finance their investment in fixed assets and technology development. The role of the government in addressing credit market failures by providing directed credit to exporting firms has been seen to be an important catalyst in the rapid movement of firms in the Republic of Korea and Taiwan Province of China into areas of potential dynamic comparative advantage, and in accelerating the pace of structural transformation in those two economies (Lin, 2010).

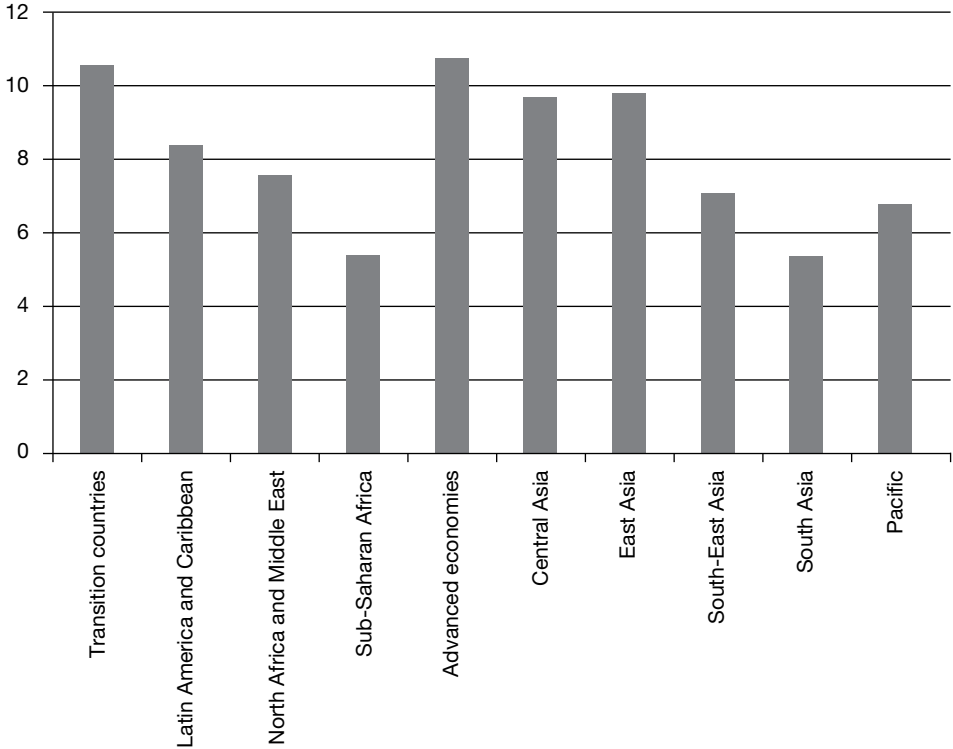
Selective credit policies were not followed in other Asian economies, in part because to carry out such policies, a high level of administrative work is required to select firms with the highest potential for growth and to monitor the performance of those firms to ensure that they meet their targets. For most other Asian economies, the administrative capability of the bureaucracy was not high enough to implement successful selective credit policies. As a consequence, the South-East Asian countries

had not had applied selective credit policies to support domestic industrialists; instead, they courted multinationals by the means of attractive tax incentives (Jomo, 2001). In South Asian countries, there was greater use of selective credit policies, but they had generally limited success in fostering technological progress and innovation (Sen and Vaidya, 1997).

A third type of market failure is in the rate of human capital formation. The private return to primary schooling is often below the social return to education because of the presence of positive externalities in human capital formation (Lucas, 1988). Governments play an important role in increasing the educational attainment of their populations in the early stages of economic development. Furthermore, the acquisition of skills that are necessary for shifting workers from low-skilled jobs in agriculture and the informal service sector to high productivity jobs in manufacturing and knowledge-based services are sometimes insufficient if job training and skill acquisition are left to the market (Stiglitz, 2001). Because companies that spend money on job training may not recoup their costs, job training and skill acquisition is often underfunded without State coordination. The East Asian economies have invested in large amounts in State-provided educational systems that place an increasing emphasis on technical subjects (Pack, 2001). Primary education was emphasized at their early stage of economic development, leading to impressive rates of increases in years of schooling. The high levels of skills and educational attainment that was evident in the general population in the Republic of Korea and Taiwan Province of China by the 1970s made it possible for workers to move in large numbers from agriculture to manufacturing, as the demand for labour increased in the manufacturing sector under rapid export-oriented industrialization.

South-East Asian and South Asian countries have had limited success with human capital formation and the creation of a skilled labour force. This is shown in figure 5, which provides years of schooling for 25+ year olds. The figure indicates that the average years of schooling in Central and East Asia are very similar to that observed in advanced market economies, while years of schooling for South Asia is close to that observed in sub-Saharan Africa. Years of schooling for South-East Asia are lower than that for Latin America and the Caribbean.

Figure 5. Years of schooling for 25+ year olds, for different regions of the world or country classifications



Source: Quality of government database, January 2016.

III. COUNTRY CASE-STUDIES

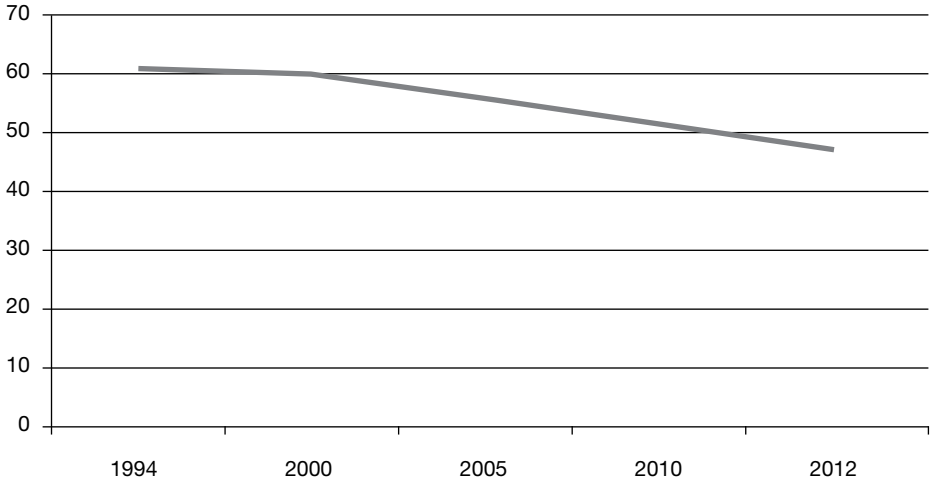
In this section, case studies of three Asian countries that experienced a slow pace of structural transformation are discussed. The first two are India and China, the two largest countries in developing Asia; in both countries, a substantial portion of their workforce is employed in agriculture (37 per cent in China, 50 per cent in India). The third country is Thailand, which has had noted success in economic growth, but a disappointing record in terms of structural transformation.

INDIA

The rate of structural transformation in India has been very slow, with a decline of only 14 percentage points of the proportion of the workforce employed in agriculture during the years 1994 to 2012, a period of rapid economic growth in the country (figure 6).⁵ In that respect, the pattern of structural transformation in India has been atypical in the Asian context in three important respects (Sen, 2014). First, unlike the major Asian economies, starting with Japan, then the Republic of Korea, Singapore, and Taiwan Province of China, and more recently China and Viet Nam, which moved from the import-substituting phases of their economic development to an export-oriented development strategy through strong growth in the labour-intensive segment of the manufacturing sector, the labour-intensive manufacturing's share in total output has fallen over time in India (Sen, 2009). Second, though there has been a large decline in the share of agriculture in total output in the post-independence period (from 55 per cent in 1955 to 20 per cent in 2008), much of the shift in economic activity has occurred towards services and not towards manufacturing as was the case in other Asian high-growth economies. In fact, the service sector's share in output was 41 per cent in 2008, much higher than what may be expected, given the level of per capita income in India. Second, a distinctive feature of the Indian manufacturing sector has been its dualism – the existence of a relatively small set of formal sector firms that has a largely protected workforce, and a large number of firms in the informal sector in which workers have little access to social security, employment protection and other benefits (Mazumdar and Sarkar, 2008). Labour productivity in formal sector firms was significantly higher than that in informal sector firms, and the gap between the two types of firms has been increasing (Sen, 2014). Those three facts suggest that there is large potential for reallocation of labour across and within sectors to increase economic growth in India. However, the reallocation of labour has not yet occurred to date because of a range of policy impediments in the proper functioning of factor and product markets and market imperfections relating to access to credit and human capital formation.

⁵ Economic growth averaged more than 7 per cent per annum in this period.

Figure 6. Share of agriculture in total employment, India, 1994-2012 (percentage)



Source: World Bank (2015), World Development Indicators.

Government failures

The most significant policy constraints to efficient transfer of labour from low productivity to high productivity activities in the Indian economy have been labour regulations, followed by land acquisition policies, and product market regulations.

Labour regulations

The labour laws in India are among the most restrictive in the world, especially with regard to retrenchment. According to the rigidity of the employment index proposed by the World Bank, Indian labour laws are more protective than the international average or an average of a group of comparator countries composed of large developing countries and countries in East and South Asia (Ahsan and others, 2008).⁶ Much of the rigidity in labour laws is derived from the Industrial Disputes Act of 1947 in which the conciliation, arbitration and adjudication procedures to be followed in the case of an industrial dispute are set. The Act imposes significant restrictions on employers

⁶ In a sample of 34 Organisation for Economic Cooperation and Development (OECD) and emerging market economies, the employment protection legislation set in India was the third most stringent, after those set in the Czech Republic and Portugal with respect to permanent (indefinite) contracts and the most stringent with respect to collective dismissals (Dougherty, 2009).

regarding changes in conditions of employment, such as hours of work, leave and holidays, and compensation to workers, such as wages and pension provisions, layoffs, retrenchments and closures.⁷ As a consequence, the labour laws exemplified by the Act have reduced the incentive of firms in the modern manufacturing sector to hire workers on permanent contracts and have pushed them to implement more capital-intensive modes of production than warranted by existing costs of labour relative to capital (Saha and others, 2014; Dougherty, 2009; Hasan and others, 2013). In addition, the restrictive labour laws have had a negative effect on the growth of the formal manufacturing sector, especially the labour-intensive industries, leading to limited possibilities for the formal manufacturing sector to absorb the high levels of surplus labour that are present in the relatively low productivity agricultural sector (Besley and Burgess, 2004; Gupta and others, 2008).

Land policies

Under the 1949 Indian Constitution, the Government of India was granted the power to enact and implement land reforms. Different state governments have used this autonomy to enact legislation, some as early as the 1950s. Land reform legislation has consisted of four categories: (i) abolition of intermediaries who were rent collectors under the pre-independence land revenue system; (ii) tenancy regulation that attempts to improve the contractual terms faced by tenants; (iii) a ceiling on landholdings to redistributing surplus land to the landless; and (iv) attempts to consolidate disparate landholdings. Abolition of intermediaries has been the most successful set of land reforms among the four categories. There has been less success in the implementation of other land reforms, with some notable exceptions, such as tenancy reforms in West Bengal.⁸ Moreover, the evidence on whether land reforms increased productivity in the agriculture sector is mixed (Besley and Burgess, 2000).

There are severe policy constraints to the acquisition of land for industrial use for public projects in infrastructure. Given that the labour-land ratios in rural areas are high, land remains a scarce resource and a source of livelihood for millions of Indian farmers. Land acquisition in India is governed by the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013. Under this Act, the minimum compensation payable to farmers is four times the market price in rural areas and two times the market price in urban areas. The Act also stipulates a comprehensive resettlement and rehabilitation package for displaced

⁷ Under Chapter VB of the Industrial Disputes Act, labour courts and tribunals can set aside any discharge or dismissal referred to them as not justified. In units employing more than 100 workers, retrenchment requires seeking authorization from the state government, which is rarely granted.

⁸ As Bardhan (1984) argues, the lack of political will to implement far-reaching land reforms may be attributed to the strong presence of the landed farmers in the ruling coalition of India.

farmers and places severe restrictions on the exercise of eminent domain. The Act was passed with the intention to protect the interests of small farmers, which was not addressed in the previous legislation that governed land acquisition in India (that dated to the colonial period). However, there are concerns that the current legislation significantly impedes the transfer of land from low productivity agricultural use to higher productivity use in industry and infrastructural provision, with an arbitrarily set minimum price for compensation that does not take into account local market conditions and cumbersome procedures to obtain land either for private or public use (Ghatak and Ghosh, 2011). Accordingly, existing land acquisition policies are an important barrier to the growth of the manufacturing sector in India, and in bringing about structural transformation.⁹

Product market regulations

Regulation of product markets was considerably eased in India in 1991 with the dismantling of industrial licensing, and a significant reduction in the number of industries reserved for the public sector. In addition, restrictions on foreign direct investment were lifted in high technology and high investment priority industries. Significant trade reforms were also enacted with the removal of quotas and a shift to tariffs, and a gradual reduction in tariffs over time. However, there has been little evidence of “creative destruction” accompanied by the reallocation of resources from low productivity to high productivity firms in the manufacturing sector (Goldberg and others, 2010). The industrial sector is still dominated by incumbents State-owned firms and business groups – and a limited number of new firms are trying to enter the formal manufacturing sector (Alfaro and Chari, 2009). The reasons for this appears to be first, significant impediments for firms to close in the form of stringent bankruptcy laws, which still favour the restructuring of existing loss-making firms rather than closure, and second, the strong political connections of the incumbents enables them to prevent new firms from entering the sector, especially in concentrated, profitable industries and in industries dominated by State-owned corporations (Mody and others, 2011). Despite reforms instituted over several decades, several government policies that impede firm closing still remain in place and act as constraints to the reallocation of labour from low productivity to high productivity sectors.

⁹ Why have Indian state and central governments not attempted to dismantle the stringent labour regulations or made it easier for land to be acquired for non-industrial purposes? Reform of labour laws and land acquisition policies are seen to be controversial and difficult to implement in the era of coalition governments that have characterized the country's political system in the 1990s and beyond (Sen, 2009). Labour laws and changes in land acquisition policies belong to what may be termed as “mass politics reforms” – which are reforms that may be considered anti-populist and are therefore, difficult to implement under the current political system (Varshney, 1999).

Market failures

Coordination problems in investment

Unlike most other economies in Asia (with the exception of the East Asian economies), the Government of India has historically played a strong role in industrial policy by coordinating the activities of private sector, and by investing directly itself in many sectors of the economy. For the first four decades following independence, the Government intervened in almost all aspects of the activities of manufacturing firms. Industry in India was subject to rather formidable legal barriers to entry. Investment, in terms of expansion of capacity of existing firms and creation of new firms, was controlled by the Government through its licensing policies that were, in turn, determined according to plan priorities. Though the purported objective of the licensing regime was better coordination of private investment so that the private return to investment was closer to its social return, it effectively led to a more monopolistic structure and significantly encouraged rent-seeking by corporations entrenched with public powers (Aghion and others, 2008). The consequence of those policies was slow total factor productivity growth for much of the 1970s and 1980s (Ahluwalia, 1991). Accordingly, while the Government of India followed similar interventionist industrial policies set in East Asian economies, the consequences of those policies for structural transformation were very different. This can mostly be attributed to the lack of capacity of the Indian State to implement industrial policies effectively and the ad hoc and discretionary nature of these policies, which led to high rates of uncertainty among potential investors and limited private investment (Bhagwati, 1993). This changed in the early 1990s with the dismantling of the License Raj, when market signals rather than government diktat guided the private investment decisions. In the case of India, lack of State action to rectify market failures resulting from coordination problems in investment cannot be seen as an important contributory factor behind the country's slow rate of structural transformation; it can be argued that too much intervention, not too little, was a significant cause of its weak performance in manufacturing historically.

Credit market imperfections

Credit markets in India are characterized by a high degree of segmentation. Large corporate firms are able to access credit at reasonable terms from public sectors banks, which dominate the banking system (Sen and Vaidya, 1997). In contrast, micro, small and medium firms are rationed out from credit markets or face high rates of interest for their loans. As Banerjee and Duflo (2004) note, borrowers face much higher interest rates than depositors, which reflects the extent of credit rationing in the economy. While there is a long history of government intervention in the Indian credit markets to ensure adequate access to small and medium firms, evidence suggests that such intervention has been largely unsuccessful in tackling credit market failures for smaller

borrowers, with commercial banks reluctant to lend to potential borrowers who do not have adequate collateral to offer, or lack a credit history (Banerjee and Duflo, 2004). The lack of loanable funds at competitive interest rates for small and medium firms in formal manufacturing in India has been viewed as an important constraint to firm growth in the sector; much of the employment creation in India has occurred in the smallest firm size class, which is mostly comprised of firms operating in the informal sector (Mazumdar and Sarkar, 2013; Hsieh and Klenow, 2014). This has led to weak demand for labour in the manufacturing sector, especially in the smaller-sized firms, constraining the pace of structural transformation.

Human capital formation

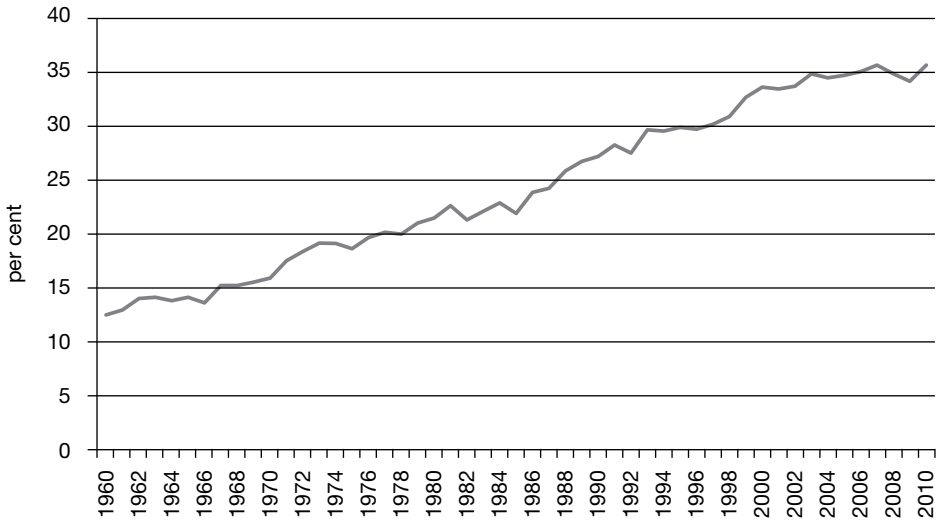
In contrast to the experiences of the economies of East Asia, India has had limited success in human capital formation. The estimated means years of schooling for those aged 25 years and above in 2011 was 4.4 as compared to 7.5 for China and 11.6 for the Republic of Korea (see Drèze and Sen, 2013). In addition to low attainment in the quantity of schooling, there has been only limited progress in improving the quality of schooling as well, with only 6.6 per cent of children in the first grade able to read a level 1 text (Pratham, 2008). Even though the Indian Constitution calls for free compulsory education for all children aged 14 years or less, successive Governments at the national and state levels have not invested sufficiently in primary education, with greater stress put on the provision of tertiary education (Dreze and Sen, 2013). In addition, there has been a lack of monitoring of public schools in India, leading to large-scale teacher absenteeism, which has contributed to the poor learning outcomes observed in the country (Panagariya, 2008). The low levels of educational attainment in India (in quantity and quality of schooling) have led to a relatively unskilled workforce that is not suitable for modern manufacturing (Wood and Calandrino, 2000). This has negatively affected the rate of structural transformation, as there has not been an adequate supply of skilled labour in low productivity sectors, such as agriculture, to fill potential jobs in the high productivity manufacturing and services sectors.

THAILAND

Thailand has had prolonged success in economic growth since the 1960s, posting growth rates that have been among the highest in the world.¹⁰ This rapid rate of growth has been accompanied by an equally impressive increase in the share of manufacturing value added as a percentage of GDP (figure 7) and a steady increase in the economic complexity of its exports (figure 8).

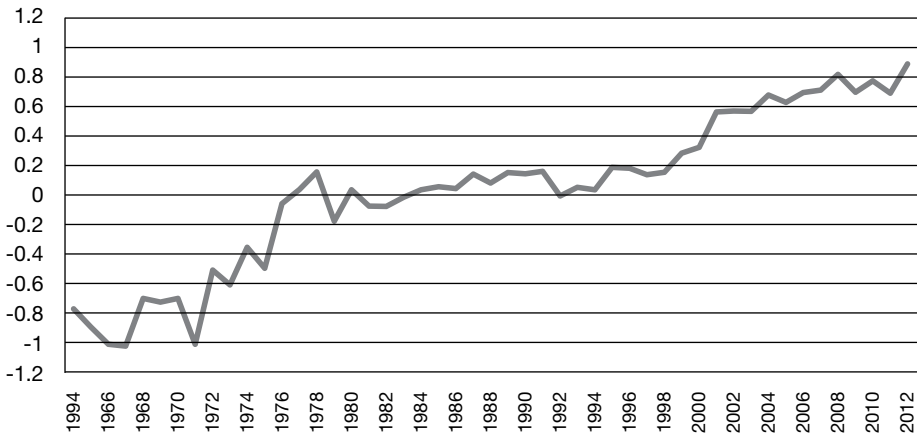
¹⁰ The Commission for Growth and Development in its growth report names Thailand as one of the thirteen growth successes, as the country has recorded an average rate of growth of GDP at 7 per cent or more a year for more than 25 years (Commission for Growth and Development, 2008).

Figure 7. Manufacturing value added as a percentage of gross domestic product



Source: World Bank (2015), World Development Indicators.

Figure 8. Economic complexity, Thailand, 1964-2012

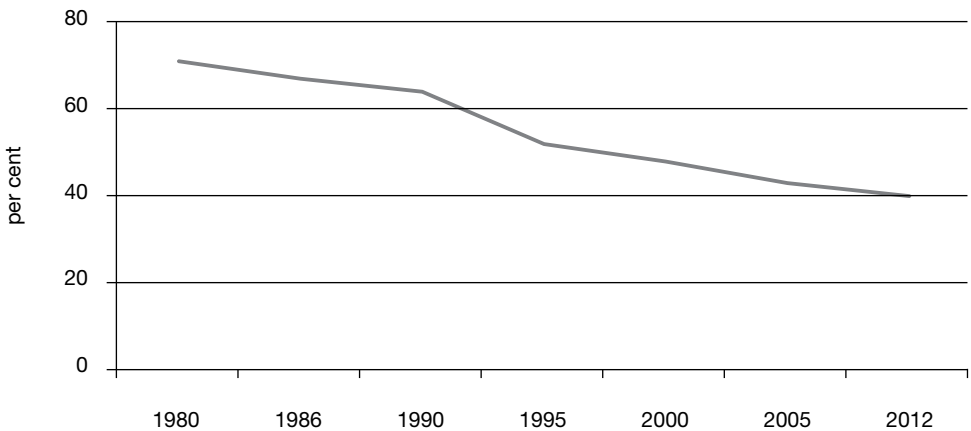


Note: Hausman-Hidalgo measure of economic complexity.

Source: Atlas of Economic Complexity. Available from <http://atlas.cid.harvard.edu/>.

However, despite the country's success with regard to sustained economic growth, its structural transformation has been weak (Warr, 1993). As figure 9 makes clear, the proportion of workers employed in agriculture has fallen slowly over the decades of rapid economic growth. In 2012, about 40 per cent of the proportion of the labour force still remained in agriculture. The following section includes a discussion on the reasons for the slow rate of structural transformation observed in Thailand, focusing on government and market failures.

Figure 9. Share of agriculture in total employment, Thailand, 1980-2012 (percentage)



Source: World Bank (2015), World Development Indicators.

Government failures

The key government failure that has impeded the pace of structural transformation in Thailand has been the absence of widespread land reforms. The case for land reform was strong because of the high prevalence of tenancy farming in some parts of the country, especially in Central Thailand, and the growing landlessness problem with increased commercialization of agriculture (Ramsay, 1982). In 1975, the Government of Thailand passed a land reform bill that stipulates that the Government purchase land from large landowners and offer the land to the landless in rural areas under a long-term hire purchase plan. The Government set up an agency – the Agricultural Land Reform Office – to implement the land reform. The priority of the land reform programme was to implement the reforms in areas where tenancy arrangements were high or where crop yields were low. However, the land reforms have been weakly implemented and the concentration of land has remained fairly high among

large landowners (Ramsay, 1982). This has contributed to a sharp rural-urban divide, with large differences in income between rural and urban households. The rapid economic growth recorded in Thailand since the 1960s was mostly driven by foreign direct investment in manufacturing and did not benefit large sections of the rural population, especially residents in the North of the country (Krongkaew, 1995). The income polarization has contributed to increasing political instability, which has had a negative effect on the growth of the manufacturing sector, especially after the financial crisis of 1997 (Sen and Tyce, 2018).

With respect to government policies relating to migration and labour market regulations, successive Governments have followed a liberal approach, which entails not constraining the movement of labour from rural to urban areas and not controlling the hiring and firing of labour. With respect to product market regulations, Thailand has received a score of 71 in terms of ease of doing business, just below the score received by Malaysia of 79, but well above the regional East Asian average of 61 (World Bank, 2014). This suggests that while Thailand can still do better in easing constraints to private investment in high productivity sectors, Government policies relating to product market entry and exit are not an important factor behind the country's disappointing record with regard to structural transformation.

Market failures

A clear difference between the Thai and East Asian growth experiences is that the Government of Thailand has not attempted to follow the interventionist industrial policies and selective credit policies set by the Government of the Republic of Korea and the government of Taiwan Province of China. Since the late 1950s, the Board of Investment, which was set up by the Government of Thailand, has used tax and other promotional incentives to encourage industrial investment, especially for export-oriented industrialization. However, there was no discretion in the manner in which those incentives were offered; the incentives were applied equally to Thai and foreign firms and included exemptions from import duties and business taxes on imported raw materials and tax holidays to promoted firms from three to eight years (Sen, 1995). The Board of Investment has played a critical role in the country's industrialization and its move to export more technically sophisticated products. Initially, until the 1980s, the Board of Investment promoted firms engaged in traditional industries, such as food processing and textiles. However, since the 1980s, it has promoted firms involved in electrical and non-electrical machinery and chemical industries, and more recently, in automotive industries (Sen and Tyce, 2015). The technocrats responsible for the country's industrial policy were conservative in their approach and avoided "picking winners" to a large extent (Perkins, 2013). While this has helped to foster the country's rapid export oriented industrialization, such a "light touch" industrial policy might not have contributed to the growth of a strong indigenous

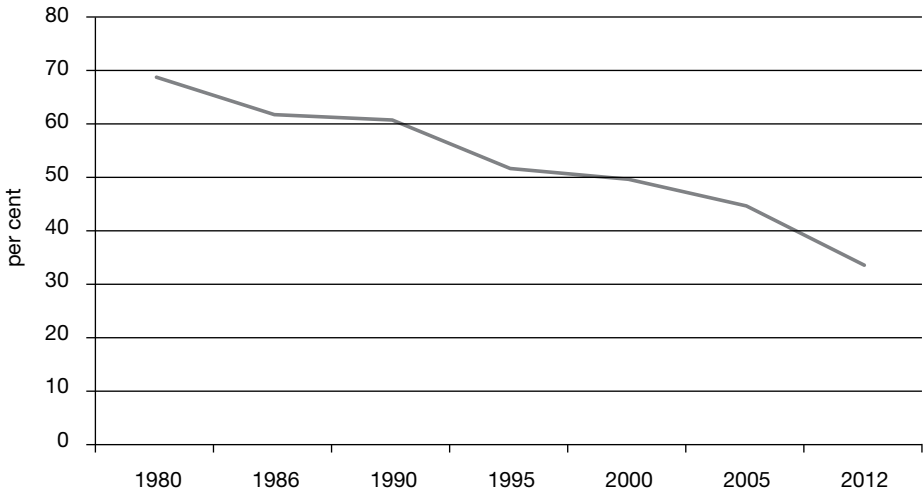
set of Thai industrialists, and consequently constrained the growth of a dynamic domestic manufacturing sector (Doner, 2009).

Market failures are most clearly obvious in the low rate of human capital formation in Thailand. While universal primary education has been achieved, secondary school attainment has been weak in rural and disadvantaged regions of the country (Khoman, 1993). A large proportion of secondary school-level educated workers and university graduates are unemployed, despite the severe skill shortages in several manufacturing and service sectors. This is the result of the lack of skills of the secondary school and university educated population relative to the labour market needs of high productivity sectors, such as manufacturing, and service sectors, such as banking. In addition, the quality of schooling has been low, leading to low and declining learning outcomes, as compared to other countries with similar levels of per capita income (World Bank, 2012b). Furthermore, learning outcomes in other parts of Thailand have been far worse than in Bangkok (World Bank, 2012b). The weak performance in educational quality can be attributed to lack of school autonomy over budgeting and education content and a lack of educational resources. Market failures in human capital formation in Thailand have been an important factor as it has constrained the supply of skilled workers from rural to urban areas, slowing the rate of structural transformation.

CHINA

The economy of China expanded at about 9 per cent over the period 1960-2013 (in per capita GDP terms). As a result of that rapid rate, it is generally expected that economic growth would have been accompanied by a rapid rate of structural transformation. While there has been a large movement of workers from the rural to urban area in the country, with the rapid export-oriented industrialization, China became the “factory of Asia” from the 1980s onwards, the rate of structural transformation still lags behind other high growth Asian economies, such as the Republic of Korea (Felipe and others, 2014). As indicated in figure 10, even though the proportion of workers employed in agriculture has declined by 50 per cent from 1980 to 2012, 33 per cent of the workforce still remains in agriculture.

Figure 10. Share of agriculture in total employment, China, 1980-2012 (percentage)



Source: World Bank (2015), World Development Indicators.

Government failures

Among government policies that have impeded the rate of structural transformation in China, the most significant one has been the household registration system, referred to as the hukou system, in which workers who want to migrate from rural to urban areas have to apply for permission from the government to switch their hukou from a rural to an urban residence. The purpose behind the hukou system was to initially shore up capital intensive heavy industrialization, which was mostly planned in the cities, and to conserve key resources and food grains to sustain urban labour (Solinger, 2014). In the post-reform period, it was used as a way to control the movement of workers from rural to urban areas as the country embarked on its massive programme of export-oriented industrialization with the objective to ensure a certain level of health, social security and education for urban dwellers (Cai and others, 2008; Naughton, 2007). In effect, the hukou was “a mechanism to block the free flow of resources (including labour) between... the cities and countryside (Chan and Zhang, 1999, p. 821). Accordingly, the hukou system had served as a brake to the movement of labour from agriculture to manufacturing, and is the main factor behind the relatively low rate of structural transformation in China (as compared to what may have been expected, given its rapid rate of industrialization).

With respect to labour regulations, the Labour Contract Law of 2008 and Minimum Wage Law of 2004 may have raised unemployment among less-skilled workers and increased the costs of firing for Chinese firms (Park, 2015), adversely affecting the demand for labour in the manufacturing sector.

With respect to land policies, radical land reforms focusing on the confiscation of land from landlords and rich peasants were enacted from 1945 to 1953 as the Chinese Communist Party took control of the country. The land reforms were implemented in Northern China during the period 1945-1948 and then in southern China between 1949 and 1953 (Moise, 1983). Confiscated land was redistributed to poor peasants and agricultural labourers, leading to a significant equalization in land ownership within localities. Collectivization followed from 1954 onwards in which private ownership and trade of land was banned. This resulted in a highly egalitarian distribution of rights to land among households within the same locality. The land reforms are largely seen as being successful in terms of generating income among rural households and providing a stable political base for the rapid industrialization that has occurred in China since the 1980s (Burgess, 2004).

Market failures

Government policies to address market failures in technological spillovers and investment coordination may have also constrained the pace of structural transformation in China. Industrial policies emphasized the development of heavy, capital-intensive industries, such as automobiles, machinery, and steel. Those sectors received preferential access to cheap credit, favourable tax treatment and supportive public investments (Park and others, 2010). In contrast, investments did not flow to light industries that had the capability to create more employment opportunities, especially for unskilled workers. Furthermore, entry into non-industrial, labour-intensive sectors, such as services, was often restricted, which, in turn, limited the development of them. Financial sector policies have also distorted the rate of structural transformation, as large, capital-intensive firms continued to receive favourable treatment from State-owned commercial banks. In addition, non-performing loans have been a problem for the public sector banks, as an incentive was extended to them to steer funds to large, State-owned enterprises or to State-supported projects implicitly backed by the Government. In contrast, private enterprises, many of which were small- and medium- sized, found it difficult to obtain loans from State commercial banks and as a result, turned to alternative financing channels, including foreign direct investment, though they accounted for the majority of the new job creation since the mid-1990s, government restrictions notwithstanding (Park and others, 2010).

Government action to address market failures in human capital formation is generally seen as a success in China, as shown by the low rates of illiteracy and the provision of universal elementary education early on in the development process (Naughton, 2007). By 2000, the proportion of the population with no formal schooling had fallen from 35 per cent in 1982 to less than 10 per cent. A large part of the increase in educational attainment can also be explained by the rapid increase in the returns to education with fast economic growth (Park and others, 2010).

IV. CONCLUSIONS AND POLICY IMPLICATIONS

Structural transformation – the reallocation of labour from low productivity to high productivity activities and sectors – is at the core of economic development (Dabla-Norris and others, 2013). Countries that have successfully transferred workers from low productivity sectors, such as agriculture, to high productivity sectors, such as manufacturing, have recorded sustained inclusive growth. However, few Asian economies have successfully combined structural transformation with rapid growth – the notable high achievers in that regard are Malaysia, the Republic of Korea and Taiwan Province of China. In this paper, it is argued that the pace of structural transformation is determined by two independent sets of factors – the demand for labour from the high productivity sectors and the supply of labour from the low-productivity sectors. It is further argued that government failures and market failures can negatively affect the demand for labour from high productivity sectors and constrain the mobility of labour from low productivity sectors. Government failures, such as labour regulations and product market regulations, can have a negative impact on the demand for labour in high productivity sectors, such as manufacturing, while land policies, such as the lack of effective land reforms or government induced barriers to rural-urban migration, can create impediments in process to smooth out the movement of labour from low productivity sectors, such as agriculture. Market failures, such as lack of coordination in investment, and credit market imperfections can adversely affect the demand for labour in the modern sectors of the economy unless addressed by effective industrial and financial policies, while human capital-related market failures can limit the supply of skilled workers from low productivity sectors to high productivity sectors.

This review of the factors that constrained structural transformation in Asian countries suggest that government failures and market failures have also affected structural transformation in several of those economies. The most important government failure has been the lack of land reform in South-East and South Asian countries. The most significant market failure has been in human capital formation, especially in creating a skilled workforce that is necessary for technological upgrading and modern manufacturing activities. Other government failures, such as stringent labour

regulations and lack of portable social insurance schemes to ease the mobility of labour, have also played a role in limiting structural transformation in developing Asian countries. Market failures, such as coordination of investment and credit market imperfections, have not been addressed in South-East Asia and South Asia as effectively as they have been in North East Asia, largely because of the lack of capacity of the State to undertake successful interventionist policies.

Case-study evidence of three Asian countries – China, India and Thailand, which have seen rapid growth but not structural transformation to the same degree is also reviewed in this paper. The evidence suggests that different factors are behind the slow rate of structural transformation in China, India and Thailand. In China, the hukou system created an artificial barrier to the movement of labour from rural to urban areas, and perhaps is the single most important factor behind the surprisingly slow rate of structural transformation in China, given its high rates of manufacturing-led economic growth. In addition, government policies that attempted to bias investment towards capital-intensive industries may also have played a role in limiting the demand for labour in the manufacturing sector, and thereby inhibited structural transformation in the country. There have been several reforms in the hukou system in recent years – in 2014, the Government of China removed hukou transfer limits in small cities, relaxed restrictions on medium-sized cities and set new qualifications for larger cities (Goodburn, 2014). However, those reforms are a modification of the hukou system and not the abolition of it, as residence certificates are still required for all Chinese citizens moving to new areas. Although it will be easier for migrants to settle in smaller cities, strict requirements will continue to make it difficult to settle in the megacities (Goodburn, 2014). This suggests that while the constraint that the hukou system poses to the process of structural transformation in China has eased somewhat, it has not been completely removed.

With respect to India, the review of the evidence suggests that not just one factor, but a range of factors are important in explaining the country's slow rate of structural transformation. The most important among those factors are stringent labour regulations, burdensome land acquisition policies and market failures related to human capital formation and skill development of the labour force. Given the very large share of workers employed in Indian agriculture and the need to increase the rate of structural transformation in the economy, a strong focus on easing government policies relating to the functioning of labour and land markets is necessary. In addition, there is need to reform the educational system, especially relating to the quality of schooling and skill formation in the workforce.

The weak record of Thailand with regard to structural transformation can be mostly attributed to lack of effective land reforms and low rates of educational attainment among the rural poor in remote regions of the country. The Government has failed

to set an effective industrial policy aimed at building the capabilities of domestic firms and allowing the manufacturing sector to move towards products with greater technological spillovers. In the case of Thailand, there is need for educational policies that address the skills shortages in the Thai workforce and effective industrial policies that accelerate the rate of growth of local Thai firms.

The overall policy message from the review of the evidence is that governments in developing Asian countries need to enact a set of complementary policies that affect both the demand side and supply side of labour in order to accelerate the pace of structural transformation. This would imply concerted government action across a range of policies – labour policies, land policies, industrial and financial policies, educational policies – rather than a narrow focus on one or two policy domains.

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