1. Introduction

This study examines the impacts of inward foreign direct investment (FDI) on the economy of China. FDI is defined as ownership of assets by foreign residents for purposes of controlling the use of those assets (Graham and Krugman, 1991). According to China’s official statistics, FDI in China includes foreign investment in equity joint ventures, contractual joint ventures, wholly foreign-owned enterprises and joint exploitation. The minimum equity share of foreign investment should be equal to or above 25 percent. FDI in China has been one of the many successful aspects of China’s economic reform and has contributed to opening up the economy and society to the outside world. The gradual liberalization of restrictions on FDI since 1979, the government’s commitment in 1992 to opening up further, and particularly China’s accession to the World Trade Organization (WTO) in 2001, have greatly encouraged foreign investors to invest in China. By the end of 2014, China had attracted a total of US$1.6 trillion FDI inflows (MOC, 2015), making it the largest FDI recipient in the developing world. The large amounts of FDI inflows have contributed greatly to China’s economy in terms of capital formation, employment creation, export expansion and technology transfer, and have exerted significant impacts on China’s economic growth and structural changes.

et al. (2013), Tanaka and Hashiguchi (2015), Wu and Chen (2016) and Chen and Wu (2017). These studies have made significant contributions to the FDI literature. However, theoretical and empirical studies on the impacts of FDI on China’s regional economic growth, income inequality and urbanization development, especially the impacts of the uneven regional distribution of FDI with its heavy concentration in coastal provinces on economic growth, and on income inequality and urbanization development of China’s inland provinces, have been limited or absent. This study aims to fill these gaps by presenting a comprehensive theoretical analysis and an in-depth empirical investigation of the roles of FDI in regional economic growth, the impacts of FDI on urban–rural income inequality, and the contributions of FDI to urbanization development in China. The findings of the study have important policy implications not only for China but also for other developing countries in relation to the design and implementation of FDI policies in order that these countries benefit more from FDI.

1.1 FOREIGN DIRECT INVESTMENT IN CHINA: CHARACTERISTICS AND CONTRIBUTIONS

1.1.1 The Growth of FDI Inflows into China

During the past three and a half decades, China has attracted large amounts of FDI inflows. As shown in Figure 1.1, the growth of FDI inflows into China from 1979 to 2015 can be broadly divided into three phases: the experimental phase from 1979 to 1991; the boom phase from 1992 to 2001; and the post-WTO phase from 2002 to 2015.

In the initial stage of the experimental phase, following the establishment of the four Special Economic Zones (SEZs) in Guangdong and Fujian provinces, which were accompanied by special incentive policies for FDI offered by the Chinese government in these SEZs (Chen, 1996, 1997b, 2011a), FDI inflows into China were highly concentrated in Guangdong and Fujian provinces, and particularly in the four SEZs. For example, Guangdong and Fujian provinces absorbed more than 70 percent of total FDI inflows in 1983. During the period from 1984 to 1991, the Chinese government made a significant effort to attract FDI inflows. This included opening more areas and regions to FDI, such as Hainan Island and 14 coastal cities across ten provinces in 1984, opening the Yangzi River Delta, the Pearl River Delta and the Min Nan Delta in 1985, opening the Shanghai Pudong New Development Zone and the entire coastal area to FDI in 1988. The government also introduced a series of laws and regulations designed to encourage FDI inflows (Chen, 1996, 1997b, 2011a). As
a result, FDI inflows into China continued to increase during the period from 1979 to 1991. However, since the Chinese government was very prudent in introducing FDI into its domestic economy, foreign investors were also cautious about making investments in China in the experimental phase of China’s opening up to the outside world. During this period, therefore, China’s performance in attracting FDI inflows was not impressive, averaging US$1.79 billion annually for the period 1979–91.

The second phase began in 1992, following Deng Xiaoping’s tour of China’s southern coastal economically opened areas and SEZs. Deng Xiaoping’s tour, which has subsequently been seen as a landmark, set the scene for China’s move away from the former uneven regional priority toward nation-wide implementation of open policies for FDI. The Chinese government adopted and implemented a series of new policies and regulations that would encourage FDI inflows into China (Chen, 1996, 1997b, 2011a). The results were astounding. In 1992 the inflows of FDI into China reached US$11.01 billion, doubling the figure for 1991. In 1993 the inflows of FDI again doubled the figure for 1992, reaching US$27.52 billion. The high growth of FDI inflows continued during 1994 to 1997 (Chen, 1996, 2011a). However, FDI inflows slowed down after 1997 and declined in 1999 and 2000 mainly because of the Asian financial crisis that substantially weakened the outward investment abilities of the East and South-east Asian economies, which have been important investors in China (Chen, 2011a).
The third phase began in 2002 after China’s entry into the WTO in 2001. China’s accession to the WTO came at a critical time, when the country was facing difficulties sustaining a high level of FDI inflows. After China’s accession to the WTO, with the implementation of its commitments and broader and deeper liberalization in trade and investment (Chen, 2002a, 2002b, 2009a, 2011a, 2011c), FDI inflows exhibited an increasing trend. FDI inflows increased from US$46.88 billion in 2001 to US$108.31 billion in 2008. However, because of the global financial crisis, FDI inflows into China declined to US$95.00 billion in 2009 (Chen, 2009b), before recovering to US$114.73 billion in 2010 and reaching US$135.61 billion in 2015.

1.1.2 The Sources of FDI in China

Since 1979 over 200 countries and economies have invested in China. Table 1.1 presents the top 15 investors in China to the end of 2014. Hong Kong (China) holds the dominant position, accounting for 46.53 percent of the total, followed by British Virgin Islands (8.83 percent), Japan (6.14 percent), the USA (4.70 percent), Singapore (4.50 percent), Taiwan (China) (3.81 percent), Korea (3.73 percent), Cayman Islands (1.79 percent), Germany (1.49 percent), Samoa (1.45 percent), UK (1.20 percent), Netherlands (0.92 percent), France (0.85 percent), Mauritius (0.81 percent), Macau (China) (0.74 percent), Others (12.51 percent), Total (100.00 percent).

Table 1.1 The top 15 FDI investors in China by the end of 2014

<table>
<thead>
<tr>
<th>End 2014</th>
<th>(US$ billion)</th>
<th>(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hong Kong (China)</td>
<td>746.94</td>
<td>46.53</td>
</tr>
<tr>
<td>British Virgin Islands</td>
<td>141.79</td>
<td>8.83</td>
</tr>
<tr>
<td>Japan</td>
<td>98.63</td>
<td>6.14</td>
</tr>
<tr>
<td>USA</td>
<td>75.38</td>
<td>4.70</td>
</tr>
<tr>
<td>Singapore</td>
<td>72.32</td>
<td>4.50</td>
</tr>
<tr>
<td>Taiwan (China)</td>
<td>61.15</td>
<td>3.81</td>
</tr>
<tr>
<td>Korea</td>
<td>59.91</td>
<td>3.73</td>
</tr>
<tr>
<td>Cayman Islands</td>
<td>28.73</td>
<td>1.79</td>
</tr>
<tr>
<td>Germany</td>
<td>23.91</td>
<td>1.49</td>
</tr>
<tr>
<td>Samoa</td>
<td>23.35</td>
<td>1.45</td>
</tr>
<tr>
<td>UK</td>
<td>19.20</td>
<td>1.20</td>
</tr>
<tr>
<td>Netherlands</td>
<td>14.74</td>
<td>0.92</td>
</tr>
<tr>
<td>France</td>
<td>13.64</td>
<td>0.85</td>
</tr>
<tr>
<td>Mauritius</td>
<td>12.97</td>
<td>0.81</td>
</tr>
<tr>
<td>Macau (China)</td>
<td>11.90</td>
<td>0.74</td>
</tr>
<tr>
<td>Others</td>
<td>200.78</td>
<td>12.51</td>
</tr>
<tr>
<td>Total</td>
<td>1605.33</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Introduction

(China) (3.81 percent), South Korea (3.73 percent), Cayman Islands (1.79 percent), Germany (1.49 percent), Samoa (1.45 percent), UK (1.20 percent), Netherlands (0.92 percent), France (0.85 percent), Mauritius (0.81 percent) and Macau (China) (0.74 percent). Together, the top 15 investors accounted for 87.49 percent of total FDI inflows into China at the end of 2014.

In terms of FDI from developing, developed, and tax haven economies, by the end of 2014, as shown in Figure 1.2, FDI in China was overwhelmingly dominated by developing economies which accounted for 68.76 percent of the total FDI inflows, while FDI from developed economies accounted for only 18.09 percent of the total. One notable feature is the large share held by the tax haven economies. FDI from the tax haven economies accounted for 13.15 percent of the total FDI inflows into China.

1.1.3 The Regional Distribution of FDI in China

At the national level the aggregate FDI inflows into China have grown steadily over the past 35 years; although the distribution of FDI inflows among China’s regions and provinces has been very uneven. Figure 1.3 presents FDI inflows into China’s three regions: the eastern region (also called the coastal region), the central region and the western region. As the figure shows, FDI inflows have been overwhelmingly concentrated in the eastern region. In contrast, the amount of FDI inflows into the central region and the western region has been relatively low. However, FDI inflows into the eastern region have been slowing down since 2012,
and have been accompanied by a relatively large increase of FDI inflows into the central region and the western region. Annual FDI inflows into the central region have reached more than US$10 billion since 2009, and annual FDI inflows into the western region reached more than US$10 billion in 2013 and 2014.

In terms of provincial distribution of FDI in China, during the period from 1983 to 2014, Guangdong and Jiangsu were the largest FDI recipients in China out of all the provinces. Their shares of FDI inflows were 14.61 percent and 14.49 percent of the national total, respectively, followed by Liaoning (8.68 percent), Shanghai (7.07 percent), Shandong (6.54 percent), Fujian (5.92 percent), Zhejiang (5.90 percent), Tianjin (5.28 percent) and Beijing (3.73 percent) in the eastern region. In the central region, Henan is the largest FDI recipient, attracting 3.31 percent of the national total, followed by Hunan (2.68 percent), Anhui (2.58 percent), Jiangxi (2.42 percent) and Hubei (2.34 percent). In the western region, Sichuan attracted the largest amount of FDI inflows, accounting for 2.67 percent of the national total, followed by Chongqing (1.54 percent), Inner Mongolia (1.36 percent) and Shaanxi (0.98 percent).

Overall, as Figure 1.4 shows, by the end of 2014, FDI in China was overwhelmingly concentrated in the eastern region and accounted for

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**Figure 1.3** FDI inflows into China by region (current US$), 1983–2014

Source: Data from 1983–2005 are from NBS (various issues), *China Statistical Yearbook*; data from 2006–14 are from MOC (various issues), *Foreign Investment Report*.
85.20 percent of the total FDI inflows, while the central region and the western region accounted for only 9.20 percent and 5.60 percent of the total, respectively.

1.1.4 Sectoral Distribution of FDI in China

In terms of the sectoral distribution of FDI in China, as Figure 1.5 shows, FDI had overwhelmingly flowed into the manufacturing sector before 2009. However, since 2010, FDI inflows into the manufacturing sector have started to slow down and have even declined since 2012. By contrast, FDI inflows into the services sector started to increase rapidly and surpassed FDI inflows into the manufacturing sector in 2010. In 2014, FDI inflows into the manufacturing sector were US$39.94 billion while FDI inflows into the services sector reached US$77.54 billion, nearly doubling the amount of FDI inflows into the manufacturing sector.

By the end of 2014, as shown in Figure 1.6, the manufacturing sector attracted 52.74 percent, the services sector attracted 44.93 percent, while the primary sector attracted only 2.33 percent of total FDI inflows into China during the period 1997 to 2014.7

Source: Compiled from NBS (various issues), China Statistical Yearbook for data from 1983–2005; and from MOC (various issues), Foreign Investment Report for data from 2006–14.

Figure 1.4 Regional distribution of FDI in China by the end of 2014

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Source: Compiled from NBS (various issues), China Statistical Yearbook for data from 1983–2005; and from MOC (various issues), Foreign Investment Report for data from 2006–14.
1.1.5 Contribution to Capital Formation

How important have FDI inflows been in China’s domestic capital formation? To evaluate the contribution of FDI to China’s domestic capital formation, we use the share of FDI inflows in China’s total investment in fixed assets. As shown in Figure 1.7, the share reached...
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Since then it started to fall but was still above 10 percent up to 2002. This suggests that FDI made an important contribution to China’s domestic capital formation during the 1990s. However, since 2003, due to China’s rapid and large increase in total investment in fixed assets, the role of FDI in China’s domestic capital formation has been declining. Nevertheless, for a large and fast-growing economy like China—average annual gross domestic product (GDP) growth around 10 percent for the last three and a half decades and the second largest economy in the world—FDI has provided an important supplementary source of finance to its domestic capital formation.

1.1.6 Contribution to Tax Revenue

FDI firms have made a significant contribution to China’s tax revenue. As Figure 1.8 shows, in 1992, the share of FDI firms’ tax revenue in China’s total tax revenue was only 4.25 percent. However, it has increased rapidly, reaching 20.53 percent in 2002, and has remained above 20 percent of China’s total tax revenue since 2002.
1.1.7 Contribution to Employment Creation

In developing countries, where capital is relatively scarce but labor is abundant, one of the most prominent contributions of FDI to the local economy is the creation of employment opportunities. Figure 1.9 shows employment in FDI firms in China from 1987 to 2014 and indicates that employment in FDI firms increased significantly after 2001. While FDI firms employed 0.21 million workers or 0.15 percent of China’s urban employment in 1987, the figures increased to 6.71 million workers or 2.80 percent in 2001, and further increased to 29.55 million workers or 7.52 percent of China’s total urban employment in 2014.

1.1.8 Contribution to Export Promotion

There is considerable evidence that FDI contributes to the growth of host countries’ international trade. In the case of China, perhaps the most prominent contribution of FDI has been in expanding China’s exports. Figure 1.10 presents the export performance of FDI firms from 1986 to 2014. FDI firms’ exports rose from US$0.58 billion in 1986 to
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Figure 1.9  FDI firms’ employment in China, 1987–2014

Figure 1.10  FDI firms’ export performance (current US$), 1986–2014

Source: NBS (various issues), China Statistical Yearbook.

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Table 1.2 The performance of FDI firms’ processing trade, 2002–12

<table>
<thead>
<tr>
<th>Year</th>
<th>FDI firms’ total processing trade (US$ billion)</th>
<th>FDI firms’ processing trade as a percentage of China’s total processing trade (%)</th>
<th>FDI firms’ processing trade as a percentage of FDI firms’ total trade (%)</th>
<th>FDI firms’ processing export (US$ billion)</th>
<th>FDI firms’ processing export as a percentage of FDI firms’ total export (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>228.76</td>
<td>75.7</td>
<td>69.28</td>
<td>134.60</td>
<td>79.21</td>
</tr>
<tr>
<td>2003</td>
<td>322.03</td>
<td>79.6</td>
<td>68.19</td>
<td>190.27</td>
<td>79.17</td>
</tr>
<tr>
<td>2004</td>
<td>450.01</td>
<td>81.9</td>
<td>67.86</td>
<td>266.35</td>
<td>78.66</td>
</tr>
<tr>
<td>2005</td>
<td>577.88</td>
<td>83.7</td>
<td>69.48</td>
<td>346.63</td>
<td>78.03</td>
</tr>
<tr>
<td>2006</td>
<td>705.55</td>
<td>84.9</td>
<td>68.07</td>
<td>431.16</td>
<td>76.47</td>
</tr>
<tr>
<td>2007</td>
<td>831.13</td>
<td>84.3</td>
<td>66.13</td>
<td>521.46</td>
<td>74.93</td>
</tr>
<tr>
<td>2008</td>
<td>890.60</td>
<td>84.5</td>
<td>63.14</td>
<td>572.20</td>
<td>72.37</td>
</tr>
<tr>
<td>2009</td>
<td>764.50</td>
<td>84.1</td>
<td>62.80</td>
<td>493.70</td>
<td>73.44</td>
</tr>
<tr>
<td>2010</td>
<td>970.94</td>
<td>83.9</td>
<td>60.67</td>
<td>620.54</td>
<td>71.96</td>
</tr>
<tr>
<td>2011</td>
<td>1084.28</td>
<td>83.1</td>
<td>58.29</td>
<td>699.33</td>
<td>70.26</td>
</tr>
<tr>
<td>2012</td>
<td>1098.42</td>
<td>81.7</td>
<td>58.00</td>
<td>715.15</td>
<td>69.92</td>
</tr>
</tbody>
</table>


US$791 billion in 2008, before falling to US$672.23 billion (due to the global financial crisis), and then increasing to US$1074.70 billion in 2014. As a result, the importance of FDI firms in China’s exports has increased from only 1.88 percent in 1986 to 58.29 percent in 2005, before falling to 45.87 percent in 2014. One reason for the significant contribution of FDI in expanding China’s exports is that China’s policy in relation to FDI had been deliberately biased toward export-oriented FDI. As a result, FDI firms rapidly become a major exporting group (Chen, 2011a).

One significant feature of FDI in promoting China’s international trade is its heavy engagement in processing trade, especially FDI firms in the coastal region and particularly in Guangdong, Fujian and Jiangsu provinces. As Table 1.2 shows, during the period 2002 to 2012, FDI firms’ processing trade accounted for over 80 percent of China’s total processing trade and accounted for over 60 percent of FDI firms’ total trade. In particular, FDI firms’ processing exports accounted for over 70 percent of FDI firms’ total exports.
1.2 THE MAIN ISSUES TO BE STUDIED

FDI in China is characterized by fast growth and a huge amount of inflows; uneven regional distribution with heavy concentration in the coastal region; overwhelming dominance by developing source economies; concentration in the manufacturing sector before 2010 and a substantial increase in the services sector since 2011; and heavy engagement in processing trade. It also contributes significantly to China’s economy in terms of capital formation, employment creation, tax revenue generation and export promotion. Therefore, what are the impacts of FDI on China’s economy in these circumstances? This study aims to deal with this question by analysing three main issues: the impacts of FDI on China’s regional economic growth; the impacts of FDI on China’s urban–rural income inequality; and the impacts of FDI on China’s urbanization development. For each of these issues, some specific questions need to be reviewed.

Before addressing each of the main issues to be studied, we first clarify the use of FDI inflow data in this study. In China’s official statistics, there are two types of FDI inflow data. One is the contracted FDI inflow data based on the approvals of FDI projects, and the other is the realized FDI inflow data based on the actual investments of FDI projects. The contracted FDI inflow data are a relatively poor indicator when used to analyse FDI inflows into China since some of the approved FDI projects were not actually implemented and some investments were less than specified in the approvals. To avoid these problems and to increase the credibility of our analysis, all FDI inflow data used in the analysis in this study are actual realized FDI inflow data.

1.2.1 Impacts on Regional Economic Growth

In the last three and a half decades China has achieved remarkable economic growth with an annual average real GDP growth rate of around 10 percent. At the same time, China has attracted a large amount of FDI inflows and FDI has contributed greatly to China’s economy in terms of capital formation, employment creation and export expansion. Our main interest in this study is to investigate and identify empirically the ways in which FDI has contributed to China’s regional economic growth. We therefore explore this issue from two aspects. The first is to investigate the impacts of FDI on the economic growth of host provinces, with a particular emphasis on how the local economic and technological conditions affect the spillovers of FDI on the economic growth of the host provinces. The second aspect of the study is to investigate the interregional impacts of the uneven regional distribution of FDI which is heavily concentrated.
in the coastal region on the economic growth of inland provinces. To address the first issue, we investigate and answer the following questions. What are the impacts of FDI on the economic growth of host provinces? Are there differences in the impacts of FDI on economic growth between coastal host provinces and inland host provinces? What are the interregional impacts of the FDI in the coastal region on the economic growth of inland provinces?

1.2.2 Impacts on Urban–Rural Income Inequality

Since the economic reforms and open policies were implemented in late 1978, China has achieved remarkable results in increasing per capita income and improving the living standards of the Chinese people; these results have been attributed to the rapid economic growth. Per capita GDP increased from US$345 in 1980 to US$6416 in 2015 (at 2010 US$). However, with this fast economic growth and overall income increases, income inequality in China has actually worsened. Based on the government’s official calculations, the Gini coefficient reached 0.491 in 2008 before falling to 0.462 in 2015, and the urban–rural per capita income ratio—one of the major components of income inequality—increased from 1.69 in 1983 to 3.33 in 2009 before falling to 2.97 in 2014. While FDI has contributed to China’s overall economic growth, has FDI also contributed to the increase of income inequality in China?

The main interest of this study is thus to identify and then investigate empirically the impacts of FDI on income inequality in China. We investigate empirically whether FDI has improved or worsened urban–rural income inequality in China. Specifically, we examine the direct impacts of FDI on urban–rural income inequality and also investigate the indirect impacts of FDI on urban–rural income inequality through international trade as FDI has been a major contributor to the rapid expansion of China’s international trade. In addition, because of the uneven regional distribution of FDI inflows in China, we also investigate the interregional impacts of this uneven regional distribution on income distribution by focusing on the interregional impacts of FDI in the coastal regions on urban–rural income inequality of the inland regions. To address the second issue, we attempt to provide answers to the following questions. What are the impacts of FDI on urban–rural income inequality in the host provinces? What are the impacts of FDI’s heavy engagement in international trade on urban–rural income inequality in the host provinces? And are there any interregional impacts of FDI in the coastal region on the urban–rural income inequality of the inland provinces?
1.2.3 Impacts on the Development of Urbanization

FDI inflows into China have been overwhelmingly concentrated in the manufacturing and services sectors, which account for over 97 percent of total FDI inflows into the country. The large amount of FDI inflows into the secondary and tertiary sectors have not only facilitated China’s economic structural changes but also absorbed hundreds of millions of surplus rural laborers into the secondary and tertiary sectors in the urban areas. Has this type of economic structural change and rural–urban population migration, both of which are associated with FDI inflows, had any impacts on China’s urbanization development? This study investigates empirically the impacts of FDI on urbanization development in China. Therefore, to address the third issue, we investigate and answer the following questions. What are the impacts of FDI on the urbanization development of host cities? And are there interregional impacts of FDI, especially FDI in the coastal region, on the urbanization development of inland cities?

1.3 THE THEORETICAL FRAMEWORK AND ITS MAIN IMPLICATIONS FOR THE PRESENT STUDY

In this section we first review some of the leading theories explaining FDI, and then discuss the implications of this literature for the study.

1.3.1 A Brief Review of FDI Theories

Foreign direct investment is international investment in the financial or non-financial corporate sectors of the economy in which a non-resident investor purchases 10 percent or more of the voting power of an incorporated enterprise or has equivalent ownership in an enterprise operating under another legal structure (IMF, 2004). Many theories have been advanced to explain FDI. Among these, the leading theories explaining FDI include the industrial organization explanations (Kindleberger, 1969, 1970; Caves, 1971, 1974a, 1974b, 1982, 1996, 2007; Hymer, 1976; Dunning, 1977, 1980, 1981a, 1981b, 1986, 1988a, 1988b, 1993; Dunning and Lundan, 2008), the product cycle hypothesis (Vernon, 1966) and the internalization theory (Buckley and Casson, 1976; Lundgren, 1977; Swedenborg, 1979; Buckley, 1987).

The industrial organization explanations of FDI originate from Hymer’s celebrated 1960 doctoral thesis (published in 1976). In his thesis, Hymer...
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first distinguished the main difference between portfolio investment and direct investment that, he argued, is fundamentally a question of who controls the enterprise in which the investment is made. If the investor directly controls the foreign enterprise, that investment is called a direct investment. If the investor does not control the foreign enterprise, the investment is a portfolio investment. Hymer argued that the capital-arbitrage hypothesis advanced to explain international capital movements was inconsistent with the behavior of multinational enterprises (MNEs) and was unable to explain the causes of FDI. Hymer also argued that the important theoretical shortcoming of the interest rate theory is that it does not explain control. If interest rates are higher abroad than at home, an investor will do well to lend money abroad, but there is no logical necessity for him to control the enterprise he lends to. Therefore, Hymer argued, if we wish to explain FDI, we must explain control.

Drawing on industrial organization theory, Hymer argued that the control of the foreign enterprise is desirable in order to remove competition between that foreign enterprise and enterprise in other countries, or the control is needed in order to appropriate fully the returns on certain skills and abilities. Enterprises in different countries often compete with each other because they sell in the same market or because some of the firms sell to other firms. If the markets are imperfect, that is, if there is horizontal or bilateral monopoly or oligopoly, some form of collusion will be profitable. One form of collusion is to have the various enterprises owned and controlled by one firm. This is one motivation for firms to control enterprises in foreign countries.

Another main motivation stems from the fact that firms are quite unequal in their ability to operate in a particular industry. A firm with advantages over other firms in the production of a particular product may find it profitable to undertake the production of this product in a foreign country as well. The firm could also rent or sell its skill rather than undertake the foreign production itself. Which method it chooses depends largely on the degree of imperfection in the market for that skill. If the market is imperfect, the owner may not be able to appropriate fully the returns on the skill unless she or he controls its use. Hymer asserted that FDI involves the transfer of a package of resources including not only capital but also technology, management skills and entrepreneurship. As a result, MNEs were motivated to produce abroad by the expectation of earning an economic rent on their total resources.

Hymer pointed out that if foreign MNEs are exactly identical to domestic firms, they will not find it profitable to enter the domestic market, since there are added costs of doing business in another country, including communications and transport costs, higher costs of stationing person-
nel abroad, as well as barriers due to language customs, and the problems arising from being outside the local business and government networks. Therefore, Hymer argued, for MNEs to carry out foreign production successfully they must possess some kind of firm-specific ownership advantages, such as superior technology or lower costs due to economies of scale, which are sufficient to outweigh the disadvantages they face in competing with indigenous firms in the country of production. Ownership advantages can range from the possession of superior technology to ownership of a brand name. Whether the firm will exploit such advantages through licensing or FDI depends on the nature of the advantages and the degree of imperfections in the markets for the advantages it possesses. The higher the imperfections, the greater will be the tendency to undertake FDI and control operations rather than engage in arm’s-length transactions.

Following Hymer, many economists have also contributed to the industrial organization explanations of FDI. Among them the works of Kindleberger (1969, 1970), Caves (1971, 1974a, 1974b, 1982, 1996, 2007), Dunning (1977, 1980, 1981a, 1981b, 1986, 1988a, 1988b, 1993) and Dunning and Lundan (2008) are particularly worthy of note. These studies concentrated on trying to identify and assess the origins and significance of the firm-specific ownership advantages which drive FDI, such as technological capacity, labor skills, industrial structure, product differentiation, marketing skills and organizational capabilities.

Vernon’s product cycle hypothesis (1966) is another early influential approach to explaining FDI. The product cycle hypothesis states that, based on the comparative advantage arising from the pattern of factor endowments, initially a product was invented in the home country with comparative advantage in technology and innovatory capabilities, and produced for the home market in the home country near to both its innovatory activities and markets. In the second stage of the product cycle, because of a favorable combination of innovation and production advantages offered by the home country, the product was exported to other countries similar to the home country in demand patterns and supply capabilities. In the third stage of the product cycle, gradually, as the product becomes standardized or mature and labor becomes a more important ingredient of production costs, the attractions of locating value-adding activities in a foreign, rather than a domestic, location increase, thus foreign production takes place through FDI. In the final stage of the product cycle, eventually, if conditions in the host country are right, the subsidiary could replace exports from the parent company or even export back to the home country. The product cycle hypothesis was the first dynamic interpretation of the determinants of, and the relationship between, international trade and foreign production.
In the mid 1970s some economists, for example, Buckley and Casson (1976), Lundgren (1977), Swedenborg (1979) and Buckley (1987), proposed the application of internalization theory to explain the growth of MNEs based on the theory of transactions costs. As Buckley and Casson (1976) observed, for MNEs to serve foreign markets through direct investment rather than alternative modes of doing business like exporting or licensing, there must have been some internalization advantages for the firm to do so. That is, there must be economies associated with a firm exploiting a market opportunity through internal operations rather than through external arm’s-length transactions such as the sale of rights to the firm’s intangible assets to other firms. These economies might be associated with costs (including opportunity costs) of contract enforcement or maintenance of quality or other standards. The internalization approach incorporates the idea of market imperfections identified by Hymer and extends it to provide an explanation for the existence of MNEs across national boundaries. In general, the theory argues that, faced with imperfections in the markets related to intangible assets and imperfect information, firms tend to internalize operations to minimize costs of transactions and increase productive efficiency.

One organizing framework was proposed by Dunning (1977, 1980, 1981a, 1981b, 1986, 1988a, 1988b, 1993), who synthesized the main elements of several explanations of FDI, and suggested that three conditions—ownership advantages, location advantages and internalization advantages—all need to be present for a firm to have a strong motive to undertake FDI. This has become known as the ‘OLI’ framework for explaining FDI.

A firm’s ownership advantage could be a product or a production process to which other firms do not have access, such as a patent or blueprint. The advantage could also be some specific intangible assets or capabilities such as technology and information, managerial, marketing and entrepreneurial skills, organizational systems and access to intermediate or final goods markets. Whatever its form, the ownership advantage confers some valuable market power or cost advantage on the firm sufficient to outweigh the disadvantages of doing business abroad.

The foreign market must offer a location advantage that makes it profitable to produce the product in the foreign country rather than simply produce it at home and export it to the foreign market. Location advantages include not only resource endowments but also economic and social factors, such as market size and structure, prospects for market growth and the degree of development, the cultural, legal, political and institutional environment and government legislation and policies.

The multinational enterprise must have an internalization advantage. If a company has a proprietary product or production process and if it
is advantageous to produce the product abroad rather than export it, it is still not obvious that the company should set up a foreign subsidiary. One of the other alternatives is to license a foreign firm to produce the product or use the production process. However, because of market failures in the transaction of such intangible assets, the product or process is exploited internally within the firm rather than at arm’s-length through markets. This is referred to as an internalization advantage.

The generalized predictions of the OLI framework are straightforward. At any given moment in time, the more an enterprise possesses ownership advantages relative to those of others, the greater the incentive it has to internalize rather than externalize their use, the more it finds in its interest to exploit the advantages from a foreign location, then the more it is likely to engage in foreign production (Dunning, 1993).

1.3.2 The Main Implications of Existing Theory for the Present Study

In the previous subsection we reviewed the leading theories explaining FDI. From Hymer’s seminal work to Dunning’s OLI paradigm, scholars have made many contributions to the theory of FDI. Among them, Dunning’s OLI framework has been the most influential and comprehensive explanation of FDI and is a very useful theoretical framework for this study.

What are the main implications of the existing theories of FDI for this study? According to Dunning’s OLI framework, because of its ownership advantage and the possession of firm-specific assets, FDI brings into a host country a package of capital and other financial resources; advanced technology and know-how; modern enterprise management and mature marketing skills; well-organized international distribution channels; coordinated relationships with suppliers and clients; good reputation and other intangible assets. As a result, FDI is expected to produce a series of impacts on a host country’s economy through capital formation, employment creation, and more importantly through knowledge spillovers to the domestic economy.

In terms of capital formation and employment creation, the inflows of FDI will increase fixed capital formation, increase demand for labor and create employment in a host country, all of which are especially important for developing countries. Through capital augmentation and employment creation, FDI is expected to contribute to economic growth and development of developing countries.

In terms of knowledge spillovers, knowledge and innovation have long been recognized as important sources of economic prosperity and development (Stiglitz, 1999). Knowledge spillovers refer to knowledge flow
that takes place without any business transactions occurring (Griliches, 1979, 1992). FDI is one of the most important means through which international knowledge spillovers take place (e.g. Dunning, 1993; Dunning and Lundan, 2008). Knowledge spillovers of FDI are regarded as a very important source of knowledge in developing countries (e.g. Javorcik, 2004; Kneller and Pisu, 2007; Chen, 2011a; Chen et al., 2013). Knowledge spillovers from MNEs to host domestic firms can take place through several channels.

First, demonstration effects are a very important channel for knowledge spillovers from MNEs to the host economy. If MNEs bring in advanced knowledge and employ new products or techniques in their production, host domestic firms may benefit from the ensuing demonstration effects to learn and imitate from the MNEs. If MNEs and host domestic firms are in the same industry, the demonstration effects also provoke competition between them. The increased competition will not only cause host domestic firms to adopt and imitate the advanced technology and production techniques of MNEs to ensure their survival but also force host domestic firms to undertake innovation to improve their own performance and to use existing technology more efficiently (e.g. Blomstrom and Kokko, 1998; Aitken and Harrison, 1999; Sheng et al., 2011; Chen et al., 2013). Moreover, the increased competition may also cause MNEs to redouble their knowledge-innovating activities in order to maintain their technological superiority in host countries. This not only increases the potential for knowledge spillovers from MNEs to host domestic firms but also offers a further incentive for host domestic firms to learn and imitate from MNEs, thus reinforcing knowledge spillovers through demonstration effects. Although, the increased competition from MNEs may also crowd host domestic firms out of the product market and compete with them in the labor and resources markets (e.g. Aitken and Harrison, 1999; Hu et al., 2005; Chen, 2011a; Fu, 2011; Sheng et al., 2011; Chen et al., 2013). However, the assessment of the net effects of horizontal knowledge spillovers of MNEs on domestic firms is inconclusive (Gorg and Greenaway, 2004).

Second, knowledge spillovers from MNEs to a host economy can also take place through labor mobility (Dunning, 1993). Employees who were working in MNEs may be hired by host domestic firms and may also set up their own businesses, bringing with them all or at least part of the knowledge that they have learned and accumulated when they worked in MNEs. Therefore, labor mobility of employees of MNEs will add to the knowledge stock outside MNEs in the host economy.

Third, knowledge spillovers from MNEs to a host economy can also occur through vertical linkages—backward linkages and forward link-
Backward linkages (from MNEs to host suppliers) of MNEs may benefit the host economy in several ways. (1) MNEs may increase the product quality and efficiency of their host suppliers. Having to meet international product and quality standards, MNEs may impose more stringent requirements for product quality and on-time delivery on their host suppliers (e.g. Humphrey and Schmitz, 2002; Javorcik, 2004; Kneller and Pisu, 2007). If MNEs are willing to provide assistance to upgrade their production management or technology, host suppliers may be able to learn about more advanced production and management techniques. They might also receive support for the improvement of product quality or the introduction of innovations, for example, through labor training (Lall, 1980). Furthermore, MNEs may provide assistance for the establishment of productive infrastructure as well as help for the sourcing of scarce raw materials (Crespo and Fontoura, 2007). (2) The competition among host domestic firms to stay or become a supplier of the MNEs may further increase their efficiency, for example, if they are urged to use their resources more efficiently or adopt new technologies or production processes (Crespo and Fontoura, 2007; Herzer, 2009). (3) The business linkages to export-oriented MNEs may provide host suppliers with information about foreign market conditions, for example, with regard to consumers’ tastes, design, packaging, product quality requirements and the regulatory environment (Blomstrom and Kokko, 1998). This knowledge may help host suppliers to establish their own direct exports to foreign markets (Sheng et al., 2011; Chen et al., 2013). (4) By increasing the efficiency and product quality of their host suppliers, MNEs may extend the benefits to other host downstream producers who produce end-user consumer goods as cheaper and technologically more advanced intermediate inputs become available (Kugler, 2006; Blalock and Gertler, 2008).

MNEs can also diffuse knowledge to a host economy through forward linkages (from MNEs to host customers) if MNEs are suppliers of intermediate goods in the host economy and sell their advanced intermediate goods to host downstream firms. Host downstream firms may become more productive as a result of gaining access to new, improved or less costly intermediate inputs produced by MNEs in the upstream sector (Javorcik, 2004). In addition, the purchase of the MNEs’ intermediate goods might be accompanied by the provision of complementary services that may not be available in connection with imports (Javorcik, 2004). Overall, MNE suppliers may increase the host country pool of knowledge by providing new intermediate goods which were previously not available in the host economy.

Finally, knowledge spillovers from MNEs to a host economy can also
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occur through joint research and development (R&D) and collaboration in innovation between MNEs and host research institutions. If MNEs are encouraged and are willing to share their advanced knowledge, the new insights garnered can spread to the wider economy. The national innovation system in general and academia in particular are valuable platforms from which knowledge can be diffused outside the MNE organization. Such systems may help to advance and translate the knowledge into commercial innovations (Mowery and Oxley, 1995). To provide incentives for MNEs to share knowledge, it is important for the national innovation system and government to support and foster joint R&D and collaboration in innovation between academia and business. For example, the Chinese government has launched a series of innovation policies to enhance an enterprise-centered national innovation system (UNESCO, 2010). In this context, the Chinese government is giving high priority to cooperation among industries, universities and research institutes in order to assimilate imported advanced technologies and innovation. National platforms (technology development centers and national engineering laboratories) for joint R&D between firms and academia have been established to foster knowledge exchanges. It is expected that this national innovation system will facilitate the diffusion of knowledge spillovers from MNEs to the broader Chinese economy.

Therefore, on a theoretical level, FDI can have impacts on a host economy through capital formation, employment creation and knowledge spillovers. Within the parameters of this theoretical framework, we will now discuss how FDI could have impacts on economic growth, income inequality and urbanization development of developing countries.

The impacts of FDI on economic growth of developing countries
Because FDI brings into the host country a package of not only capital but also technology, production know-how, management skills and other intangible assets (e.g. Hymer, 1976; Dunning, 1993; Caves, 1996), it is expected that FDI can contribute to the economic growth of developing countries according to both the neo-classical growth models and the new growth models. In the neo-classical growth models, which emphasize technological progress, long-run growth can only be achieved by technological progress which is considered to be exogenous. Because FDI brings into developing countries not only capital but also technology and other intangible assets, which are exogenous to developing countries, according to the neo-classical growth models, therefore, a positive relationship between FDI and long-run economic growth should be expected. Similarly, in the new growth models which emphasize the role of science and technology, human capital and externalities in economic development, FDI is expected
to promote economic growth in the long run. It is expected that FDI can increase developing countries’ economic growth through several channels. First, the inflows of FDI will increase demand for labor and create employment in a host country, especially in developing countries. The increase in employment will contribute to an increase in total output. This implies the more the employment created by FDI, the higher the output growth of a host economy. Second, the inflows of FDI increase a host country’s fixed capital formation. Through capital augmentation in a recipient economy, FDI is expected to be growth-enhancing by encouraging the incorporation of new inputs and technologies into the production function, thus increasing total output. This implies the more the foreign capital input, the higher the output growth of the host economy. Third, FDI is believed to be a leading source of technology transfer in developing countries. Technological progress takes place through a process of capital deepening by the introduction of new varieties of knowledge-based capital goods which are brought in by MNEs. This implies that FDI is expected to shift the production function of a host country over time resulting from technological progress. Fourth, through knowledge spillovers, FDI is expected to increase the productivity and efficiency of local firms in the host country. This implies the higher the presence of FDI, the stronger the spillover effects of FDI on local economic growth.

However, MNEs may also impose competition on local firms, for example, crowding them out of product markets and competing with them in the labor and resources markets (Aitken and Harrison, 1999; Branstetter and Feenstra, 2002; Hu and Jefferson, 2002; Fu, 2011; Sheng et al., 2011; Chen et al., 2013). Thus, FDI may result in negative spillovers on local economic growth. Therefore, whether domestic firms in the local economy will benefit from spillovers of FDI also depends on the absorptive capabilities of the local economy and the industrial linkages between MNEs and domestic firms. Thus, the implication is that, given the spillovers of FDI, the higher the level of local absorptive capabilities and the closer the industrial linkages between MNEs and domestic firms, the more benefit will be obtained by domestic firms in the local economy from knowledge spillovers of FDI.

The impacts of FDI on income inequality of developing countries

In terms of the impacts of FDI on income inequality, it is expected that FDI would affect income distribution in developing countries by contributing to economic growth and development, changing resource endowments and impacting on their employment and wage structures. This effect is manifested in several ways.

First, according to the Kuznets inverted-U curve hypothesis (Kuznets,
income inequality increases in the early stage of development but declines later once a certain stage of development is reached. Theoretically, as discussed above, FDI is expected to contribute to developing countries’ economic growth and development through capital formation, employment creation, technology transfer and knowledge spillovers (Dunning, 1993; Caves, 1996). Therefore, it is also expected that although FDI may initially increase income inequality, its benefits will eventually spread throughout the whole economy and it could in the long run facilitate a more even distribution of incomes in developing countries (Tsai, 1995; Chen, 2016).

Second, FDI brings capital into capital-scarce developing countries; this not only increases the countries’ productive capital stock, but also changes their capital-to-labor ratio (Dunning, 1993). As a result, FDI inflows should reduce the relative returns on capital to labor and, consequently, reduce income inequality in capital-scarce developing countries (Lin et al., 2013).

Third, FDI creates employment in developing countries, which is especially important where there is a large amount of surplus labor. According to the conventional Heckscher-Ohlin model and the Stolper-Samuelson theorem (Krugman and Obstfeld, 1991), if developing countries have relatively abundant unskilled labor, to take advantage of the relatively plentiful factors of production, FDI would be concentrated in activities that use unskilled labor intensively (Lee and Vivarelli, 2006; Ucal et al., 2014). As a result, FDI should lead to an increase in the demand for unskilled labor, which not only increases the income of the previously unemployed laborers but also drives up the wages of unskilled workers relative to the wages of the skilled workers. As a result, income inequality will decline in developing countries as FDI increases. Therefore, by contributing to economic growth and development, capital formation and employment creation, FDI tends to reduce income inequality in developing countries.

Conversely, FDI may also increase income inequality in developing countries. Because of its ownership advantages, apart from capital, FDI also brings technology, competition and knowledge spillovers into developing countries, which may accelerate skill-biased technological changes and hence increase income inequality in these countries. This is because, given the high technology content embodied in the production, MNEs will tend to demand more skilled labor, thus increasing the skill intensity of production in these developing countries (Feenstra and Hanson, 1997). Second, facing the intense competition from MNEs, local firms are induced to adopt new technologies and engage in R&D activities (Wood, 1995; Thoenig and Verdier, 2003). Third, through competition and knowledge spillovers, local firms are induced to undertake technological changes.
(Wang and Blomstrom, 1992; Borensztein et al., 1998; de Mello, 1997, 1999; Saggi, 1999). These technological changes may be skill-biased and increase the relative wages of skilled workers (teVelde, 2003; Figini and Gorg, 2011). Therefore, ironically, when allowing for capital deepening and skill-biased technological change, FDI not only promotes economic growth by improving capital accumulation and productivity growth but also increases income inequality in developing countries.

The impacts of FDI on urbanization development of developing countries

Urbanization is a population shift from rural to urban areas and the gradual increase in the proportion of people living in urban areas. According to the theories of Lewis (1954) and Fei and Ranis (1964), people leave the agricultural sector to work in the manufacturing sector and population migration from rural areas to urban areas is mainly attracted by the higher wages offered in the manufacturing sector and is driven by the income difference between urban areas and rural areas. It is also expected that FDI can affect the urbanization process of developing countries through facilitating the economic structural changes by contributing to the expansion of the secondary and tertiary sectors, absorbing surplus rural labor by creating employment in the secondary and tertiary sectors and encouraging rural people to migrate to cities by offering higher wages.

It is clear that FDI contributes to both economic development and structural changes in developing countries. For developing countries, being relatively abundant in human resources especially in the large numbers of unskilled laborers, FDI inflows will tend to be concentrated in the labor-intensive manufacturing and services sectors. As a result, FDI will not only contribute to economic development but also facilitate economic structural changes by contributing to the expansion of the secondary and tertiary sectors of developing countries. During the process of economic structural changes, the decline of the agricultural sector will produce excess numbers of laborers in rural areas, and the expansion of the secondary and tertiary sectors contributed by FDI will, in turn, induce large numbers of these rural laborers to flow into urban areas. Therefore, FDI will contribute to economic structural changes, absorbing surplus rural labor and accelerating urbanization development in developing countries.

Second, FDI creates employment in developing countries, which is especially important in those countries where there are large quantities of rural surplus laborers. On the one hand, FDI directly creates employment opportunities for many rural laborers, thus accelerating the transfer of rural surplus labor to urban areas. On the other hand, FDI’s growth effect increases employment across the whole economy, which will increase the
flows of the rural population toward urban areas, thus increasing urbanization development in developing countries.

Third, empirical studies show that MNEs not only pay their employees higher wages than domestic firms but also have a positive impact on wages in those domestic firms participating in the supply chains established by MNEs (OECD, 2008). In addition, FDI’s contribution to economic growth also tends to increase the overall level of income in urban areas in developing countries. This higher wage and income increase effect of FDI will attract rural surplus labor to flow into cities to seek new jobs and higher incomes, which will increase the urban populations and promote urbanization development. Therefore, we expect that FDI will have a positive impact on urbanization development in developing countries.

The interregional impacts of FDI on economic growth, income inequality and urbanization development in developing countries

The above discussions have focused on the impacts of FDI in a host region in terms of economic growth, income inequality and urbanization development of the host region of a developing country. However, what are the interregional impacts exerted by FDI that is established in the host region on the economic growth, income inequality and urbanization development of other regions of a developing country? In many developing countries FDI inflows have been geographically concentrated in only a few regions, for example, in India (Mukherjee, 2011), Indonesia (Indonesia Investment Coordinating Board, 2010), Mexico (Jordaan, 2008), Russia (Gonchar and Marek, 2014) and Turkey (Deichmann et al., 2003). A similar pattern of FDI inflows has also been seen in China. As we discussed in Section 1.1, one of the prominent features of FDI in China is its heavy concentration in the coastal (eastern) region, accounting for over 85 percent of the total FDI inflows into China. Has the concentration of FDI in the coastal region had any impact on economic growth, income inequality and urbanization development of the inland region? This is one of the main concerns of this study.

Based on the FDI literature reviewed above, we argue that FDI can have interregional impacts on economic growth, income inequality and urbanization development in China through two main channels: (1) interregional knowledge spillovers on economic growth and development and (2) interregional labor migration and income remittance.

Due to its ownership advantages, FDI can generate positive interregional knowledge spillovers on economic growth and development in other regions. Interregional knowledge spillovers of FDI can take place through at least four channels. The first is the interregional movement of labor. FDI stimulates the interregional migration of labor and when
employees trained or hired by FDI firms move back to their own regions they can bring knowledge to local firms and knowledge diffusion takes place (Rozelle et al., 1999; Fosfuri et al., 2001; Cai and Wang, 2003; Du et al., 2005; Holger and Strobl, 2005; Bao et al., 2007). A second channel is through interregional backward and forward industrial linkages. FDI may develop inter-industrial linkages with firms in other regions of a country, providing firms in those regions opportunities to gain economies of scale and productivity improvement through links in the supply chain (Javorcik, 2004; Kugler, 2006; Liu, 2008; Sheng et al., 2011; Chen et al., 2013). The third is interregional imitation. Innovations and R&D activities of FDI firms might generate interregional knowledge spillovers through imitation and reverse engineering in firms in other regions (Keller, 2002; Funke and Niebuhr, 2005; Kuo and Yang, 2008; Bronzini and Piselli, 2009). And the fourth channel is macroeconomic consequences, such as increased market demand for products from other regions as a result of income increases generated by FDI (Brun et al., 2002; Zhang and Felmingham, 2002).

However, FDI may also impose competition on firms in other regions, for example, crowding them out of the product market and competing with them in the labor and resources markets (Aitken and Harrison, 1999; Branstetter and Feenstra, 2002; Hu and Jefferson, 2002; Hu et al., 2005; Fu, 2011; Fu and Gong, 2011; Chen et al., 2013; L. Wang et al., 2013; Chen, 2015a). Thus, FDI may have negative interregional spillovers on economic growth of other regions.

Because economic growth promotes income equality (Kuznets, 1955) and urbanization development (Lewis, 1954; Fei and Ranis, 1964), if FDI has positive interregional spillovers on economic growth it will contribute to reducing income inequality and increasing the urbanization development in other regions. In contrast, if FDI has negative interregional spillovers on economic growth, it will contribute to increasing income inequality and impeding the urbanization development in other regions.

In terms of interregional labor migration and income remittance, FDI attracts interregional migration of labor from other regions. In the case of China, FDI in the coastal region has attracted hundreds of millions of migrants from the inland region to the coastal region. This type of interregional labor migration associated with FDI is expected to have impacts on economic growth, income inequality and urbanization development in the inland region.

One of the most important impacts is that, attracted by better employment opportunities, higher income and more career development opportunities attributed to the large amount of FDI inflows into the coastal region, hundreds of millions of both skilled laborers and unskilled laborers will flow from the inland region to the coastal region seeking work in
FDI firms. Consequently, the massive outflows of labor from the inland region to the coastal region will have negative impacts on the economic growth of the inland region.

Second, the interregional migration of rural migrant workers from the inland region will cause a loss of incomes at home on the one hand, but on the other hand they will remit money back to their home region. If the amount of remittance by interregional rural migrant workers is higher than the income lost at home, rural households’ incomes will increase, thus reducing urban–rural income inequality in the inland region. However, if the amount of remittance sent by the interregional rural migrant workers is lower than the lost income at home, rural households’ incomes will decrease, thus increasing urban–rural income inequality in the inland region.

A further issue is that among the interregional migrants from the inland region to the coastal region, a small proportion comprises urban migrants but the overwhelming majority of them are rural migrant workers. The movement of urban migrants to the coastal region will definitely reduce the permanent urban population of the inland region. While many of the rural migrant workers would have moved to urban areas in their own cities, because of higher wages, more job opportunities and better living conditions in the coastal region largely attributed to the large amount of FDI inflows, they choose to migrate to work and live in the coastal region. As a result, we expect that the migration of large numbers of laborers from the inland region to the coastal region will promote urbanization development in the coastal region but will impede urbanization development in the inland region.

Therefore, theoretically FDI could have positive or negative impacts on economic growth, and could improve or worsen income inequality and contribute to or impede urbanization development in other regions. For this reason, the exact interregional impacts of FDI on economic growth, income inequality and urbanization development need empirical investigation.

By applying the theoretical framework of Dunning’s OLI paradigm in explaining FDI, together with the theories of economic growth, economic development and income inequality, as well as economic development and labor migration, we have raised a number of implications of our study. These implications will enable us to develop a set of hypotheses that may be expected to explain the impacts of FDI on China’s regional economic growth, income inequality and urbanization development. These hypotheses will be developed and tested in the ensuing chapters of this study.
1.4 STRUCTURE OF THE STUDY

The five core chapters are grouped into three parts, with each part focusing on a specific issue addressed in the study, namely, the impacts of FDI on regional economic growth (Part I), the impacts of FDI on income inequality (Part II) and the impacts of FDI on urbanization development (Part III).

Part I comprises Chapters 2 and 3 and focuses on investigating the impacts of FDI, with particular emphasis on knowledge spillovers of FDI, on China’s regional economic growth.

Chapter 2 examines the impacts of FDI on China’s regional economic growth. The chapter first discusses the implications of FDI on economic growth of developing countries based on different growth models. Then it identifies the possible channels through which FDI may affect the economic growth of host economies. Based on the theoretical foundations of economic growth and the channels through which FDI affects economic growth, an augmented growth model incorporating the variables of FDI is specified. By using a provincial-level panel dataset encompassing China’s 30 provinces over the period 1987–2014, this chapter estimates the augmented growth model in which direct effects (for example, raising output and productivity through capital augmentation and technological progress) and indirect effects (for example, improving productivity and efficiency through spillover effects on the local economy) of FDI on China’s regional economic growth are analysed. The chapter first examines the impacts of FDI on China’s regional economic growth by using the full sample of China’s 30 provinces. Then the chapter examines how the local economic and technological conditions of host provinces influence the extent to which FDI contributes to local economic growth by subdividing China’s 30 provinces into the coastal region and the inland region province groups based on their economic and technological conditions. Finally, based on the empirical regression results, the implications for enhancing and accelerating the diffusion of positive knowledge spillovers from FDI to China’s economy are discussed.

Chapter 3 focuses on investigating the interregional impacts of FDI on China’s regional economic growth, with a particular emphasis on analysing the impacts of FDI in the coastal region on the economic growth of the inland provinces. FDI in China is heavily concentrated in the coastal region. Do inland provinces benefit from FDI in the coastal region or are they disadvantaged by FDI in the coastal region? The main interest in this chapter is therefore to investigate empirically whether FDI concentrated in the coastal region may have boosted or undermined economic growth in the inland region. The chapter first discusses the channels through which
interregional knowledge spillovers of FDI can take place. Then using a provincial-level panel dataset containing China’s 19 inland provinces over the period 1987–2014 and employing the fixed-effects and instrumental variable regression techniques, the chapter estimates an augmented growth model incorporating the variables of FDI in the coastal region to investigate (1) whether there are interregional spillovers resulting from FDI being concentrated in the coastal region on economic growth of inland provinces; (2) does the level of local industrial development of inland provinces affect interregional spillovers from FDI concentrated in the coastal region on the economic growth of inland provinces; and (3) do different types of FDI engaged in different levels of the processing trade in the coastal region have different interregional spillovers on the economic growth of inland provinces. Finally, based on the empirical estimation results, implications for China’s regional opening policies implemented since 1978, which have favored the coastal region to attract FDI, particularly export-oriented FDI focusing on processing trade, are discussed. In addition, appropriate policies to attract FDI inflows into the inland region and to increase interregional knowledge spillovers from FDI in the coastal region to inland provinces are proposed.

Part II consists of Chapters 4 and 5 and is devoted to investigating the impacts of FDI on China’s urban–rural income inequality.

Chapter 4 investigates the impacts of FDI on urban–rural income inequality in China. For the last three and a half decades, China has achieved remarkable economic growth, with an annual GDP growth rate above 10 percent. It is clear that the large amount of FDI inflows has contributed to that rapid growth. However, with such fast economic growth, income inequality in China has actually worsened. While FDI has contributed to China’s economic growth, has FDI also contributed to the rising income inequality in China? Therefore, the main interest of this chapter is to investigate empirically whether FDI has improved or worsened urban–rural income inequality in China. The chapter starts with a discussion on the rising income inequality and presents reasons for investigating the impacts of FDI on urban–rural income inequality in China. Then it discusses the theoretical framework and the possible channels through which FDI may affect urban–rural income inequality in China. By using a provincial-level panel dataset containing China’s 30 provinces over the period 1987–2014 and employing the fixed-effects and instrumental variable regression techniques, the chapter estimates an augmented Kuznets inverted-U curve model incorporating the variables of FDI to investigate the direct impact of FDI on urban–rural income inequality. The chapter also investigates the indirect impact of FDI on urban–rural income inequality as a result of international trade as FDI has been a major contributor to the rapid
expansion of China’s international trade. Finally, based on the empirical regression results, some policy suggestions for reducing urban–rural income inequality particularly relating to FDI are discussed.

Chapter 5 analyses the interregional impacts of FDI on urban–rural income inequality, with a particular emphasis on investigating the impacts of FDI in the coastal region on urban–rural income inequality in the inland provinces. FDI in China is heavily concentrated in the coastal region, a fact which has attracted hundreds of millions of rural migrants from inland provinces to work in coastal provinces. Can FDI in the coastal region have interregional impacts on urban–rural income inequality in inland provinces? This is the main interest of this chapter. The chapter first presents the theoretical framework for the study and discusses the possible channels through which FDI may have interregional impacts on urban–rural income inequality in China’s inland provinces. Then using a provincial-level panel dataset containing China’s 19 inland provinces over the period 1987–2014 and employing the fixed-effects and instrumental variable regression techniques, the chapter estimates an augmented Kuznets inverted-U curve model incorporating the variables of FDI in other regions to investigate whether there are interregional impacts of FDI on urban–rural income inequality of inland provinces. The chapter also investigates the interregional impacts of FDI in different regions (coastal region versus inland region) and examines how FDI engaged in different types of trade activities (processing trade versus ordinary trade) impacts on urban–rural income inequality in inland provinces. Finally, based on the empirical regression results, the chapter discusses some policy implications for reducing urban–rural income inequality in the inland provinces.

Part III contains Chapter 6 and is devoted to investigating the impacts of FDI on China’s urbanization development. China has achieved considerable progress in urbanization development. However, its urbanization level is still relatively low compared to countries at the same income level. Therefore, accelerating the transfer of rural surplus labor to urban areas and increasing the level of urbanization are important and long-term tasks in China. How has FDI contributed to China’s urbanization development? This is the main interest of this chapter. The study starts with a brief overview of the literature and identifies gaps in existing studies on the impacts of FDI on urbanization development. Then it discusses the theoretical framework adopted to explain labor migration and urbanization development, and the possible channels through which FDI may affect urbanization development. In particular, the chapter discusses how FDI may affect rural–urban migration by enforcing the pushing and pulling forces which drive labor migration from rural areas to urban areas, thus promoting urbanization development in China. By using a prefecture
city-level panel dataset covering China’s 262 prefecture cities for the period 2004–13 and employing the dynamic panel system Generalized Method of Moments (GMM) model with instrumental variable regression techniques, the chapter investigates the impacts of FDI on China’s urbanization development. The empirical exercises are conducted in three steps. The study investigates (1) the impacts of FDI in a host city on that city’s urbanization development; (2) the interregional impacts of FDI on an inland city’s urbanization development; and (3) the interregional impacts of FDI in different regions (coastal cities versus inland cities) and engaged in different levels of processing trade on an inland city’s urbanization development. Based on the empirical estimation results, some policy implications for accelerating rural to urban labor migration and promoting urbanization development in China are discussed.

Finally, Chapter 7 serves as the conclusion of this study. It summarizes the main findings of the study and provides some policy implications for China’s attraction and utilization of FDI in order to enhance the benefits of FDI to China’s economy.

NOTES

1. The four Special Economic Zones are Shenzhen, Zhuhai and Shantou in Guangdong Province, and Xiamen in Fujian Province.
2. There is no generally accepted definition of what renders a country or jurisdiction a tax haven, but activities that are commonly associated with such places range far beyond tax. Most commonly it refers to those countries or jurisdictions that have a low-tax or no-tax regime or which offer generous tax incentives. Some definitions focus purely on tax: for example, a widely cited academic paper (Dharmapala and Hines, 2009) describes a tax haven as a jurisdiction where particular taxes, such as inheritance tax or income tax, are levied at a low rate or not at all.
3. The tax haven economies are Barbados, British Virgin Islands, Cayman Islands, Mauritius and Samoa. FDI inflows from the tax haven economies into China are investments made by third countries or economies in China via the tax haven economies to take advantage of tax-free regimes in the tax haven economies. Please see Chen (2011a) for a detailed explanation.
4. The eastern region comprises Beijing, Tianjin, Hebei, Liaoning, Shanghai, Jiangsu, Zhejiang, Fujian, Shandong, Guangdong and Hainan.
5. The central region comprises Shanxi, Jilin, Heilongjiang, Anhui, Jiangxi, Henan, Hubei and Hunan.
6. The western region comprises Inner Mongolia, Guangxi, Sichuan, Guizhou, Yunnan, Shaanxi, Gansu, Qinghai, Ningxia, Tibet and Xinjiang.
7. Data for FDI inflows into sectors are not available before 1997.
8. Processing trade activities include ‘processing or assembling with imported materials’ and ‘processing or assembling with supplied materials’. For the processing or assembling with imported materials, processing firms import, free of customs duty, materials and components that are used to produce finished goods and export them to international markets. In the case of processing or assembling with supplied materials, the processing firms process or assemble duty-free materials and components supplied by foreign firms and export finished products. They are paid a fee for the processing or assembling activities.
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The foreign firms control both the supply of the materials and the entire international marketing of the processed or assembled products.

9. The host region can be a country, a province or a city depending on the level of data used in empirical studies. In this study, Chapters 2 to 5 use provincial-level data, so the host region is a province, while Chapter 6 uses prefecture city-level data, so the host region is a city.