2014

Emerging Market Challenges: Moving Beyond Trade to Promote the Middle Class and Avoid the Middle-Income Trap

Penelope B. Prime
Georgia State University, pprime@gsu.edu

Emerging Market Challenges: Moving Beyond Trade to Promote the Middle Class and Avoid the Middle-Income Trap

by Penelope B. Prime*

I. INTRODUCTION

The rise of the middle class around the world is seen by many as the next frontier in business opportunities. In fact, the concept of "emerging markets" is closely associated with the likelihood of a rapid rise in middle-class incomes; in other words, a large "internal market potential" or an "increasing purchasing power among consumers."[1] One report by McKinsey & Company[2] estimated that annual private spending in emerging markets will reach $30 trillion by 2025.[3] It has been estimated that global consumers and proportional spending will increase from 1.8 billion people spending $21 trillion in 2009 to 4.9 billion people spending $56 trillion by 2030.[4]

Another trend, however, raises the prospect that these opportunities will be tempered, at least in certain markets. The so-called middle-income trap, also referred to as "growth slowdowns," is increasingly cited

---

* Director of the China Research Center & Professor of International Business, Institute of International Business, J. Mack Robinson College of Business, Georgia State University. University of Denver (B.A., 1976); University of Michigan (M.A., 1980); University of Michigan (Ph.D., 1987). The Author would like to thank Drew Matthews for his research assistance.

1. S. TAMER CAVUSGIL ET AL., DOING BUSINESS IN EMERGING MARKETS (2d ed. 2013).
2. Yuval Atsmon et al., *Winning the $30 Trillion Decathlon: How to Succeed in Emerging Markets*, MCKINSEY Q., Aug. 2012, at 1.
3. *Id.*
4. Homi Kharas, *The Emerging Middle Class in Developing Countries*, BROOKINGS INSTITUTION, http://www.brookings.edu/research/papers/2010/01/global-consumers-khraras.

as a concern by analysts and policy makers in a growing number of countries. Middle-income traps have been defined differently by various analysts, but generally refer to a slowing or stalling of increases in income and productivity during specific periods of time, especially for countries once they reach a middle-income range.[5] Many countries have seen their average living standards remain in a specific range for decades, while a relatively small group of countries have experienced continuous growth and have made it into the high-income range.[6] These latter countries can serve as sources of policy recommendations to others. Singapore, Ireland, South Korea, and Taiwan are examples.[7]

The purpose of this Article is to explore the challenges many countries face in sustaining growth in incomes and to draw lessons from successful countries that could be helpful in overcoming those challenges. This Article analyzes three countries that recently joined the group of high-income countries—Singapore, Ireland, and Chile—and compares them with three middle-income countries—Malaysia, Peru, and China—that are finding it increasingly difficult to move ahead. In a world with rising competition across the technological spectrum, especially from China, sector and niche options sometimes seem very limited.

In general, economies that have been open to trade and investment have benefitted from increased competition and access to resources and technologies, while middle-income countries have been unable to keep up.[8] The argument proposed here is that in today's global business environment, openness to trade may be necessary, especially for smaller economies, but is not sufficient to sustain growth. There is a critical role for underlying capabilities that are required to increase productivity and to move up the value chain in production and exports. Studies have shown that the benefits of also hosting Foreign Direct Investment (FDI) will be greater as domestic capabilities improve.[9] Capabilities, such as improving labor-force skill levels, facilitate knowledge spillover channels

---

5. *E.g.*, Pierre-Richard Agénor et al., *Avoiding Middle-Income Growth Traps*, VOX (Dec. 21, 2012), http://www.voxeu.org/article/avoiding-middle-income-growth-traps.

6. *See id.*

7. *Id.*

8. *See generally* Eva Paus, *Confronting the Middle Income Trap: Insights from Small Latecomers*, 47 STUD. COMP. INT'L DEV. 115, 119-20 (2012) [hereinafter Paus, *Confronting the Middle Income Trap*].

9. Thomas Kemeny, *Does Foreign Direct Investment Drive Technological Upgrading?*, 38 WORLD DEV. 1543, 1544 (2010); Eva A. Paus & Kevin P. Gallagher, *Missing Links: Foreign Investment and Industrial Development in Costa Rica and Mexico*, 43 STUD. COMP. INT'L DEV. 53, 54 (2007) [hereinafter Paus & Gallagher, *Missing Links*].

from foreign firm capabilities to local ones.[10] Here, there is a clear role for appropriate government institution-building and policy.

II. GROWTH AND TRAPS

Recently there has been an upsurge in the work done on middle-income countries and the danger of these countries falling into economic trouble despite years of progress.[11] The export and investment strategies that are successful at lower levels of income do not continue to produce sufficiently high growth rates forever.[12] Much of this research points to evidence that countries that have moved up the value chain in terms of exports and those with good education systems beyond the primary level are more likely to avoid a prolonged slowdown or a "trap." For example, Eichengreen and colleagues use data from 1956 to 2010 for high-growth, middle-income countries to identify slowdown events and reasons behind them.[13] They find two thresholds of slowdowns, one at per capita gross domestic product (GDP) of $10,000-$11,000 and another at $15,000-$16,000 purchasing power parity (PPP).[14] Some countries experience slow growth at both junctures.[15] They define a "slowdown" as slow growth that lasts for at least seven years.[16] In their analysis, they identify the following variables as being associated with slowdowns: an aging population, undervalued exchange rates, overly high investment rates, low levels of secondary and tertiary education, and a low proportion of high-technology exports in total exports.[17]

Another example of research on growth slowdowns is Ohno's proposition of development stages.[18] Stage 0 is a pre-industrial stage with dependence on agriculture, extractive resources, or foreign aid.[19] In stage 1, manufacturing is dominated by foreign investment, and the

---

10. *See generally* Kemeny, *supra* note 9, at 1544, 1545; Paus & Gallagher, *Missing Links*, *supra* note 9, at 54.

11. *See generally* Paus, *Confronting the Middle Income Trap*, *supra* note 8, at 115-16.

12. *See* Barry Eichengreen et al., *Growth Slowdowns Redux: New Evidence on the Middle-Income Trap* §§ 1, 6 (Nat'l Bureau of Econ. Research, Working Paper No. 18673, 2013), *available at* http:www.nber.org/papers/w18673.

13. *Id.*

14. *Id.* §§ 3, 6.

15. *Id.* § 6.

16. *Id.* § 2.

17. *Id.* §§ 2, 6.

18. Kenichi Ohno, *Avoiding the Middle-Income Trap: Renovating Industrial Policy Formulation in Vietnam*, 26 ASEAN ECON. BULL. 25, 25-43 (2009).

19. *Id.* at 26, 28 fig.1.

country contributes only unskilled labor and land.[20] In stage 2, domestic local suppliers emerge with more value created in the local economy.[21] To reach stage 3, locals take over the full array of value-chain activities from design to marketing.[22] This stage depends on advanced skill levels and internalized capabilities.[23] It allows the country to export high value-added products.[24] In stage 4, the final stage, the country has achieved the ability to innovate, namely to create new industrial products.[25] Ohno places Vietnam in stage 1, Thailand and Malaysia in stage 2, Korea and Taiwan in stage 3, and the United States and Japan in stage 4.[26] Countries can get "stuck" in each of the stages from 0-3 for different reasons.[27]

Two other factors are also important in analyzing growth slowdowns. The first is the nature of the global market environment. Slowdowns can no doubt occur in many kinds of global conditions but may be influenced significantly by the situation at the time. Today, the importance of external demand for some countries, such as the small, exporting economies, will mean that the global financial crisis will affect them much more than others. Also, today the competition from China in export markets is a new variable in countries' policy considerations.[28]

The second factor is that certain thresholds, such as the share of high-technology exports in total exports, are indicators of reaching a certain threshold of development that may be related to the ability to continue to compete and grow. However, the underlying challenge is how countries can actually reach those thresholds. For example, it is one thing to say education is important; it is another to organize the resources in such a way as to establish a successful, nation-wide educational system.

Establishing the skills and the capabilities to respond to changing global conditions to continually move up the value chain is the key to avoiding and overcoming middle-income traps.[29] Both social capabilities and firm capabilities matter.[30] Social capabilities encompass the

---

20. *Id.* at 26-27, 28 fig.1.
21. *Id.* at 27, 28 fig.1.
22. *Id.* at 27-28 & fig.1.
23. *Id.* at 28 & fig.1.
24. *Id.*
25. *Id.*
26. *Id.*
27. *Id.* at 25-43.
28. *See* Paus, *Confronting the Middle Income Trap, supra* note 8, at 116.
29. *See id.* at 118.
30. *Id.* at 118, 128.

basic infrastructure and educational systems required for a nation to compete as well as the ability of government agencies to formulate and coordinate the implementation of productive policy.[31] Firm-level capabilities include the following: the ability to produce a range of products with varying technological sophistication; the ability to move up the value chain within a sector, diversify across sectors, and sell products competitively in the global marketplace; the ability to conduct research and develop new products and services; and the ability to productively employ increasingly more skilled labor.[32] The success of building both types of capabilities depends on targeted government policies that direct resources and design programs to these ends, while maintaining an open business environment to attract foreign firms and promote competition in the domestic economy.[33]

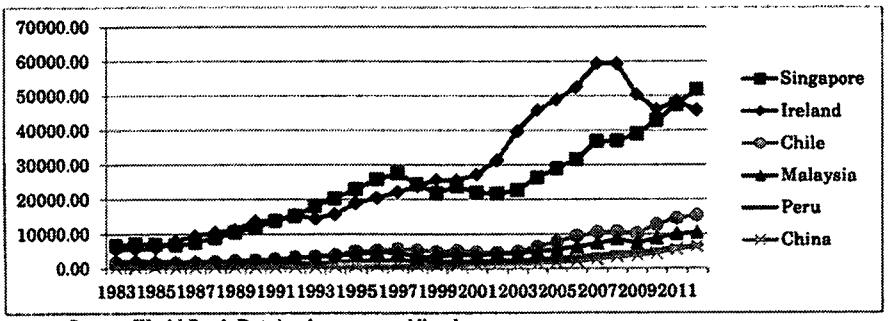
III. EXPORTS, CAPABILITIES, AND GROWTH: EVIDENCE FROM SIX COUNTRIES

To explore the importance of building capabilities to sustain growth, examples are drawn from six countries. Three high-income countries, Singapore, Ireland, and Chile, and three middle-income countries, Malaysia, Peru, and China, are analyzed.[34] Their PPP-GDP-per-capita levels in 2012 ranged from $61,803 in Singapore to $9,233 in China.[35] While all of these economies have done well by some measures, Malaysia and Peru have been in the middle-income range for many years.[36] In 1997, China entered the middle-income category,[37] and policy makers there are concerned that China could also become "stuck" in this middle ground. In 1983, all of these countries had GDP-per-capita levels below $10,000.[38] However, by 2012 there were clear winners, with Singapore and Ireland outshining the others by a wide margin.[39]

---

31. *Id.* at 122.
32. *Id.* at 123, 127.
33. *Id.* at 133.
34. The World Bank's definitions of income groups are as follows: high income means gross national income (GNI) per capita is greater than $12,616; middle income includes both upper and lower; upper means GNI per capita between $4,086 and $12,616; lower means GNI per capita between $1,036 and $4,085; low income means GNI per capita is less than $1,035. *Data: How We Classify Countries*, WORLD BANK DATABANK, http://data.worldbank.org/about/country-classifications.
35. *See infra* Table 2.
36. World Bank Analytical Classifications, WORLD BANK (last visited Mar. 8, 2014), http://siteresources.worldbank.org/DATASTATISTICS/Resources/OGHIST.xls.
37. *Id.*
38. *See infra* Figure 1.
39. *See infra* Figure 1 & Table 2.

Figure 1
GDP Per Capita (PPP, Current Dollars): 1983-2012



Source: World Bank Databank, www.worldbank.org

Table 2
Case Country Population, GDP and GDP Per Capita (PPP)

Country	Population	GDP	Per Capita
Singapore	5,312,400	$328,323,425,996	$61,803
Ireland	4,588,798	$ 200,032,639,699	$43,592
Chile	17,464,814	$ 390,374,472,696	$22,352
Malaysia	29,239,927	$ 501,248,928,886	$17,143
Peru	29,987,800	$ 327,825,011,396	$10,932
China	1,350,695,000	$ 12,470,982,025,051	$9,233

All six countries have had decent savings rates with which to fund investment, with Singapore and China's nearing 50% of GDP at the high end and Peru's closer to 20%.[40] All of them have also utilized foreign investment, although, as a share of GDP, Ireland and Singapore stand out with shares above 15% and 17%, respectively.[41]

40. *See infra* Table 3.
41. *See infra* Table 4.

Table 3
Savings as a Percent of GDP, Decade Averages

Country	1980s	1990s	2000s
Singapore	42.9	48.7	48.1
Ireland	20.3	29.1	35.7
Chile	21.6	25.9	27.3
Malaysia	31.8	40.7	42.1
Peru	23.5	17.6	23.9
China	36.2	41.0	47.9

Table 4
Foreign Direct Investment as a Percent of GDP, Decade Averages

Country	1980s	1990s	2000s
Singapore	9.33	11.60	17.41
Ireland	0.40	5.09	15.02
Chile	2.55	5.20	6.92
Malaysia	2.57	5.83	3.09
Peru	0.07	3.07	3.73
China	0.79	4.14	3.67

All six countries have substantial levels of overall exports, however, certain comparisons are relevant.[42] First, the export share in GDP is substantially higher in Singapore, Ireland, and Malaysia than in China, Chile, or Peru.[43] For Ireland and Malaysia, the share has grown substantially since 1980.[44]

42. *See infra* Table 5.
43. *Id.*
44. *Id.*

Second, the share of high-technology exports in total manufactured exports is shown in Figure 2.[45] Singapore's and Malaysia's shares have increased the most, with their shares reaching 60% by the end of the 2000s, and Ireland is close behind.[46] China's high-technology exports also increased as a share of total exports.[47] Peru and Chile, on the other hand, do not export many high-technology products, with their shares remaining below 10%.[48]

Third, exports of information and communication technology (ICT) services show a somewhat different pattern.[49] Here, Ireland is the top performer with ICT services as a share of total service exports hovering at about 60% and reaching almost 70% in 2012.[50] China's ICT service exports have risen from about 25% in 2005 to about 35% of service exports in 2012.[51] The other four countries all report ICT service exports at about 25% or below, with Peru at just above 10%.[52]

Table 5
Exports as a Percent of GDP, Decade Averages

Country	1980s	1990s	2000s
Singapore	174.4	172.1	208.9
Ireland	51.3	71.5	91.3
Chile	26.4	29.1	36.9
Malaysia	57.3	91.2	104.3
Peru	17.3	13.4	23.1
China	11.8	19.6	31.1

Source: World Bank Databank, www.worldbank.org

45. High-technology exports are products with high research and development (R&D) intensity, such as in aerospace, computers, pharmaceuticals, scientific instruments, and electrical machinery. Data are in current U.S. dollars.

46. *See infra* Figure 2.

47. *Id.*

48. *Id.*

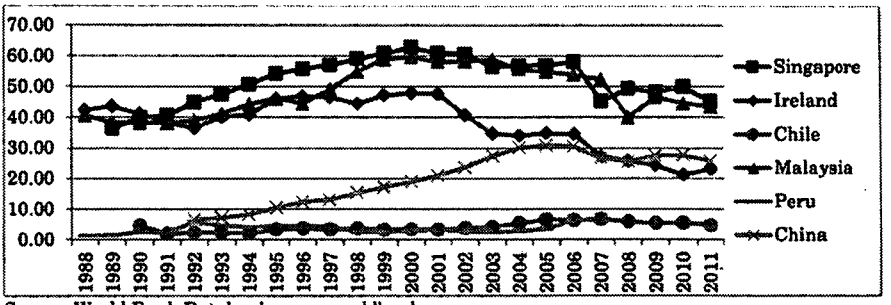
49. Information and communication technology (ICT) service exports include computer and communications services (telecommunications and postal and courier services) and information services (computer data and news-related service transactions).

50. *See infra* Figure 3.

51. *Id.*

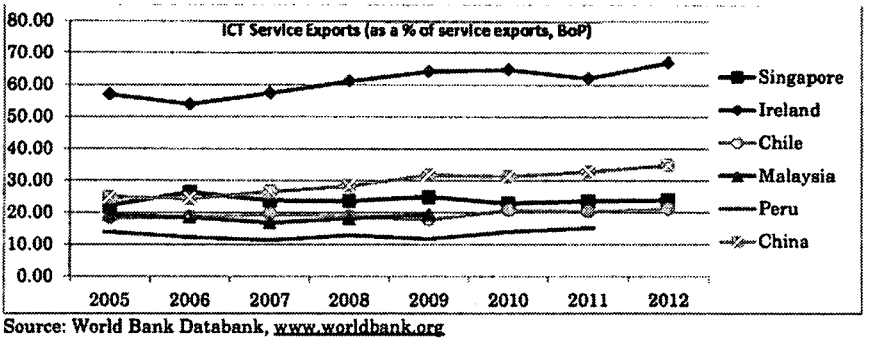
52. *Id.*

Figure 2
High-Technology Exports as a Percent of Manufactured Exports 1988-2012



Source: World Bank Databank, www.worldbank.org

Figure 3:
ICT Services as a Percent of Service Exports, Balance of Payments (BOP) Measure: 2005-2012



Source: World Bank Databank, www.worldbank.org

While all six case countries have substantial exports, there are a wide range of outcomes represented. Each has strengths that have helped it develop, but some have had a better mix of circumstances than others—by accident or by design. The next section looks at the case countries in more detail, focusing on the policy environment and growth factors more generally. Differences emerge in the countries' foci on capabilities. Comparison of these case countries suggests the following conclusions: rising incomes per capita do not necessarily equate to rising

capabilities, as in Chile and Peru; export sophistication does not necessarily translate into domestic productive strength, as in Malaysia; macro conditions or the need for reforms can derail progress despite a good capabilities base, as in Ireland and China; and setting up the conditions for positive spillovers from FDI to the domestic economy is challenging, as is shown by even the successful cases of Ireland and Singapore.

Table 6
Research and Development as a Percent of GDP

	Singapore	Ireland	Chile	Malaysia	Peru	China
1996	1.34	1.30		0.22		0.57
1998	1.75	1.24		0.40	0.10	0.65
2000	1.85	1.11		0.47	0.11	0.90
2002	2.10	1.09		0.65	0.10	1.07
2004	2.13	1.22		0.60	0.15	1.23
2006	2.16	1.24		0.63		1.39
2008	2.84	1.45	0.37			1.47
2010		1.79				

Note: Data only available after 1996; Source: World Bank Databank, www.worldbank.org

A. Peru

Peru is one of the fastest growing countries in Latin America, reaching 8%–9% GDP growth in recent years.[53] Exports are a key part of the country's development today.[54] Exports as a percent of GDP reached 23% in the 2000s, increasing from only 13% in the 1990s.[55] Peru's largest export category is minerals, representing over half of total exports.[56] Other exports include fish, textiles, chemicals, and agricultural products.[57] Recently, the importance of mineral and fish exports has risen, partly due to high demand from China. The country has a

53. Elias A. Baracat et al., *Sustaining Trade Reform: Institutional Lessons from Peru and Argentina*, at 19 (The World Bank Human Development Network, Policy Research Working Paper No. 6283, 2012).

54. *Id.*

55. *See supra* Table 5.

56. *See generally* Baracat et al., *supra* note 53, at 28.

57. *See generally id.* at 57.

trade surplus and has implemented policies to promote trade further.[58] For example, Peru negotiated trade agreements with eleven countries between 2009 and 2011, including the United States, Japan, and China.[59] In addition, FDI has increased in importance since the 1980s, reaching about 4% of GDP in the 2000s and is concentrated in mining.[60]

Peru's continued and increasing reliance on primary exports means that the country has not moved up the value chain very much. Peru's performance in terms of high-technology exports of both goods and services is relatively low,[61] and Peru's research and development (R&D) spending also is very low, at least as of 2004.[62] In the context of Ohno's stages, one could argue that much of Peru's economy is still in stage 0.[63]

B. Malaysia

Malaysia's economy has done very well by many measures. Its gross national income (GNI) per capita increased from $1,930 in 1985 to $9,800 in 2012.[64] Beginning with exports of raw materials in the 1970s, Malaysia today compares favorably with richer countries in terms of its export share and high-technology exports of manufactures and services.[65] So far, the country has not quite reached high-income status, but the government launched its new economic model targeting that goal by 2020.[66] However, its economic performance has not matched other Asian countries such as South Korea, Taiwan, or Singapore; according to Ohno, Malaysia is still in stage 2.[67] Malaysia is seen as an example of a country that has gotten caught between the low-cost countries and the more advanced countries that have the capacity to innovate.[68]

---

58. *Id.* at 1, 28.
59. *Id.* at 41.
60. *Id.* at 1, 28; *see also supra* Table 4.
61. *See supra* Figures 2 & 3.
62. *See supra* Table 6.
63. *See* Ohno, *supra* note 18, at 26-28.
64. *GNC per capita, Atlas method*, THE WORLD BANK, http://data.worldbank.org/indicator/ny.gnc.plap.cd.
65. *See supra* Figures 2 & 3 and Table 5.
66. Aaron Flaaen et al., *How to Avoid Middle-Income Growth Traps? Evidence From Malaysia*, VOX (July 22, 2013), http://www.voxeu.org/article/how-avoid-middle-income-traps-evidence-malaysia.
67. *See* Ohno, *supra* note 18, at 26-28.
68. *See* Flaaen et al., *supra* note 66.

The next steps seem fairly clear. In Ohno's framework, Malaysia is trying to move from stage 2 to stage 3 and therefore needs to build local domestic firm capabilities to produce and export.[69] This will increase the local value added and help increase productivity and living standards at home. The country's R&D spending has been rising but is still quite low.[70] Flaaen and his colleagues imply from their research that Malaysia should focus on higher value-added services as a way to maintain high growth rates.[71] While Malaysia exports ICT services, growth in the modern services sector has stalled.[72] At the same time, growth in demand for these services is rising globally, hence, Jimenez and his collegues argue that this offers an opportunity to Malaysia and other countries.[73] Currently, Malaysia lacks the skills, institutions, and capital to accomplish these steps. Jimenez and his colleagues also emphasize the need to modernize the country's education system.[74]

C. *Chile*

Chile's rising income levels have placed it in the World Bank's high-income-country group, and it is often referred to as a model of development in Latin America.[75] The country followed open trade and investment policies earlier than many of its neighbors and has attracted substantial foreign investment.[76] The country has also been ranked in the top ten of the freest countries in the world in 2012 and 2013.[77]

Much of the investment in Chile has been concentrated in the mining industry, in copper specifically.[78] The economy is not widely diversified, partly due to the investment attraction of its profitable and

---

69. *See* Ohno, *supra* note 18, at 26-28.

70. *See supra* Table 6.

71. *See* Flaaen et al., *supra* note 66.

72. *Id.*

73. Emmanuel Jimenez et al., *Stuck in the Middle? Human Capital Development and Economic Growth in Malaysia and Thailand*, (The World Bank Human Development Network, Policy Research Working Paper No. 6283, 2012).

74. *Id.* at 15.

75. Francisco Gallego & Norman Loayza, *The Golden Period for Growth in Chile: Explanations and Forecasts* 417 (Cent. Bank of Chile Working Paper No. 146, 2002), *available at* www.international.ucla.edu/media/files/gallego_loayza.pdf.

76. *See generally* Manuel R. Agosin, *Trade and Growth in Chile*, 68 CEPAL REV. 79, 95-96 (1999), *available at* http://www.eclac.org/publicaciones/xml/3/20203/agosin_i.pdf.

77. T. Elliot Gaiser, *Chile's Strong Economy: A Case of Positive Policy and Freedom*, THE FOUNDRY (posted Jan. 23, 2013, 11:01 AM), http://blog.heritage.org/2013/01/23/chile-strong-economy-a-case-of-positive-policy-and-freedom/.

78. Esteban Pérez Caldentey, *Income Convergence, Capability Divergence, and the Middle Income Trap: An Analysis of the Case of Chile*, 47 STUD. COMP. INT'L DEV. 185, 189 (2012).

abundant mineral resources, which have received renewed interest from China in the last decade.[79] Nonetheless, successful pockets of higher value-added activities have emerged. These "pockets of excellence," such as forestry products, fish, fruit, and wine, have contributed to the development of new skills and to higher incomes overall and are evidence of local firm innovation as well as spillovers from foreign investment.[80]

Exports of these niche products, however, represent approximately 10% of total exports, with copper and related mineral exports representing over 70%.[81] The data presented in Figures 2 and 3 also suggest that Chile has not focused on building expertise in high-technology manufacturing or services.[82] Even in the copper industry, Chile produces very little of the world's fabricated copper products.[83] In terms of Ohno's development stages, this places Chile between stages 2 and 3, despite achieving high-income status and joining the Organization for Economic Co-operation and Development (OECD) in 2010.[84]

Government policies facilitating technology transfer, credit availability, needed skill attainment, and funding for research and development were critical to the emergence of these higher value-added sectors.[85] Policy makers also understand that appropriate policies are needed to push Chile's economy toward more domestic innovation and development of technologies, in addition to attracting more high-technology foreign investment. For example, the National Innovation Council was established in 2005, and the Research and Development Tax Credit went into effect in 2008.[86] Chile's R&D expenditures are very low, at 0.37% of GDP.[87] Chile's education system and labor-market participation are areas that need improvement. Growth in productivity in the economy has declined in recent years, adding urgency to these measures.[88] The International Monetary Fund (IMF) suggested that the country will need to seek alternatives because it cannot rely on a global copper boom forever.[89]

---

79. *Id.* at 186.
80. *Id.* at 205; *see generally* Agosin, *supra* note 76, at 95-96.
81. Caldentey, *supra* note 78, at 191.
82. *See supra* Figures 2 & 3.
83. Caldentey, *supra* note 78, at 195.
84. *Id.* at 191.
85. *Id.* at 194-95.
86. *Id.* at 198.
87. *See supra* Table 6.
88. Caldentey, *supra* note 78, at 203.
89. *Chile: Staff Report for the 2013 Article IV Consultation*, INT'L MONETARY FUND (June 14, 2013), http://www.imf.org/external/pubs/ft/scr/2013/cr13198.pdf.

D. Ireland

In 1990, Ireland's GDP per capita was only 62% of the OECD average.[90] Within a decade, its GDP per capita had surpassed this average and continued to rise until the financial crisis in the late 2000s.[91] One of the key factors behind this remarkable success was FDI.[92] The fact that Ireland was part of the European Economic Community beginning in the 1970s, and, later, the Single Europe process helped place the country in a good position to attract foreign investment.[93] It also meant that Ireland received substantial funding from the European Union (EU) to use toward its development goals.[94] However, the country also focused resources, policies, and attention on proactively attracting foreign companies and meeting their needs to be successful in Ireland.[95]

The Irish Development Authority (IDA), established in the late 1950s, was the main government institution tasked with attracting FDI.[96] The IDA slowly built a global reputation for Ireland as an investment location with the help of generous tax incentives and by investing in infrastructure and education.[97] Investments in electronics, medical devices, and pharmaceuticals were especially successful in the 1970s and 1980s.[98] These were followed by developments in software, media, and other advanced services.[99] These successes are reflected in the high share of ICT service exports, as seen in Figure 3.[100]

Ireland's success with foreign investment did not mean that local firms easily followed. In fact, after several rounds of studies evaluating Ireland's progress, the lack of spillovers to domestic firms was apparent.[101] As a result, the Irish government started programs to change this and to focus explicitly on ways to link local and foreign firms to help

90. Eva Paus, *The Rise and Fall of the Celtic Tiger: When Deal-Making Trumps Developmentalism*, 47 STUD. COMP. INT'L DEV. 161, 161 (2012) [hereinafter Paus, *Rise and Fall*].

91. *Id.* at 163.

92. *Id.* at 162-63.

93. *Id.* at 165-66.

94. *Id.* at 171-72.

95. *Id.* at 162-63, 165-66, 171.

96. *Id.* at 165.

97. *Id.*

98. *Id.* at 171 & fig.2.

99. *Id.*

100. *See supra* Figure 3.

101. Paus, *Rise and Fall*, *supra* note 90, at 169.

local firms build their experience and expertise.[102] One example was the National Linkage Program that began in the mid-1980s, which later merged with other entities to become Enterprise Ireland (EI) in 1998.[103] EI's task was specifically to increase the capabilities of domestic companies.[104]

These efforts to promote the development of domestic firms achieved some success. Local sourcing was increased by foreign firms, and new domestic firms emerged. The local software industry was especially successful. The need to increase capabilities in higher-technology and knowledge-intensive sectors became increasingly apparent. With the expansion of the EU to include much of central Europe, as well as the opening of China and India, assembly manufacturing left Ireland for less expensive locations, which also left the domestic sourcing companies without customers.[105]

Building a knowledge-based economy is a long-term commitment. Ireland has a start with its good education system, infrastructure, and experience with coordinating between the public and private sectors.[106] The country has encouraged R&D and increased funding for research but lags behind Singapore and the advanced countries.[107] The country's National Development Plans in the late 1990s and 2000s focused on science and technology, and a new institution, the Science Foundation Ireland, was created to foster basic research capabilities.[108] Again, a pattern of deliberate action on the part of government actors can be seen.

Rapid growth based on construction and consumption took the country in a different direction in the late 2000s. Unfortunately, some of the coordinated focus on development goals that previously existed seemed to shrink, or at least to be overwhelmed by new opportunities to make money, even if these activities were short-lived. The property bubble that resulted ended abruptly, leaving Ireland in a severe crisis.[109] The long-term adjustments necessary after this downturn eroded some of the hard-earned capabilities. For example, many skilled people have emigrated since 2008, and it is unclear how many will ever return.[110] At the same time, new start-up businesses have emerged, building on

---

102. *Id.* at 163.
103. *Id.* at 170.
104. *Id.* at 169-70.
105. *Id.* at 170, 172.
106. *See id.* at 168.
107. *See supra* Table 6.
108. Paus, *Rise and Fall*, *supra* note 90, at 173.
109. *Id.* at 180.
110. *Id.*

the entrepreneurs' experiences with existing technology companies such as Google, Amazon, and Apple, and of course, benefitting from the country's still low corporate tax rate.[111] Ireland's future will depend in part on preserving the capabilities that it has acquired as it works its way out of the economic financial downturn.

E. Singapore

Ireland's government has been very development-oriented; Singapore's has been even more so.[112] Their proactive government approaches have been similar. Singapore has also used FDI as the main conduit for investment, trade, and technology.[113] Singapore's Economic Development Board (EDB) has been the main government body tasked with courting and cultivating multinationals since its establishment in 1961.[114] The EDB has been very successful. Table 4 shows that FDI as a share of GDP was already high in the 1980s at approximately 9%, rising to over 17% in the 2000s.[115] Today, Singapore has at least 7,000 foreign firms operating in the country.[116]

In addition, Singapore has had very high savings rates—over 40% of GDP and, more recently, almost 50%—which helped to fund its investment. These high savings rates have been driven by a compulsory retirement savings program, the Central Provident Fund.[117] As a result of the high domestic savings, policy makers in Singapore do not see FDI mainly as a source of funds but rather as a way to create jobs and enhance local skills.[118] They emphasize that job and skill creation are the main avenues for spillovers from foreign firms to the domestic economy.[119] When needed skills were not available locally or could not be developed quickly enough, Singapore's government sought out and encouraged people with the proper skills to move to Singapore.[120]

Singapore, like Ireland, benefitted from location and timing. Singapore's geography, both in terms of having a deep-water port and

---

111. Ben Rooney, *The Celtic Tiger Purrs: Ireland Tops European VC Chart*, WALL ST. J. (Nov. 21, 2013, 11:13 AM), http://blogs.wsj.com/tech-europe/2013/11/21/the-celtic-tiger-purrs-ireland-tops-european-vc-chart/?KEYWORDS=Ireland.

112. *See generally* Penelope Prime, *Utilizing FDI to Stay Ahead: The Case of Singapore*, 47 STUD. COMP. INT'L DEV. 139, 139 (2012) [hereinafter Prime, *Utilizing FDI*].

113. *See id.*

114. *Id.* at 144.

115. *See supra* Table 4.

116. Prime, *Utilizing FDI*, *supra* note 112, at 144.

117. *Id.* at 146.

118. *Id.* at 149-50.

119. *Id.*

120. *Id.* at 140.

being located along key trade routes, helped the country establish trading as its first industry.[121] But more than that, Singapore was in a good position to take advantage of the developing production networks in electronics beginning in the 1970s. Texas Instruments invested in Singapore early on to produce integrated circuits and semiconductors.[122] At one point, Singapore produced the majority of the world's hard drives.[123] None of this was inevitable, however. Singapore worked very hard to make the country an attractive investment destination because it was not the only one competing for these companies' business. Singapore's government invested heavily in infrastructure, with an eye to the needs of multinationals, as well as in good living conditions for its citizens and foreign employees.[124] Statutory boards were created to focus on specific infrastructure and service needs, such as energy, telecommunications, air travel, and housing.[125] Many of these boards evolved into government-linked companies (GLCs), which continue to operate today.[126]

Similar to the situation in Ireland, as the global economy evolved, low-cost manufacturing left Singapore for southeast Asia and China.[127] This move was anticipated and encouraged as a way to move the economy beyond labor-intensive manufacturing.[128] Singaporean firms began to invest more abroad at this time as well.[129] Referred to as the "external wing" strategy, Singapore envisioned utilizing the resources and markets of the region to allow growth beyond its small economy.[130]

To support these moves up the value chain, better and different skills were needed. Singapore had a vision of building a knowledge-based economy, partly spurred by a national study called "The Next Lap" in 1991.[131] Technological upgrading at home was required.[132] Both foreign and domestic firms were targeted.[133] However, like Ireland, Singapore had largely neglected the development of its own companies beyond the GLCs in services and utilities, most of which were small and

121. *See id.* at 146.
122. *Id.* at 149.
123. *Id.*
124. *Id.* at 148-53.
125. *Id.* at 144.
126. *Id.*
127. *Id.* at 151.
128. *Id.* at 150.
129. *Id.*
130. *See generally id.* at 144-45.
131. *Id.* at 151.
132. *Id.*
133. *Id.*

medium-sized companies in traditional sectors or contract suppliers to multinationals.[134] This new thrust of policies focused on ways to link these companies to technological innovation.[135] Placing this process in the context of Ohno's stages, Singapore wanted to move to the innovative stage 4 but still needed to build local firm expertise along the value chain in stage 3.

This is similar to Ireland, except that Singapore did not experience the same type of financial crisis. Singapore, as an economy deeply linked to global markets, felt the effects of both the U.S. crisis and later the European slowdown, but these influences were not as devastating as what Ireland went through.[136] This may reflect a stronger coordination of development policy across the economic and political system in Singapore, or it may be attributable to good fortune. In any case, neither Ireland nor Singapore is facing a middle-income trap. Both have been successful with deliberate development policies to build social and firm capabilities that have supported growth over time.

IV. THE CASE OF CHINA

While policy makers outside of China are dealing with rising competition from Chinese exports and, increasingly, Chinese multinationals, analysts inside China are worrying about the possibility of the country hitting its own growth slowdown. The Third Plenary Session of the 18th Communist Party of China (CPC) Central Committee, which convened in mid-November 2013, released communications that explicitly referred to proposed reforms designed to avoid falling into a "middle-income trap."[137]

From an outside perspective, China's growth since reforms began has been spectacular.[138] Gross national income per capita was $190 in 1978.[139] By 2012, it reached $5,680, which is the upper-middle-income range by the World Bank's categorization.[140] The country's success with trade is even more striking.[141] Figure 4 compares the value of

134. *See id.*

135. *Id.* at 151.

136. *See id.* at 151-52.

137. Xinhua, *Reform Roadmap to Announce Dozens of Detailed Targets*, XINHUANET (Nov. 15, 2013), http://news.xinhuanet.com/english/china/2013-11/15/c_132891756.htm.

138. *See infra* Table 7 (exhibiting China's GDP growth since the 1970s).

139. Hu Jiangun, *Sustained Development Leads to Higher Living Standards*, CHINA TODAY (Feb. 7, 2014), http://www.chinatoday.com.cn/english/economy/2014-02/07/content_594552.htm.

140. *Id.*

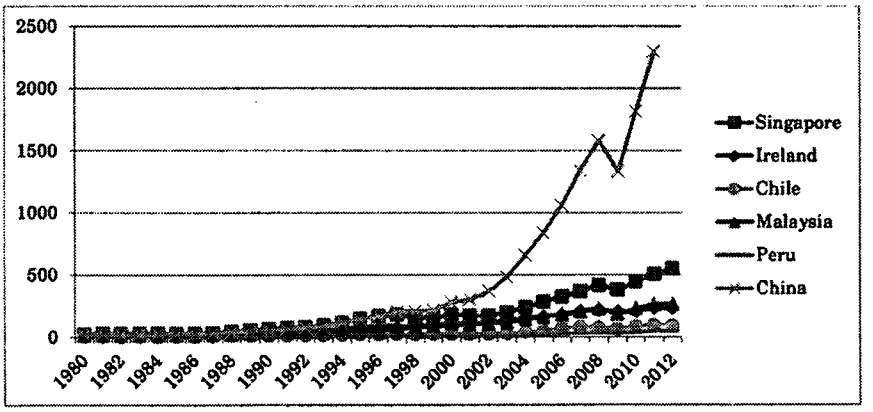
141. *See generally* Prime, *Utilizing FDI*, *supra* note 112, at 150.

exports over time for the six case countries.[142] China's growth in trade accelerated in the 1990s after Deng Xiaoping reinvigorated reform and opening policies, and growth further accelerated as a result of China becoming a member of the World Trade Organization (WTO) in 2001.[143] Exports as a share of GDP in China reached above 30%, which is low compared with the case countries profiled here but is very high for such a large economy.[144] In absolute terms, China's exports are over 11% of the world's exports today.[145]

Table 7
China's GDP Growth, Decade Averages

	1970s	1980s	1990s	2000s	2010s
GDP growth (annual %)	7.4	9.8	10.0	10.3	9.8

Figure 4
Comparative Export Trade Value: 1980-2012



Source: World Bank, Databank.

142. *See infra* Figure 4.

143. *See generally* Penelope Prime, *Sustaining China's Economic Growth: New Leaders, New Directions?*, 53 EURASIAN GEOGRAPHY & ECON. 688, 689 (2012) [hereinafter Prime, *Sustaining China's Economic Growth*].

144. *Id.* at 694.

145. Marc Howe, *China's Share of Global Export Market Rises to Over 11%*, MINING.COM (Dec. 28, 2012), http://www.mining.com/chinas-share-of-global-export-market-rises-to-over-11-64008.

After decades of rapid growth, however, growth in China has fallen to less than 8% since 2010.[146] For years, 8% had been seen as the lowest acceptable growth rate, as it was thought that lower rates would not be able to generate enough jobs for graduates of high school and college and would not be sufficient to reach national development goals.[147] The prospect of lower growth rates has been at least partially accepted by the leadership because some of the slowdown is recognized to be a natural process after such high growth for so long.[148] However, Chinese leaders do not want growth to be too slow or to face the danger of a serious, long-term slowdown, and no one seems confident that these far more negative results will not occur.[149]

One question behind this phenomenon is whether this slowing is cyclical or structural. The global economy has seen much economic turmoil in recent years, especially in countries that buy many Chinese exports such as the United States, Japan, and the European Union.[150] Hence, the cyclical factors seem relevant. Recent estimates that growth could recover to above 8% in 2014 support this theory.[151] Much debate in China today, however, focuses on structural issues, as did the top leadership's recent reports and targets for reform.[152] Internally, China's analysts seem to believe that while some of the slower growth may be due to the global slowdown, this does not explain the underlying factors.[153]

Thinking about China's situation from a capabilities perspective, China's achievements look quite good and compare favorably with Singapore and Ireland. On the simplest level, China is capable of producing world-class exports.[154] In terms of both high-technology manufactured goods and ICT services, China has made impressive strides.[155] These high-technology exports have been largely driven by foreign investment, similar to the strategies of Ireland and Singapore.

---

146. Prime, *Sustaining China's Economic Growth*, *supra* note 143, at 694.

147. Michael Lelyveld, *Jobs Riddle at Heart of Changing China*, ASIA TIMES (July 31, 2013), http://www.atimes.com/atimes/China_Business/CBIZ-0-310713.html.

148. Sophia Yan & Dayu Zhang, *China Sets 7.5% GDP Target*, CNN MONEY (Mar. 5, 2014), http://money.cnn.com/2014/03/04/news/economy/China-gdp/.

149. *Id.*

150. *See generally* Prime, *Sustaining China's Economic Growth*, *supra* note 143, at 697.

151. *OECD Sees China Growth Accelerating in 2014*, CHINA DAILY (updated Nov. 20, 2013, 11:27 AM), http://usa.chinadaily.com.cn/business/2013-11/20/content_17118918.htm.

152. *See id.*

153. *See* Prime, *Sustaining China's Economic Growth*, *supra* note 143, at 697.

154. *See generally* Xiaolan Fu & Yundan Gong, *Indigenous and Foreign Innovation Efforts and Drivers of Technological Upgrading: Evidence from China*, 39 WORLD DEV. 1213, 1224 (2011).

155. *Id.* at 1218.

However, China's own R&D as a percent of GDP has also grown steadily and is targeted to reach 2.2% by 2020.[156]

China's central government has focused on two approaches to deal with the growth slowdown phenomenon: pushing to develop domestic innovation capability and to rebalance the drivers of growth away from exports and high investment towards domestic consumption.[157] The new central leadership has also targeted economic, financial, and social reforms as part of this larger effort.[158]

With respect to innovation, national policy has included science and technology advancement for decades.[159] This was one of the "four modernizations" put forth by Deng Xiaoping in the early reform program.[160] The strategy was to rely on foreign technology acquired through purchases as well as FDI.[161] Studies have found evidence of spillovers due to foreign investment and trade.[162] Not surprisingly, foreign firms tend to be associated with spillovers in high-technology, while domestic firms are associated with low-technology upgrading.[163] Fu and Gong find evidence of negative effects on domestic firms from the innovation activities of foreign firms,[164] while Li shows evidence that importing foreign technology alone is insufficient for facilitating domestic innovation.[165] From a Chinese policy perspective, relying on foreign firms or foreign trade forever is not desirable. Long-term goals include ensuring that Chinese firms become world-class companies. One piece of this strategy has been to consolidate the state sector into "national champions."[166] This has been partially successful in that it has

156. *See supra* Table 6.

157. Prime, *Sustaining China's Economic Growth*, *supra* note 143, at 694.

158. *Id.* at 693-94.

159. *See generally* Yang Yao, *In Search of Balance: Technological Development in China*, *in* COMPETITIVENESS, FDI AND TECHNOLOGICAL ACTIVITY IN EAST ASIA 239 (Sanjaya Lall & Shujiro Urata eds., 2003).

160. Prime, *Sustaining China's Economic Growth*, *supra* note 143, at 689.

161. Xibao Li, *Sources of External Technology, Absorptive Capacity, and Innovation Capability in Chinese State-Owned High-Tech Enterprises*, 39 WORLD DEV. 1240, 1240 (2011).

162. Fu & Gong, *supra* note 154, at 1214.

163. *See* Yih-chyi Chuang & Pi-Fum Hsu, *FDI, Trade, and Spillover Efficiency: Evidence From China's Manufacturing Sector*, 36 APPLIED ECON. 1103, 1103-04 (2004); Fu & Gong, *supra* note 154, at 1213.

164. Fu & Gong, *supra* note 154, at 1213.

165. Xibao Li, *supra* note 161, at 1240.

166. Ali F. Farhoomand, *National Innovation Systems of China and the Asian Newly Industrialised Economies: A Comparative Analysis*, ASIA CASE RESEARCH CENTRE (2005), http://www.acrc.hku.hk/promotional/promotional_shownote.asp?caseref=872.

resulted in some innovative, branded companies, such as Lenovo and Hai'er, as well as some in the private sector, such as Huawei.[167]

A second set of policy initiatives being pursued by the central government to help sustain growth in China over the long run is the rebalancing effort.[168] Similarly, with too much reliance on FDI, Chinese policy makers now believe that China should not rely as much on exports or foreign demand to fuel its growth.[169] Further, many foreign countries cannot absorb more Chinese exports because their bilateral trade deficits are already high.[170] These deficits have led to political backlashes against imports of Chinese products.[171]

If the expectation is that less of China's GDP will be purchased by foreigners, then more must be bought domestically.[172] This primarily refers to the share of GDP that is bought by consumers. Investment spending is already very high—over 40% of GDP—so while investment rates should remain substantial to support future growth, investment should be directed more towards products and services that would appeal to domestic consumers.[173] So far, consumption as a share of GDP has been unusually low in China—under 40%—and has fallen over time.[174] Some of the factors hypothesized to be behind this situation include the need to save for uncertainties without good insurance options, the high education and health costs, the difficulty of getting credit, and the lack of employer or public retirement plans.[175]

The third piece of the strategy to bolster growth is the reform agenda. While major reforms were part of what drove growth since the late 1970s, many believe that the benefits of these changes have been largely exhausted.[176] The economic structure still favors producers over consumers and state companies over private companies. Getting the state-private mix and relationship right would help create incentives to start new companies, to innovate, and to produce desired products and services. Quality R&D with mechanisms to explore the commercial

---

167. *See id.*

168. Li Qi & Penelope Prime, *Market Reforms and Consumption Puzzles in China*, 20 CHINA ECON. REV. 388, 389 (2009).

169. Prime, *Sustaining China's Economic Growth*, *supra* note 143, at 694.

170. *Id.* at 695.

171. *Id.*

172. *See id.* (noting that "the challenges to shift demand from exports to domestic consumption are formidable").

173. *Id.*

174. *Id.*

175. *See* Qi & Prime, *supra* note 168, at 391.

176. *See* Fu & Gong, *supra* note 154, at 1215.

relevance of research outcomes is needed.[177] At this stage, reforming the incentive structure and opportunities within the economy may be more important than building stronger capabilities. However, taking the next steps may first require successful reforms.[178]

China's leaders seem to agree with this assessment, which is reflected in the announcements about new reforms as a result of the Third Plenary Session.[179] The changes proposed range from allowing farmers to sell the rights to land in the countryside to freeing up interest rates in the financial sector and making it easier for private firms to access capital through the banking system.[180] Implementation will be needed, but the direction of the changes is toward more market-determined outcomes and more options for individuals both as producers and consumers.[181]

V. MEASURING SOCIAL AND FIRM CAPABILITIES

The Human Capital Report[182] published by The World Economic Forum puts together four sets of variables across countries that reflect fairly well some of the social and firm capabilities focused on in this Article. The health and education factors identified therein are elements of social capabilities, and the work and employment and enabling environment factors are largely firm-based capabilities.[183]

The overall rankings are given in Table 8.[184] The order of the rankings is largely consistent with the discussion of the relative strengths of each country's capabilities. By this rendering, however, Ireland is closer to Malaysia than Singapore, with Singapore further ahead. Cyclical factors, such as unemployment, are included in the work and employment category, which partially explains why Ireland is not closer to Singapore in these macro-level rankings. For a high-income country, Chile does not score very high in any of the categories, underscoring the weakness of its capabilities. Finally, China scores quite well with respect to work and employment, and this is Peru's best category as well.

---

177. *See* Prime, *Sustaining China's Economic Growth*, *supra* note 143, at 690.

178. *Id.* at 688.

179. Xinhua, *supra* note 137.

180. *Id.*

181. *Id.*

182. *See generally*, *The Human Capital Report*, WORLD ECONOMIC FORUM (2013), http://www3.weforum.org/docs/WEF_HumanCapitalReport_2013.pdf.

183. *See id.*

184. *See infra* Table 8.

Table 8
World Economic Forum Human Capital Country Rankings, Out of 122 Countries, 2013

	Overall	Health	Education	Work/ employment	Enabling Environment
Singapore	3	13	3	2	5
Ireland	20	25	9	22	19
Malaysia	22	39	34	18	22
Chile	36	38	49	37	35
China	43	65	58	26	47
Peru	75	82	84	50	81

Source: World Economic Forum (2013).

Table 9
Disaggregated Measures of Selected Capabilities, World Economic Forum Rankings Out of 122

	Singapore	Ireland	Malaysia	Chile	China	Peru
Social Capabilities						
Ease of finding skilled employees	16	5	12	48	22	85
Collaboration: state of cluster development	7	19	12	45	22	90
Business & university R&D collaboration	4	12	15	37	31	95
Intellectual property protection & property rights	2	16	27	40	44	93
Social mobility	8	21	26	38	59	62
Firm capabilities						
Capacity to innovate	18	19	15	56	27	93
Pay related to productivity	3	33	1	28	15	66
Index of economic complexity	7	17	31	74	26	82
Firm level technology absorption	12	22	30	42	63	73
Staff training	6	19	11	40	42	77
Training services	12	21	17	39	57	81

Source: World Economic Forum (2013).

More detailed information is found in the components of these overall rankings. Table 9 lists the relevant parts of work and employment and enabling environment, distinguishing between social and firm capabilities.[185]

As previously discussed, of the six case countries, Singapore ranks the highest in most categories, and Peru ranks the lowest. Singapore's struggle to find enough skilled labor is reflected in its lower rank in the ease of finding skilled employees.[186] Singaporean policies encouraging people with needed skills to immigrate to the country are directly related to solving this challenge.[187] At this more disaggregated level, Ireland's rankings continue to be fairly low compared with Singapore, except with respect to access to skilled labor. Malaysia's rankings look relatively strong, both in social and firm capabilities, which bode well for its efforts to reach high-income status soon. In contrast, Chile looks relatively weak in both capabilities, despite already achieving a high income per capita. Finally, although China's GDP per capita is below Peru's, its rankings in all of these categories are better than Peru's—often a great deal better. This is consistent with the view that China has been fairly successful at capacity-building but needs other changes to help ensure sustained growth.

VI. CONCLUSION

While the middle class seems to be stagnating in advanced countries, there are many predictions about expected rises in the middle class in the developing world. For example, the World Bank estimates that in the past decade, the middle class in Latin America grew 50% and represented 30% of the region's population by 2009.[188] Will this growth of the middle class continue? To increase the chances, Peru and Chile will need to invest more in capabilities, as will other countries in the region.

The six case countries studied in this Article each have a different history, with varying resources, advantages, and disadvantages. All are "open for business." They all have attracted foreign investment and have increased their trade over time. However, trade and FDI are insufficient for sustained growth and alone will not guarantee broad-

185. *See supra* Table 9.

186. *See* Prime, *Sustaining China's Economic Growth*, *supra* note 143, at 694.

187. *Id.*

188. Francisco H. G. Ferreira et al., *Economic Mobility and the Rise of the Latin American Middle Class*, THE WORLD BANK (Nov. 13, 2012), http://www.worldbank.org/en/news/press-release/2012/11/13/new-world-bank-report-finds-fifty-percent-increase-middle-class-latin-america-over-last-decade.

based benefits. The most successful countries in this study–Ireland and Singapore–have taken very specific, directed steps to link the benefits of FDI and trade to their domestic economies. Establishing and continuously improving both social and firm capabilities will be key to this success. Other situations can, of course, get in the way of this process. Ireland's macroeconomic crisis and China's need for reform are two examples. But the underlying viability of an economy over time will depend largely on its ability to establish and improve these capabilities.