

6

Product Market and Competition

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6.1 Introduction

The effect of competition on economic development is a rather problematic issue. Although it is generally considered that more competition enhances market and firm efficiency,¹ both theoretical and empirical literature reveal that greater competition could have negative effects on firms and productivity, especially for the least developed economies. As underlined by Aghion and Griffith (2005: 1), under certain circumstances higher growth can be maintained through more protectionist and entrenched policies, whereas under other circumstances growth seems

¹ Product market deregulation, insofar as it triggers competition for incumbent firms, is widely seen as a key determinant of output and productivity growth in both developed (Nicoletti and Scarpetta 2003; Blanchard and Giavazzi 2003; Wölfel et al. 2009) and developing economies (Djankov et al. 2002, 2006; Loayza et al. 2004, 2005).

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to require greater competition and openness. This corresponds to the old Gerschenkron (1962) idea, according to which there may be several engines of growth that do not require the same institutions and policies in order to operate efficiently. Competition certainly has a positive effect when a country's economic growth is mainly backed by technological innovation.² More competition may, however, turn out to be negative in the case of less developed countries since it can reduce investment for low productive firms. In other words, a low income economy, distant from the technological frontier, whose growth heavily relies on primitive accumulation, a small set of primary resources, low productivity manufacturing and rigid labour regulation, may not benefit from more competition on goods markets, and could even be harmed by it. Consequently, countries should move from less competitive to more competitive institutions throughout their path of technological development.³

As regards our aim in this chapter, that is, comparing the institutional systems underlying product markets, we can infer from the previous point that models of competition regulation may tend to be very different across countries and levels of economic development. But even within OECD economies, strong differentiation remains, notably with respect to competition intensity, the magnitude of regulatory constraints and of state control over the economy (Amable 2003: 115). Since most of them have not experienced a trend of deregulation akin to the one that has hit OECD countries since the mid-1980s, the odds are that the heterogeneity of product market regulation (PMR) is even larger for developing economies. Although a few developing countries, like Chile, have implemented deep market-establishing reforms over the last 30 years, the majority have chosen a much more incremental approach, and kept high levels of state control over goods markets. Even those which underwent structural adjustment programmes during the eighties and nineties followed

² Ever since Schumpeter (1934), it has been widely accepted that competition has two contradictory but complementary effects on growth. On the one hand, increased competition has an adverse effect, by eroding the rents of the innovative firms, whose monopolistic position may be contested by potential entrants. On the other hand, competition and entry also have a positive impact on innovation, since they produce strong incentives for incumbent firms to find new products or to reduce their costs so as to temporarily escape competition.

³ This point has received empirical support by Acemoglu et al. (2006) on the basis of cross-sectional aggregated data. Amable et al. (2010), who tested the assumption of a non-linear competition effect on productivity using sector-based data, have been less supportive of this point.

very different trends of privatization and goods market deregulation (Berr et al. 2009). As emphasized by Aghion and Griffith (2005), the singularity of each national institutional environment has greatly conditioned the product market regulation trajectories of change over the last three decades, thereby maintaining high diversity across developing countries.

This chapter presents a comparative analysis of developing economies' product market governance systems. We start by examining how these systems are assessed, before going on to identify the main differentiation patterns of these competition regimes, then presenting the specific typology generated by cluster analysis.

6.2 Competition and Product Market Governance in Developing Countries

In this section, we argue that product market governance systems can be analysed as the articulated bodies of formal or informal rules (product market regulation, including trade and investment regulations, business rules) and policies (taxation, infrastructure provision, direct state intervention on goods market) aimed at organizing an optimal level of competition on goods markets.⁴ As explained above, this optimal level of competition is highly dependent on the level of development and resource endowment, but also on historically inherited social preferences. The perimeter of the product market governance is, therefore, broader than that of mere competition policies, whose focus is generally restricted to the rules governing competition between firms and market entry. Product market governance is the product of complex interaction between four actors: government, incumbent firms, competitors and consumers. Developing countries exhibit a huge variety of national forms of goods production and exchange (Amsden 1989; Wade 1989; Subramanian and Roy 2003; Acemoglu et al. 2003; Rodrik 2008a, b).

⁴Except for Amable (2003), CC does not always make a clear and systematic distinction between the different domains pertaining to the *production* domain, broadly defined by Soskice (1999: 101) as “the organization of production through markets and market-related institutions”. Accordingly, it articulates such dimensions as industrial and labour relations, competition policies, as well as the financial system (Hall and Soskice 2001).

Country-specific political compromises between the state, banks and industrial firms condition the shape of competition governance.

In some historical cases, these national compromises led to economic successes, such as the East-Asian miracle. In Korea and Taiwan, broad growth coalitions, marshalling the government, its administration and private business, have succeeded both in setting up the conditions needed for sustained growth, and making them legitimate for the majority of their populations (World Bank 1993; Evans 1995; Ranis 1995). By contrast, in Africa, Latin America or the Middle East, ruling coalitions have built statist centralized politico-economic systems, often financing “factional-distributive” policies by natural resource rents, with only limited impact on long-term growth (Rougier 2016). Significant product market rigidities there have generally led to resource misallocation, corruption and economic failures (Rodrik 2003; Robinson 2009; Cammett et al. 2015).

State interventionism in goods markets prevails in most developing economies. The specific form of state interventionism used by a country can exert considerable impact on its economic development. In an influential paper, Hall and Jones (1999) showed that the labour productivity gap between developed and developing economies can be explained by differences in governmental diversion of resources.⁵ Several years earlier, Mauro (1995) had also found that corruption reduces investment and economic growth. Given that a stricter regulation of entry tends to be associated with higher levels of corruption, excessive entry regulation traditionally ends up by benefiting the regulators or a limited number of politically connected incumbent firms in developing countries (Faccio 2006; Acemoglu and Johnson 2011). Any attempt to characterize developing economies’ product market regulation should, accordingly, account for corruption and all other forms of state or administrative protection.

A related issue is the importance of informality in most developing countries’ goods markets. Excessive market regulation or political control over economic resources may drive potential entrepreneurs to carry out their activities in the informal sector. In poor economies’ informal sectors, contract enforcement is generally low, with business coordina-

⁵They averaged, for 1986–1995, five *International Country Risk Guide* scores assessing the government’s role in protecting against private diversion: (i) law and order, (ii) bureaucratic quality, (iii) corruption, (iv) risk of expropriation, and (v) government repudiation of contracts.

tion essentially operating through personal ties, network building and informal rules of behaviour (Fafchamps 2004; Berrou and Combarrous 2011). Because of the lack of legal recourse, economic agents spend significant amounts of resources setting up long-term relationships, thereby limiting their capacity to invest in capacity or productivity. As a consequence, a high degree of informality generally leads to small-sized businesses and low sectoral concentration. Informal ties are, by nature, very hard to measure, especially at country level. In addition, the extent of informal activities is not necessarily a good predictor of the extent of production networks in developing economies.

Our analytical framework is described in Fig. 6.1. The top left cell features each country's broad institutional conditions: complementary labour and financial institutions, norms and values, or legal origin. The *competition regime*, that is, the model of product market institutional governance, refers to the role played by government, local businesses, transnational companies and market actors, and their coalitions. Product market governance determines competitiveness and other related competition outcomes such as entry rates, margins, concentration, comparative

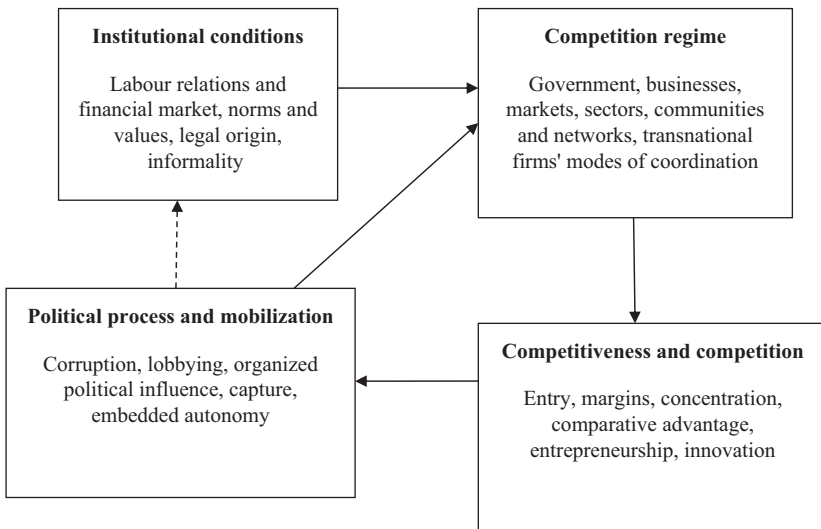


Fig. 6.1 Analytical framework for comparing competition and product market governance

advantage, rents or innovation. The bottom left cell is related to the mobilization patterns and political processes impacted by competitiveness and competition outcomes, but these processes and patterns also determine, in turn, the institutional structure of the competition regime.

In the next section, we present the indicators that we have selected to characterize competition regimes.

6.3 Assessing Competition and Product Market Governance

As explained in the previous section, the measurement of product market institutions represents a difficult challenge, both because data is scarce for developing countries, and because the dimensions and forms of these institutions vary widely. Whereas some countries, like Chile or East European former socialist systems, have converged towards liberalized OECD-style governance mechanisms, others, like China, have set up very original private–public systems of production and distribution that cannot really be assessed by using the existing indicators that were crafted for industrialized countries. Various product market regulation scores have been recently developed by OECD to assess member countries' degree of product market liberalization. These scores cover three dimensions of product market governance: State control of business enterprises, legal and administrative barriers to entrepreneurship, and barriers to international trade and investment (Nicoletti and Scarpetta 2003; Wölfel et al. 2009). Although the database has been recently extended to seven developing countries, its country coverage remains too narrow for our purpose, since the vast majority of developing countries are still excluded. Moreover, developing countries' production regimes generally feature complex systems of legal and informal regulation, and intertwine private and state-owned firm strategies that cannot be expressed as a mere score on a scale of liberalization.

Various dimensions have been selected to describe product market governance systems across our sample of developed and developing countries: competition policies, state incentives and direct market interven-

tion, legal and administrative barriers to entrepreneurship, barriers to international trade and investment and corruption.

As for competition policy, various input measurements of explicit competition policies have been proposed in the literature.⁶ Fingleton et al. (1998) use measurements of public funding or of the level and skill of agency staff that are devoted to antitrust enforcement, but the lack of harmonized information about competition policy inputs has driven scholars to compute binary variables indicating the presence or absence of antitrust laws (Palim 1998; Dutz and Vagliasindi 2000; Kee and Hoekman 2007). Furthermore, having a competition law on the statute book does not necessarily mean, however, that that law is actually enforced. Nicholson (2008) remarks that although most Latin American countries passed antitrust laws in the early sixties (and Venezuela as early as 1919), they did not actively enforce those laws until the early nineties. In order to assess the gap between *de jure* and *de facto* competition policies, Voigt (2009) has computed scores for both *formal* (on the book) and *effective* competition policies, and shown that they differ significantly across the sample countries. *Formal competition policy* can be defined as a body of independent rules constraining any business action and capitalistic relations that could divert economic resources from their optimal use, notably by concentrating in or monopolizing a market. Competition-focused indicators tend to consider that any distortion to pure market competition is bad for economic performance, thereby disregarding the positive role of strategic industrial policies. By contrast, *effective competition policy* is defined as a more pragmatic approach by which governments aim at reconciling the contradictory goals of competition on domestic markets and firms' competitiveness. This second indicator evaluates the degree to which competition policy is pragmatic, namely, its capacity to be carried out in accordance with economic constraints and goals. Bearing in mind this difference, these two indicators have been included in our data analysis.

⁶In recent empirical literature, competition is mainly assessed by such outcome measurements as entry rates on domestic markets (Hoekman et al. 2001; Aghion et al. 2005). Sector-based margins of incumbent firms are often used to measure competition intensity, assuming that more entry decreases incumbents' rents. Such measurements are not, however, relevant at cross-national level. Moreover, outcome measurements cannot describe the full set of policies and the range of *competition system* varieties.

As for the other dimensions of product market regulation in developing countries, which include government fiscal and legal incentives delivered to firms, legal barriers, the administrative burden imposed on entrepreneurship and the level of corruption, three data sources have been mobilized. From the Fraser Institute *Economic Freedom of the World* database, four indicators have been selected: *price controls*, a variable which measures the extent of price controls by the government; *trade taxes*, measuring the extent of trade protection (*mean tariffs* and *government revenues from trade taxes*); *transfers and subsidies to the economy*, computed as a score, initially provided by the World Bank Development Indicators, measuring central government transfers to producers and consumers (as a share of GDP); and *corruption*, a score for perceived corruption. From the CEPII Institutional Profiles database, we have used *IPR protection*, a score of the perceived degree of compliance of firms with intellectual property rights policy; *capital openness*, a score of the degree of openness to capital of domestic firms and industries (including public utilities); *SEZ*, a composite score accounting for the number and dynamism of Special Economic Zones; and *retail barriers*, an indicator of the entry barriers and concentration in the retail sector. Finally, we have used the World Bank Doing Business database's *cost of tax compliance*, measuring the time required per year for a business to prepare, file, and pay taxes on corporate income, value added or sales taxes, and taxes on labour; *contract enforcement* and *licence restrictions*, two additional indicators of the extent of red tape and regulation burdens, measuring respectively the number of procedures required to enforce a contract and the time (in days) required to obtain a license to construct a standard warehouse.⁷

We believe that, taken together, these 13 variables provide complementary quantitative information about the product market governance models (*competition regimes*), since they cover all the dimensions surveyed in the previous sections, as summed up in Fig. 6.1. Government diversion or anti-diversion policies are measured by *price controls* and *licence restrictions*, *cost of tax compliance*, *IPR protection*, *formal competition* and *contract*

⁷ However imperfect, Freedom House types of economic organization and other indicators, such as the share of the output provided by state-owned enterprises (World Bank Development Indicators), or the Government effectiveness and Regulatory quality scores of the World Bank Governance Index, will be used in Table 6.4 as characterization variables of our clusters.

enforcement. The competition/competitiveness trade-off is accounted for by *SEZ*, *transf_subsidies*, and by *effective competition*. *Capital openness* and *trade taxes* account for the degree of external liberalization for FDI, and for exporting or importing domestic businesses. Lastly, the mobilization and political processes are accounted for by *corruption* and *retail barriers*, with the former measuring the extent of the possible connections between firms and the administration, and the latter serving as proxy for the bargaining power of big companies in the retail industry.

6.4 Models of Competition and Product Market Governance

6.4.1 Main Dimensions of Competition and Product Market Governance Differentiation

Since all 13 variables are quantitative, Principal Component Analysis (PCA) has been used in our empirical analysis. Initially, PCA was processed on these 13 active variables. Then, additional categorical variables, describing a country's geographical localization, Human Development Index (HDI) level and various socioeconomic outcomes, were used as characterization variables.⁸ In order to test the robustness of the PCA results, 25 bootstrap replications of the initial sample were implemented in order to identify confidence intervals for the projected variables coordinates. The bootstrap procedure showed that the active variables' position on the first factorial plan (reported in Fig. 6.2) is stable, thus confirming the robustness of the PCA results.⁹ Table 6.1 gives PCA eigenvalues and active and supplementary variables correlations with each factor.¹⁰ The first component, which explains 40.56% of overall variance, is predominantly loaded by a government's direct or indirect intervention on the

⁸ It should be noted that the *ex-post* use of these variables does not affect the PCA.

⁹ Active countries' projection can be found in the Appendix, Fig. 6.5.

¹⁰ By construction, the optimal number of components needed to account for data variability is determined by (i) the proportion of total variance explained by each component, (ii) the absolute variance explained by each component (the Eigen value of each component retained should exceed value one) and (iii) the capacity of each component to be interpreted meaningfully.

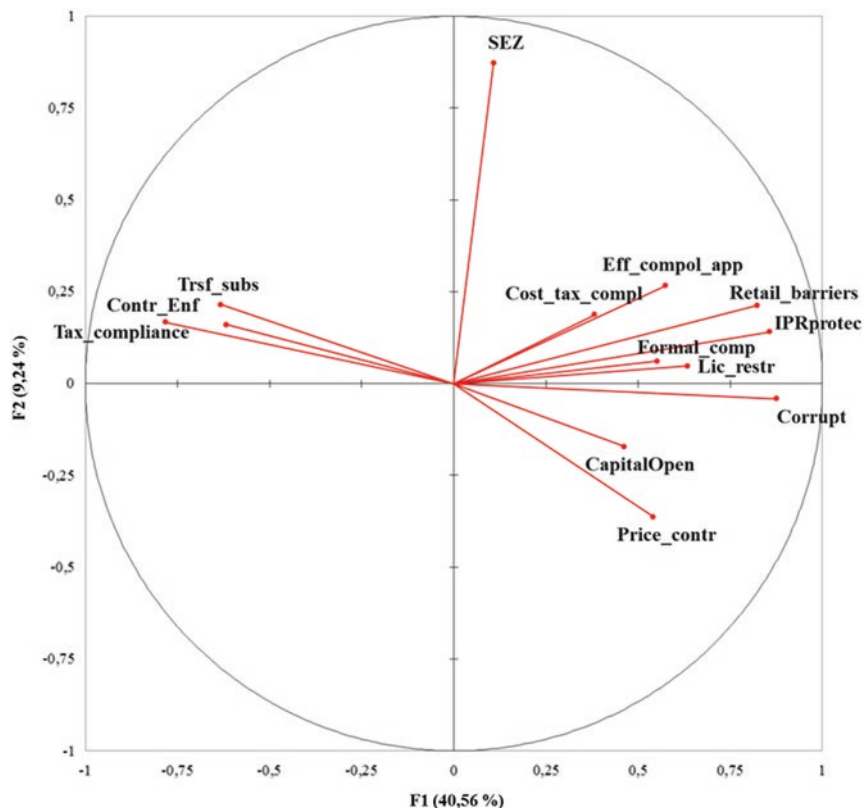


Fig. 6.2 Projection of the variables on the first plan of components. *Data source:* Author's calculations; see Table 6.5 for details

product market (corruption, licence restrictions, price controls, transfers and subsidies, capital openness, trade taxes), and by the variables related to red tape and the business environment (cost of tax compliance, contract enforcement, intellectual property rights protection).

It should be observed that lower corruption is associated with lower red tape and direct or indirect state interventionism, thereby suggesting that corruption tends to be complementary to high product market regulation.¹¹ Put otherwise, the first dimension of differentiation of com-

¹¹ This correlation is not surprising, since recent empirical studies have shown that corruption provides entrepreneurs with more flexibility in over-regulated environments (Méon and Weill 2010).

Table 6.1 PCA Eigenvalues and active variable-axis correlations

	PC1	PC2	PC3	PC4
Eigenvalues	5.273	1.201	1.102	1.034
% of variance	40.56	9.24	8.48	7.95
Cumulative %	40.56	49.80	58.28	66.23
Corruption	0.88	-0.04	0.02	0.12
Price controls	0.54	-0.36	0.44	-0.23
License restrictions	0.63	0.05	0.23	-0.16
Tax compliance	0.38	0.19	0.40	0.61
Retail barriers	0.82	0.21	-0.05	0.05
Capital controls	0.46	-0.17	-0.03	-0.42
Effect. competition policy	0.57	0.27	-0.51	0.01
Formal competition policy	0.55	0.06	0.16	-0.46
SEZ	0.11	0.87	0.19	-0.16
Transfers and subsidies	-0.62	0.16	0.58	-0.12
IPR protection	0.86	0.14	-0.11	-0.00
Contract enforcement	-0.63	0.22	-0.14	-0.38
Trade taxes	-0.78	0.17	-0.05	-0.00

Data sources: Author's calculations on data collected from World Bank Doing Business, CEPII Institutional Profiles, Voigt (2009) and Fraser Institute; for details, see Table 6.5

petition regimes is the degree of internal and external liberalization of the product market, including red tape, trade and capital integration.

The second component explains 9.24% of overall variance; it is mainly loaded by *SEZ* and, to a lesser extent, by *price controls* and *effective competition policy*. The third component (PC3), explains 8.48% of overall variance, and is loaded by the anti-correlation between residual features of direct government intervention (*price controls*, *transfers and subsidies*, *tax compliance*), and *effective competition policy*. All these four dimensions of state interventionism are involved in industrial policies, in particular those carried out at the initial stage of economic development and associated with the “developmental state” model. That being said, the interpretation of PC2 is now more clear-cut: public incentives aimed at attracting FDI in export processing industries (measured here by *SEZ*) do not correlate either to the degree of product market internal liberalization (correlated to the first component) or to traditional developmental state industrial policies (correlated to the third component). This result suggests that emerging economies have elaborated new forms of industrial policies that are essentially based on integration to world value chains.

One consequence of this is that a crucial pattern of opposition between competition regimes relates to the style of governmental intervention on the product market: traditional directive industrial and trade policy vs. “new industrial policy,” more focused on FDI attraction and rapid integration to world value chains.¹² Closer examination of the competition policy indicators in Table 6.2 shows that formal competition policy is associated with the logic of liberalization/deregulation of the product markets (PC1).

Table 6.2 Models of competition and product market governance

Cluster 1—<i>Liberalized deregulated</i> (32 countries)				
Australia	Austria	Belgium	Canada	Switzerland
Chile	Czech Republic	Germany	Denmark	Spain
Estonia	Finland	United Kingdom	France	Greece
Hong Kong	Hungary	Ireland	Iceland	Israel
Italy	Japan	Lithuania	Netherlands	New Zealand
Norway	Portugal	Singapore	Slovak Republic	Slovenia
Sweden	United States			
Cluster 2—<i>Export-oriented</i> (26 countries)				
United Arab Rep.	Argentina	Columbia	Dominican Rep.	Ghana
Guatemala	Croatia	Jordan	Korea, Rep.	Sri Lanka
Latvia	Mauritius	Malaysia	Namibia	Nicaragua
Oman	Panama	Philippines	Poland	Romania
Thailand	Tunisia	Turkey	Uruguay	Serbia Montenegro
South Africa				
Cluster 3—<i>Statist partially liberalized</i> (28 countries)				
Angola	Armenia	Azerbaijan	Bangladesh	Bulgaria
Bolivia	Brazil	Ecuador	Haiti	Indonesia
Jamaica	Kazakhstan	Lao PDR	Libya	Mongolia
Mauritania	Malawi	Niger	Nigeria	Nepal
Paraguay	Sudan	Senegal	Uganda	Ukraine
Uzbekistan	Venezuela	Vietnam		

(continued)

¹² See Piveteau and Rougier (2011) for an analysis of this shift in industrial policy from traditional developmental state directive policies towards FDI-attraction policies.

Table 6.2 (continued)

Cluster 4— <i>Statist protected</i> (26 countries)				
Burundi	Benin	Burkina Faso	Central African Rep.	China
Cameroon	Congo	Algeria	Egypt	Ethiopia
Gabon	India	Iran	Morocco	Madagascar
Mali	Pakistan	Russian Fed.	Sierra Leone	Syrian Arab Republic
Chad	Togo	Tanzania	Congo, Dem. Rep.	Zambia
Zimbabwe				
Cluster 5— <i>Idiosyncratic</i> (17 countries)				
Albania	Botswana	Cote d'Ivoire	Costa Rica	Honduras
Kenya	Cambodia	Lebanon	Moldova	Mexico
Mozambique	Peru	Papua New Guinea	Rwanda	Saudi Arabia
El Salvador	Yemen			

Note: Bold characters denote countries commonly classified as emerging, in the sense that they have been considered as such by at least one of the following institutions: Boston Consulting Group, BNP Paribas, IMF or Standard and Poor's

6.4.2 The Four Models of Competition and Product Market Governance

In the previous subsection, PCA has provided information about the patterns of correlation between the 13 variables used to describe competition governance systems. Country's distribution on the first factorial plan is reported in Fig. 6.3. A further step has consisted in implementing a mixed classification procedure so as to identify clusters of countries with similar product market regulation. A hierarchical cluster analysis was carried out on the dataset, and the relevant partition¹³ was consolidated by the implementation of *k*-means-like iterations aimed at increasing inter-cluster variance while minimizing intra-cluster variance. Since that procedure tends to ascribe each individual, even if it is not well represented in the multidimensional space, into one of the identified clusters, all the countries whose position is too close to the barycentre¹⁴

¹³The relevant partition, i.e., the relevant number of clusters, is derived from the dendrogram analysis and the analysis of two indicators which respectively measure (i) the improvement of the inter- to intra-cluster variance ratio when one moves from a given partition to another and (ii) the impact of *k*-means consolidation on that ratio.

¹⁴More accurately, the standardized Euclidian distance between these countries and the barycentre is less than half the median distance.

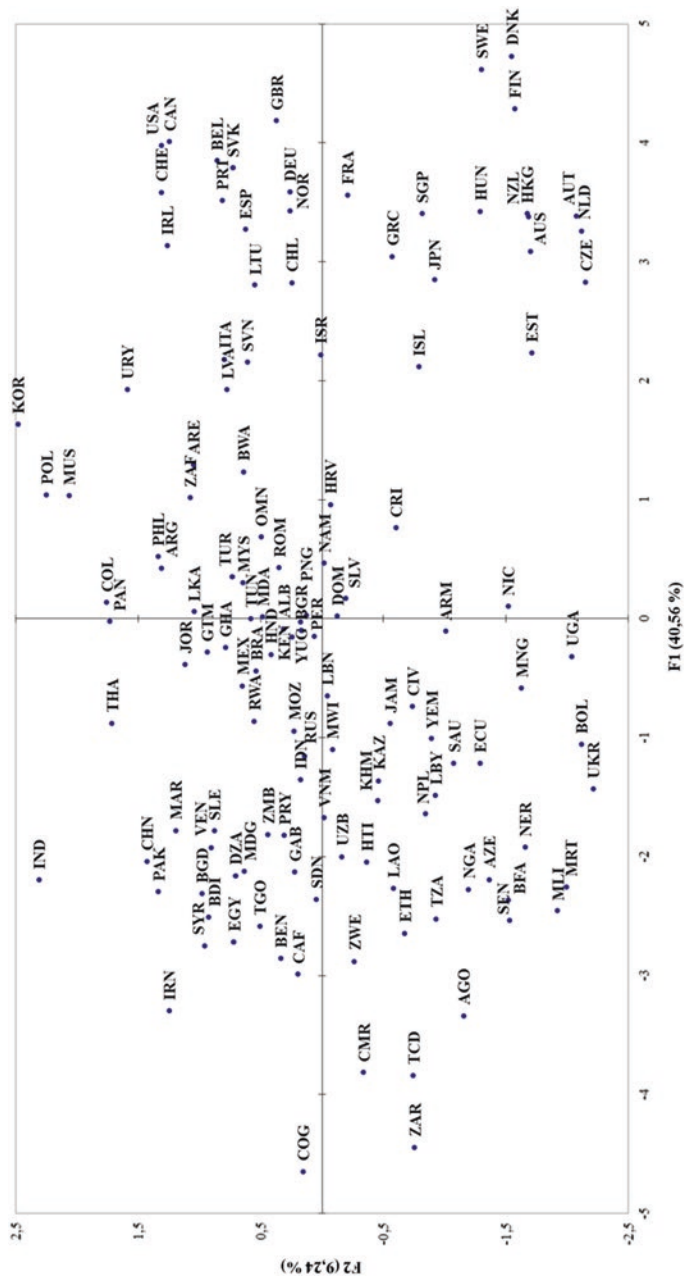


Fig. 6.3 Countries' projection over the first factorial plan. Data source: Author's calculations

have been re-imputed into an additional group, labelled *idiosyncratic*. Countries labelled as *idiosyncratic* have thus adopted original institutional arrangements that are different from (i) the “regularities” established for the other countries that are aggregated in clearly identified groups, and (ii) in most cases, one another within the *idiosyncratic* group. The five clusters (four clusters plus the *idiosyncratic* group) that were identified by this method are reported in Table 6.2. Figure 6.4 maps them onto a world atlas. At this point, several significant results are worth being emphasized.

First, there is no one unique model of competition and product market governance among emerging economies. Countries commonly identified as “emerging economies” are distributed across different models of competition governance. A first line of differentiation is related to the degrees of openness and protection of the domestic product market. A majority of emerging economies, especially the smallest ones, are classified in the *export-oriented deregulated* model, which features high degrees of market deregulation, as well as a strong outward orienta-

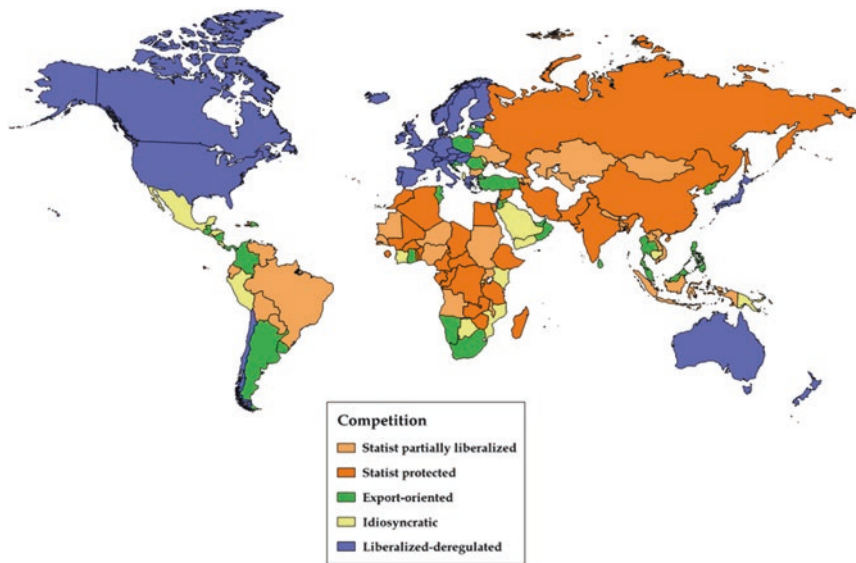


Fig. 6.4 World map of the competition and product market governance models

tion. Countries characterized by that model have significantly higher degrees of product market deregulation, trade openness, FDI attraction to Special Economic Zones, and intellectual property rights protection than is the case for the other clusters of non-developed economies (Table 6.3). Their retail sector is also significantly more concentrated than in other developing and emerging countries, indicating the existence of economic barriers to entrants in this sector and of a certain degree of organization of big companies to protect their markets against potential entrants.

As for the biggest emerging economies, such as Brazil, China, India and Indonesia, they all fall into the two varieties of statist models. As shown in Table 6.3, these two models, namely the *statist partially liberalized* and the *statist protected*, exhibit significant differences as regards the extent of their red tape and market regulation (price controls, licence restrictions) and degree of protectionism (trade taxes, capital controls). Brazil, and smaller emerging countries, like Argentina, Indonesia, Korea, South Africa, Thailand and Turkey, belong to the former group, which is the less regulated and protected of the two, although still featuring relatively higher degrees of state interventionism, especially through state transfers and subsidies and FDI incentives. By contrast, China, Egypt, India, Iran, Russia and Pakistan have been grouped together as *statist protected* competition and product market models, together with a large number of poor developing countries. A common trait of these countries is that state intervention via administrative burden and direct intervention in the trade and production spheres has tended to thwart the emergence of an open competitive market.

Table 6.4, which reports cluster means for several characterization variables, requires several comments. First, and quite surprisingly, the so-called emerging market countries are not necessarily more open to trade and more financially liberalized than the other developing economies. However, they do exhibit significantly higher levels of economic incentives to attract FDI and access to global value chains. Second, OECD countries' competition governance models have all been clustered within the *liberalized deregulated* group. This implies that OECD countries' competition regimes exhibit more similari-

Table 6.3 Active and supplementary variables: compared cluster means (standard errors)

	All (N = 143)	(1) Liberalized deregulated	(2) Export-oriented	(3) Statist partially liberalized	(4) Statist protectionist	(5) Idiosyncratic
Corrupt	0.06 (1.02)	1.54^a (0.71)	-0.02 (0.44)	-0.68 (0.28)	-0.66 (0.36)	-0.32 (0.50)
Price_contr	4.77 (2.12)	6.43 (1.54)	4.15 (1.78)	4.50 (2.03)	3.04 (1.65)	5.50 (1.73)
Lic_restr	6.60 (2.03)	8.10 (1.17)	6.94 (1.61)	6.41 (1.63)	4.28 (1.95)	7.02 (1.30)
Tax_comp	6.17 (2.71)	7.51 (2.15)	7.53 (1.57)	2.85 (2.70)	5.94 (2.21)	6.65 (1.35)
Retail_barr	1.40 (1.02)	2.53 (0.75)	1.74 (0.60)	0.59 (0.53)	0.48 (0.39)	1.26 (0.65)
Capit_contr	2.72 (0.81)	3.22 (0.67)	2.86 (0.76)	2.48 (0.78)	2.22 (0.81)	2.68 (0.56)
Eff_comp	-0.28 (0.92)	0.42 (0.82)	-0.05 (0.82)	-1.10 (0.73)	-0.54 (0.70)	-0.36 (0.61)
Form_comp	-0.10 (0.94)	0.55 (0.84)	0.02 (0.83)	0.25 (0.92)	-0.91 (0.75)	-0.08 (0.53)
SEZ	1.76 (1.32)	1.55 (1.46)	2.76 (1.23)	1.24 (0.97)	1.54 (1.28)	1.72 (0.79)
Tsfr_subsid	7.59 (2.00)	5.57 (1.76)	7.91 (1.57)	7.98 (1.72)	9.06 (0.85)	8.87 (1.09)
IPR_protec	2.14 (1.17)	3.59 (0.48)	2.46 (0.61)	1.14 (0.69)	1.23 (0.68)	1.63 (0.60)
Contr_enf	32.72 (11.00)	22.90 (5.86)	31.77 (7.69)	36.59 (10.94)	41.44 (12.08)	33.71 (6.49)
Tax_trade	8.76 (5.39)	3.16 (1.64)	7.59 (3.51)	9.73 (4.05)	15.68 (3.20)	9.31 (3.56)
GDP/cap. cstt \$ ^{PPP}	11,586.17	29,261.30	10,390.71	4002.28	3013.61	5745.76 (5601.70)
2005	(12,435.22)	(8710.41)	(9343.73)	(3382.45)	(3534.57)	
HDI	0.62 (0.19)	0.85 (0.04)	0.67 (0.09)	0.53 (0.14)	0.43 (0.15)	0.54 (0.16)
Gini index	40.63 (9.09)	33.93 (6.90)	43.24 (9.41)	41.98 (10.02)	39.39 (6.51)	46.63 (6.08)
Regul_quality	0.05	1.38	0.17	-0.61	-0.80	-0.26
SOE_invest	6.00	9.39	5.88	5.00	4.46	6.17
Gov_effect	0.04	1.53	0.16	-0.64	-0.82	-0.61
Social_infrast	0.476	0.816	0.444	0.328	0.286	0.412
Econ_organ	3.15	4.33	3.04	2.95	2.16	3.14

^aMean significantly different for the group at 5% (bold) or 1% (underlined) confidence level

Data sources: Author's calculations on data collected from World Bank Doing Business, CEPII Institutional Profiles, Voigt (2009) and Fraser Institute; for details, see Table 6.5

Table 6.4 Informative variables: compared cluster frequencies (in %)^a

	<i>Liberalized deregulated</i>	<i>Export-oriented</i>	<i>Statist partially liberalized</i>	<i>Statist protected</i>	<i>Indistinct</i>	All (N = 143)
OECD	<u>0.72</u>	0.00	0.00	0.00	0.00	0.18
East Asia and Pacific	0.06	0.15	0.14	0.04	0.12	0.10
Eastern Europe and Central Asia	0.19	0.23	0.21	0.04	0.12	0.16
Latin America and the Caribbean	0.03	<u>0.27</u>	<u>0.25</u>	0.00	0.29	0.15
South Asia	0.00	0.04	<u>0.29</u>	0.08	0.00	0.04
Middle-East and North Africa	0.00	0.15	0.04	0.19	0.18	0.10
Sub-Saharan Africa	0.00	0.15	0.07	0.65	0.29	0.27
Total	1.00	1.00	1.00	1.00	1.00	1.00
Very high HDI	<u>0.69</u>	0.08	0.00	0.00	0.00	0.24
High HDI	0.25	0.40	0.25	0.04	0.31	0.21
Medium HDI	0.03	0.48	0.32	0.31	0.25	0.26
Low HDI	0.03	0.04	<u>0.43</u>	<u>0.65</u>	0.44	0.29
Total	1.00	1.00	1.00	1.00	1.00	1.00
Industrialized countries	0.78	0.08	0.18	0.00	0.12	0.26
Emerging countries	0.16	0.65	0.25	0.31	0.29	0.33
Developing countries	0.06	0.27	0.21	0.19	0.35	0.20
Less developed countries	0.00	0.00	<u>0.36</u>	<u>0.50</u>	0.24	0.21
Total	1.00	1.00	1.00	1.00	1.00	1.00

^aMean significantly different for the group at 5% (bold) or 1% (underlined) confidence level

Data sources: Author's calculations

ties than differences, especially when they are opposed to those of the developing countries. Although it systematically exhibits lower degrees of achievements in all the dimensions under analysis, one specific group of emerging economies presents close similarities with the OECD cluster.

Those emerging countries that have adopted the *export-oriented deregulated* model of competition and product market governance have generally liberalized FDI and trade in order to upgrade their industry. By contrast, more mature OECD countries seem to have placed stronger emphasis on direct intervention via subsidies to industries. In this respect, export-oriented deregulated emerging countries look more liberalized than the so-called *liberalized deregulated* mature industrialized countries. Third, large emerging economies such as China, Egypt, India or Russia which have adopted *statist protected* governance systems, or, to a lesser extent, Brazil, which is classified as a *statist open* model, all seem to provide transnational firms with fewer incentives to invest than the smaller *export-oriented deregulated* emerging economies that are more integrated to the world economy. The fact of having formerly been ruled under a socialist model of governance is probably a common feature of many countries belonging to the two *statist* clusters. Even though the logic of state control over the economy was partially interrupted by broad privatization programmes during the 1990s, the socialist legacy has survived via large state-owned enterprises and cultural inertia in privatized firms (Lin 2009).

These results show that our four clusters can be located on a linear scale going from low levels of economic development to higher ones, but also from low-quality governance or institutions to higher quality ones. The four clusters also follow a typical path of change, going from a pure *statist* to a pure capitalist economic organization. Table 6.4 shows that, on average, the *export-oriented deregulated* model has more in common with the *liberalized deregulated* (with strong industrial policy) model than with the two other clusters, which are mainly composed of developing economies. Moreover, the *statist partially liberalized* model shares common features with the *export-oriented deregulated* one, that is, the importance of FDI attraction and of integration to world value chains,

which is nevertheless far more pronounced for the latter, and a tendency to be more open than *statist protected* countries. Yet the *statist liberalized* model is less externally liberalized than the *export-oriented deregulated* model.

As regards internal liberalization and deregulation, it appears that both the *statist partially liberalized* and *statist protected* models are more heavily regulated than the *export-oriented deregulated* one. The capacity to organize transfers and subsidies is significantly lower in *statist protected* countries, which are also characterized by weak states and a high share of informality in the national GDP. Not surprisingly, the countries classified as *liberalized deregulated* are essentially industrialized economies showing the highest levels of HDI and income per capita, and the lowest levels of inequality.

Additional characterization variables in the bottom of Table 6.3 show that there is a scale of regulation quality across the four distinct clusters. The regulatory quality index (World Bank), which measures the quality of the government regulatory action, and the government effectiveness indicator, both increase linearly from the *statist protected* to the *liberalized-deregulated* model. Likewise, the GDP share of state-owned enterprises and government investment linearly increases across the four clusters, suggesting that privatization and state retreat from direct production and investment closely parallel external liberalization and internal deregulation.

6.5 Conclusion

In this chapter, various dimensions of the competition governance system have been described and used to cluster models of competition governance across a large set of developed, developing and emerging countries.

Our data analysis has captured three alternative dimensions along which competition and product market governance models can be differentiated. The first one pertains to the degree of internal and external liberalization of the product market, including red tape and trade and financial integration. The second dimension of differentiation corresponds to FDI attraction policies, especially those concerning export-

processing industries. The third dimension is related to more standard industrial policies, in particular those carried out during the first stages of economic development, and is associated with the developmental state model. One important result is that FDI attraction policies appear to be uncorrelated either to the logic of product market internal liberalization and deregulation, or to industrial policies in a developmental state style. Although diversion/anti-diversion policies still constitute the predominant dimension of differentiation between national systems of competition regulation, the style of state interventionism is also a crucial factor of international heterogeneity. In the more protectionist emerging countries, product market governance tends to operate through the traditional directive industrial and trade policy channels. By contrast, product market governance tends to mobilize more exclusively the channel of policies focused on FDI attraction and integration into world value chains in the more extraverted emerging economies.

On the basis of such a differentiation pattern, four distinct competition regimes have been identified. A fifth set, grouping “idiosyncratic” modes of competition regulation, has been generated by our methodology. OECD developed economies are all classified as *liberalized deregulated* models. The bulk of emerging economies, especially the smallest ones, are found in the *export-oriented deregulated* model, which is characterized by strong outward orientation. Bigger emerging economies fall into the two varieties of statist models, namely the *statist partially liberalized* and the *statist protected*. Brazil and Indonesia belong to the former group, a less regulated and more open model, whereas China, Egypt, India, Iran, Pakistan and Russia fall into the latter group. Other advanced emerging countries, like Argentina, Korea, South Africa, Thailand and Turkey are typified as *statist partially liberalized* model because of a strong degree of state interventionism over markets, aimed, however, at easing integration to the world economy. This represents a crucial difference in respect of the *statist protected* model to which a large number of developing countries belong, where state-diversion plays a central role in the processing of markets, in a context of highly protectionist economies.

Appendix

Table 6.5 Variables used in the cluster analysis

Name of the variable	Description of the data	Source
Government diversion/anti-diversion policies		
<i>Cost of tax compliance</i>	Time required per year for a business to prepare, file, and pay taxes on corporate income, value-added or sales taxes, and taxes on labour (a higher score indicates a shorter time cost)	World Bank Doing Business 2009
<i>IPR protection</i>	Degree of compliance of the IPR policy (0 if no IPR law; from Value 1 if poor compliance, to Value 4 if strong compliance)	CEPII Institutional Profiles
<i>Formal competition</i>	Formal competition policy (A higher score indicates more formal competition rules)	Voigt (2009)
<i>Contract enforcement</i>	Number of procedures to enforce a contract (A higher value means more red tape)	World Bank Doing Business 2009
<i>Price controls</i>	Price controls (a higher score means a more limited use of price controls)	Fraser Institute
<i>Licence restrictions</i>	Time in days and monetary costs required to obtain a license to construct a standard warehouse (a higher score indicates fewer restrictions)	World Bank Doing Business 2009
Trade integration policies		
<i>Capital openness</i>	Degree of openness of private firms and domestic sectors (including public utilities) to foreign capital (0 if no foreign capital; from 1 if low degree of openness to 4 if no protection)	CEPII Institutional Profiles
<i>Trade taxes</i>	Taxes on international trade (taxes on international trade composite index accounting for revenues from trade taxes, mean tariff rate, standard deviation of tariff rates; a higher score indicates more restrictions on trade)	Fraser Institute

Table 6.5 (continued)

Name of the variable	Description of the data	Source
Competition/competitiveness trade-off		
<i>SEZ</i>	Number and degree of dynamism of Special Economic Zones (index with the value 0 if no SEZ; lies between 1—few or inefficient SEZ to 4—efficient or numerous SEZ)	CEPII Institutional Profiles
<i>Transf_subsidies</i>	Index of transfers and subsidies to the economy as a percentage of GDP (a higher score indicates smaller public transfers as a percentage of GDP)	Fraser Institute
<i>Effective competition</i>	Competition policy geared towards economic efficiency (A higher score indicates a more economic driven policy)	Voigt (2009)
Mobilization and political processes		
<i>Corruption</i>	Score for corruption (a higher value means less corruption and negative values signal high corruption)	Fraser Institute
<i>Retail_barriers</i>	Barriers to entry in the retail sector; measurement of the degree of concentration in the retail sector (scores ranging from 0 if no big firms in the retail sector to 4 if big companies)	CEPII Institutional Profiles

Table 6.6 Correlation matrix

	Corrupt	Price_ contr	Lic_ restr	Tax_ comp	Ret_ barr	Capit_ contr	Eff_ comp	Form_ comp	SEZ	Sect_ subsid	IPR_ protec	Contr_ enf	Tax_ trade
Corrupt	1.00												
Price_ contr	0.50	1.0											
Lic_ restr	0.56	0.37	1.0										
Tax_ comp	0.39	0.12	0.15	1.0									
Ret_ barr	0.66	0.30	0.46	0.30	1.0								
Capit_ contr	0.32	0.25	0.25	0.11	0.31	1.0							
Eff_ comp	0.49	0.13	0.23	0.15	0.48	0.23	1.0						
Form_ comp	0.42	0.32	0.30	0.11	0.43	0.29	0.26	1.0					
SEZ	0.04	-0.06	0.15	0.08	0.20	-0.04	0.11	0.11	1.0				
Sect_ subsid	-0.54	-0.14	-0.28	-0.03	-0.44	-0.22	-0.44	-0.20	0.08	1.0			
IPR_ protec	0.74	0.40	0.48	0.29	0.74	0.36	0.52	0.40	0.17	-0.53	1.0		
Contr_ enf	-0.53	-0.34	-0.35	-0.30	-0.49	-0.17	-0.21	-0.23	0.04	0.38	-0.44	1.0	
Tax_ trade	-0.59	-0.43	-0.44	-0.28	-0.61	-0.34	-0.32	-0.43	0.01	0.49	-0.59	0.49	1.0

Data sources: Author's calculations; for details, see Table 6.5

Table 6.7 Summary statistics (means and standard deviation)

	All (N = 143)	Eastern			Latin America and the Caribbean	Middle-East and North-Africa	Sub-Saharan Africa	South Asia
		East Asia and Pacific	Europe and Central Asia	OECD				
Corrupt	0.06 (1.02)	-0.01 (0.98)	-0.19 (0.59)	-0.30 (0.58)	-0.16 (0.48)	-0.57 (0.52)	-0.42 (0.24)	
Price_contr	4.77 (2.12)	3.78 (2.44)	4.22 (2.16)	5.25 (2.34)	4.11 (1.62)	4.11 (1.93)	4.20 (1.10)	
Lic_restr	6.60 (2.03)	7.62 (1.43)	6.46 (1.54)	6.83 (1.30)	6.39 (1.94)	5.01 (2.30)	6.76 (1.40)	
Tax_comp	6.17 (2.71)	6.53 (3.39)	5.81 (3.04)	4.81 (2.49)	6.77 (2.66)	6.02 (2.64)	4.72 (1.86)	
Ret_barr	1.40 (1.02)	1.15 (0.67)	1.76 (1.01)	1.50 (0.77)	0.91 (0.67)	0.73 (0.77)	0.55 (0.31)	
Capit_openness	2.72 (0.81)	2.28 (0.81)	2.84 (0.80)	2.84 (0.90)	2.49 (0.79)	2.57 (0.82)	2.70 (0.91)	
Eff_comp	-0.28 (0.92)	-0.35 (1.16)	-0.08 (1.19)	-0.28 (0.76)	-0.46 (0.62)	-0.78 (0.69)	-0.44 (0.67)	
Form_comp	-0.10 (0.94)	0.08 (0.98)	0.09 (0.95)	0.15 (0.81)	-0.72 (0.78)	-0.60 (0.89)	0.00 (0.89)	
SEZ	1.76 (1.32)	1.92 (1.50)	1.59 (1.28)	2.18 (1.29)	2.08 (0.95)	1.27 (1.14)	3.00 (1.22)	
Tsft_subsid	7.59 (2.00)	8.37 (0.78)	6.28 (1.91)	8.42 (1.28)	8.45 (1.11)	9.20 (0.81)	8.97 (0.57)	

(continued)

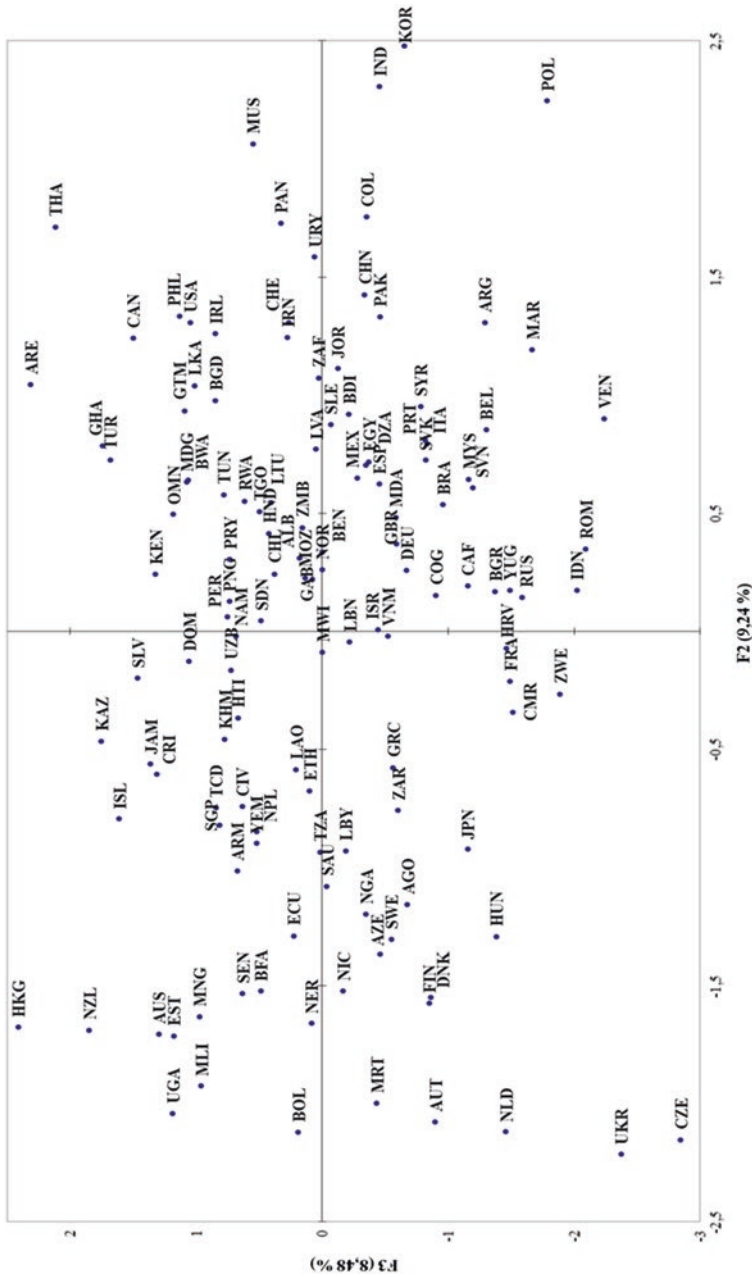


Fig. 6.5 Country projection over the second and third components. Data source: Author's calculations

References

- Acemoglu, D., P. Aghion, and F. Zilibotti. 2006. Distance to Frontier, Selection, and Economic Growth. *Journal of the European Economic Association* 4: 37–74.
- Acemoglu, D., and S. Johnson. 2011. *Why Some Nations Fail*. New York: Crown Business.
- Acemoglu, D., S. Johnson, and J.A. Robinson. 2003. An African Success Story: Botswana. In *In Search of Prosperity: Analytic Narratives on Economic Growth*, ed. D. Rodrik. Princeton, NJ: Princeton University Press.
- Aghion, P., N. Bloom, R. Blundell, R. Griffith, and P. Howitt. 2005. Competition and Innovation: An Inverted-U Relationship. *Quarterly Journal of Economics* 120 (2): 701–728.
- Aghion, P., and R. Griffith. 2005. *Competition and Growth: Reconciling Theory and Evidence*. Cambridge, MA: The MIT Press.
- Amable, B. 2003. *The Diversity of Modern Capitalism*. Oxford: Oxford University Press.
- Amable, B., L. Demmou, and I. Ledezma. 2010. Product Market Regulation, Innovation and Distance to Frontier. *Industrial and Corporate Change* 19 (1): 117–159.
- Amsden, A. 1989. *Asia's Next Giant: South Korea and Late Industrialization*. Oxford: Oxford University Press.
- Berr, E., F. Combarrous, and E. Rougier. 2009. Too Much Consensus Could be Harmful: Measuring the Implementation of International Financial Institutions Policies and Their Effects on Growth. In *Monetary Policies and Financial Stability*, ed. Louis-Philippe Rochon. Cheltenham: Edward Elgar.
- Berrou, J.-P., and F. Combarrous. 2011. Testing Lin's Social Capital Theory in an Informal African Urban Economy. *Journal of Development Studies* 47 (8): 1216–1240.
- Blanchard, O., and F. Giavazzi. 2003. Macroeconomic Effects of Regulation and Deregulation in Goods and Labor Markets. *The Quarterly Journal of Economics* 118 (3): 879–907.
- Cammatt, M.C., I. Diwan, A. Richards, and J. Waterbury. 2015. *A Political Economy of the Middle East*. Boulder, CO: Westview Press.
- Djankov, S., R. La Porta, F. Lopez-De-Silanes, and A. Shleifer. 2002. The Regulation of Entry. *The Quarterly Journal of Economics* 117 (1): 1–37.
- Djankov, S., C. McLiesh, and R.M. Ramalho. 2006. Regulation and Growth. *Economics Letters* 92 (3): 395–401.

- Dutz, M., and M. Vagliasindi. 2000. Competition Policy Implementation in Transition Economies: An Empirical Assessment. *European Economic Review* 44 (4-6): 762–772.
- Evans, Peter. 1995. *Embedded Autonomy: State and Industrial Transformation*. Princeton, NJ: Princeton University Press.
- Faccio, M. 2006. Politically Connected Firms. *American Economic Review* 96 (1): 369–386.
- Fafchamps, M. 2004. *Market Institutions in Sub-Saharan Africa: Theory and Evidence*. Cambridge, MA: MIT Press.
- Fingleton, J., E. Fox, D. Neven, and P. Seabright. 1998. *Competition Policy and the Transformation of Central Europe*. London: Centre for Economic Policy Research.
- Gerschenkron, A. 1962. *Economic Backwardness in Historical Perspective*. Cambridge, MA: Harvard University Press.
- Hall, R.E., and C.I. Jones. 1999. Why Some Countries Produce So Much More Output per Worker than Others. *Quarterly Journal of Economics* 114 (1): 83–116.
- Hall, P.A., and D. Soskice, eds. 2001. *Varieties of Capitalism: Institutional Foundations of Comparative Advantage*. Cambridge: Cambridge University Press.
- Hoekman, B., C. Michalopoulos, M. Schiff, and D. Tarr. 2001. Trade Policy Reform and Poverty Alleviation. *Policy Research Working Papers* No. 2733. Washington, DC: The World Bank.
- Kee, H.L., and B. Hoekman. 2007. Imports, Entry and Competition Law as Market Disciplines. *European Economic Review* 51 (4): 831–858.
- Lin, J.Y. 2009. *Economic Development and Transition*. New York: Cambridge University Press.
- Loayza, N., A.M. Oviedo, and L. Servén. 2004. Regulation and Macroeconomic Performance. *World Bank Policy Research Working Paper* No. 3469. Washington, DC: The World Bank.
- . 2005. The Impact of Regulation on Growth and Informality: Cross-Country Evidence. *World Bank Policy Research Working Paper* No. 3623. Washington, DC: The World Bank.
- Mauro, P. 1995. Corruption and Growth. *Quarterly Journal of Economics* 110 (3): 681–712.
- Méon, P.-G., and L. Weill. 2010. Is Corruption an Efficient Grease? *World Development* 38 (3): 244–259.
- Nicholson, M.W. 2008. An Antitrust Law Index for Empirical Analysis of International Competition Policies. *Journal of Competition Law and Economics* 4 (4): 1009–1029.

- Nicoletti, Giuseppe, and Stephano Scarpetta. 2003. Regulation, Productivity and Growth: OECD Evidence. *Economic Policy* 36: 9–72.
- Palim, M.R.A. 1998. The Worldwide Growth of Competition Law: An Empirical Analysis. *Antitrust Bulletin* 43 (1): 105–145.
- Piveteau, A., and E. Rougier. 2011. Le retour en trompe l'œil de la politique industrielle : L'expert, l'Etat et l'économie politique locale. *Revue Tiers Monde* 2011 (208): 177–192.
- Ranis, G. 1995. Another Look at the East Asian Miracle. *The World Bank Economic Review* 9 (3): 509–534.
- Robinson, J.A. 2009. *Industrial Policy and Development: A Political Economy Perspective*. Mimeo.
- Rodrik, D. 2003. *In Search of Prosperity: Analytical Narratives on Economic Growth*. Princeton, NJ: Princeton University Press.
- . 2008a. Normalizing Industrial Policy. *Commission on Growth and Development Working Paper* No. 3, Washington, DC.
- . 2008b. Industrial Policy: Don't Ask Why, Ask How. *Middle East Development Journal* 1 (1): 1–29.
- Rougier, E. 2016. Fire in Cairo: Authoritarian-Redistributive Social Contracts, Structural Change, and the Arab Spring. *World Development* 78: 148–171.
- Schumpeter, J.A. 1934. *The Theory of Economic Development*. Cambridge, MA: Harvard University Press.
- Soskice, D. 1999. Divergent Production Regimes: Coordinated and Uncoordinated Market Economies in the 1980s and 1990s. In *Continuity and Change in Contemporary Capitalism*, ed. H. Kitschelt, P. Lange, G. Marks, and J.D. Stephens. Cambridge: Cambridge University Press.
- Subramanian, A., and D. Roy. 2003. Who Can Explain the Mauritian Miracle? Meade, Romer, Sachs, or Rodrik? In *In Search of Prosperity: Analytic Narratives on Economic Growth*, ed. D. Rodrik. Princeton, NJ: Princeton University Press.
- Voigt, S. 2009. The Effects of Competition Policy on Development—Cross-Country Evidence Using Four New Indicators. *Journal of Development Studies* 45 (8): 1225–1248.
- Wade, R. 1989. *Governing the Market: Economic Theory and the Role of Government in East Asian Industrialization*. Princeton, NJ: Princeton University Press.
- Wölfl, A., I. Wanner, T. Kozluk, and G. Nicoletti. 2009. Ten Years of Product Market Reforms in OECD Countries—Insights from a Revised PMR Indicator. *OECD Economics Department Working Paper* No. 695. Paris: OECD.
- World Bank. 1993. *The East Asian Miracle*. Washington, DC: The World Bank.