

International Finance Center : Its Conditions and Effects

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What fosters the establishment of an international finance center(IFC)? Does it raise the degree of financial development? This paper examines the conditions and effects of the IFC. In this study, a cross-country sample of 106 countries are used and 18 of them are identified as IFC nations. As expected, the successful environment of an IFC is closely linked to the advances in financial openness. The most important institutional factor favorable to IFCs turns out to be the regulatory environment. An IFC will be sustainable under freer and transparent market regulations even in non-financial sectors, as well as a more open financial system. In general, the depth of financial markets increases steadily as the real economy grows. However, our findings show that beyond just functioning to facilitate international financial transactions, the IFC raises further the degree of domestic financial development.

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I. Introduction

What fosters the establishment of an international finance center (IFC)? Kindleberger (1974) examined the historical aspects of IFC. However, it is hard to find systematic empirical studies investigating its conditions and effects. Furthermore, the study of IFCs has been in the field of economic geography rather than financial economics. Even if it is approached from the view of finance, most studies have focused on background and classification of IFCs.¹⁾

This paper investigates the conditions and effects of an IFC in a cross-country regressions framework. Based on a gravity model, Portes et al. (2001) find that cross border financial transactions are related with distance as well as the size of the economy.²⁾ However, since the IFC is defined as a physical space such as a city or a district in a city, not the quantity of transactions, too many cities and districts have to be included in the regression sample. To avoid this problem, we only deal with the cross-country sample and identify the nations that IFCs belong to. That is, the IFC nation is treated as a dummy variable. We apply a Probit model to what determines the establishment of an IFC. We are mainly interested in economic and institutional conditions, not geography.

Another concern is why we need an IFC. Kaufman(2001) points to efficiency as well as value added in the finance industry as potential gains of an IFC. We are also interested in whether an IFC as an active international financial market would enhance the (domestic) financial development of the nation.

In empirical work, a cross-country sample of 106 countries is used and 18 of them are identified as IFC nations such as the U.K. and the U.S. As determinants for an IFC, this paper uses economic environment variables; income level and index of financial openness. It also uses institutional factors; regulation, law, bureaucracy, investor rights, accounting standards, and corruption. We consider three standard measures of financial development; the ratio of liquid liabilities to GDP, the ratio of equity market capitalization to GDP, and the ratio of private credit to GDP.

According to analyses with a Probit model, the establishment of an IFC is closely linked to advances in financial openness. The most important institutional factor favorable to an IFC turns out to be regulatory environment. The IFC will be sustainable under freer and more transparent market regulations

Notes : 1) Reed(1981) and Abraham et al.(1993) classified international finance centers and selected major cities with rankings using factor analysis.

2) This contradicts to Kaufman(2001) who predicted the role of an international finance center as a physical space would diminish due to the rapid development of IT.

even in non-financial sectors, as well as a more open financial system. On the other hand, beyond just functioning to facilitate international financial transactions, the IFC raises further the degree of domestic financial development.

This paper is organized as follows. The second chapter explains the data used. The third chapter analyses the determinants of IFC. The fourth chapter estimates the effects of IFC on the financial development. The last chapter discuss the policy implications of the results.

II. Data

We examine a sample of up to 106 countries over the period 1980 to 2001. The data are primarily drawn from the databases of Beck et al.(2000) and Demirguc-Kunt and Levine(2001), and the financial indicators are updated to the year 2001. We use financial development data averaged over the entire period, and thus have one observation per country. We then examine the cross-sectional relationship between IFC dummy, its determinants, and financial development indicators. Sample countries can be categorized into three groups as in Table 1.

Table 1	Sample Countries
	1. High-Income Countries (20)
	Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Ireland, Italy, Japan, Luxembourg, Netherlands, New Zealand, Norway, Spain, Sweden, Switzerland, United Kingdom, United States
	2. Emerging Markets Countries (31)
	Argentina, Brazil, Chile, Colombia, Cote d'ivoire, Egypt, Arab Rep., Greece, Hong Kong, India, Indonesia, Israel, Jamaica, Jordan, Kenya, Korea, Malaysia, Mexico, Morocco, Nigeria, Pakistan, Philippines, Portugal, Singapore, South Africa, Sri Lanka, Taiwan, Thailand, Trinidad and Tobago, Tunisia, Turkey, Venezuela
	3. Low-Income Countries (55)
	Bahamas, Bangladesh, Barbados, Bolivia, Botswana, Burkina Faso, Burundi, Cameroon, Congo, Costa Rica, Cyprus, Dominica, Dominican Republic, Ecuador, El Salvador, Fiji, Gabon, Gambia, Ghana, Guatemala, Guyana, Haiti, Honduras, Iceland, Iran, Kuwait, Lesotho, Liberia, Madagascar, Malawi, Malta, Mauritius, Myanmar, Nepal, Niger, Panama, Papua New guinea, Paraguay, Peru, Rwanda, Saudi Arabia, Senegal, Seychelles, Sierra Leone, St. Vincent and the grenadines, Sudan, Suriname, Swaziland, Syria, Tanzania, Togo, Uruguay, Zaire, Zambia, Zimbabwe
	bold: IFC nations

It is not easy to define IFC nations. We identified 18 countries relying on the recent study of Ahn and Ryoo(2003). These countries are in alphabetical orders: Australia(Sydney), Bahamas, Belgium(Brussel), Canada(Montreal and Toronto), Dominica, Germany(Frankfurt), Hong Kong, Japan(Tokyo), Malaysia (Kuala Lumpur), Luxemburg, Netherlands(Amsterdam), Panama, Singapore, Seychelles, Switzerland(Zurich), Thailand(Bangkok), U.K.(London), U.S. (New York). Representative cities as IFCs are in parentheses.

Hong Kong, U.K., and U.S. are global IFC, while other countries are regional, specialized, or offshore IFCs.³⁾ Especially, Dominica, Panama, and Seychelles are offshore IFCs as tax haven categorized by OECD(1998). Even if ten countries are high-income countries, they are not biased toward one group. Bahamas, Dominica, Panama, and Seychelles are low-income countries and Hong Kong, Malaysia, Thailand, and Singapore are emerging markets.

An open and competitive economic environment would help an IFC grow, we consider openness as one of the potential determinants of an IFC. We include both trade openness and financial openness. Trade openness(TOPEN) is measured as the ratio of the sum of exports and imports to GDP. The index of financial openness(FOPEN) is from Chinn and Ito(2002). They have recently compiled a new composite measure of financial openness based on four different categories of information contained in various issues of the *Annual Report on Exchange Arrangements and Exchange Restrictions*.⁴⁾ This index is to provide information on the nature of the restrictions on external accounts for a wide cross-section of countries, standardized to take on higher values the more open the country is to cross-border capital transactions. We also include the level of income (RGDP) which is per capita GDP, adjusted for PPP.⁵⁾

Other than the baseline economic variables, we consider institutional determinants of an IFC such as accounting standards, shareholder rights, creditor rights, law enforcement, regulation, investor rights, corruption, and bureaucracy. These variables are often used in recent comparative economics which use quantified institutional measures.

Accounting standard(ACCOUNT) is an index created by examining and rating companies' 1990 annual reports on their inclusion or omission of 90 items in balance sheets and income statements published by the Center for International

3) For example, Brussels specializes in offshore bookkeeping, Sydney in derivatives, and Zurich in foreign currency transactions.

4) The four categories are the presence of multiple exchange rates, restrictions on current account transactions, restrictions on capital account transactions, and the requirement of surrender of export proceeds.

5) Summary statistics of these variables are introduced in Sections II and III.

Financial Analysis & Research, Inc. The maximum is 90, the minimum 0. Shareholder rights(SHARE) is an index aggregating the shareholder rights ranging from 1 to 6.⁶⁾ Creditor rights(CREDITOR) is an index aggregating different creditor rights ranging from 0 to 4.⁷⁾

Law enforcement(LAW) is a measure of the law and order tradition of a country. It ranges from 10, strong law and order tradition, to 1, weak law and order tradition.⁸⁾ Regulation(REGUL) is a rating of regulation policies related to opening and keeping open a business. The scale is from 0 to 5, with higher scores meaning that regulations are straightforward and applied uniformly to all businesses and that regulations are less of a burden to business.⁹⁾

Corruption(CORRUPT) is from Knack and Keefer(1995) with a scale from 0 (high level of corruption) to 10(low level). The data are averaged over the period 1982-95.¹⁰⁾ Bureaucratic quality(BUREAU) measures the quality of bureaucracy. High scores indicate autonomy from political pressures and strengths and expertise to govern without drastic changes in policy or interruptions in government services. It is scored from 0 to 6.¹¹⁾

	ACCOUNT	SHARE	CREDITOR	LAW	REGUL	CORRUPT	BUREAU
entire sample	60.9	3.00	2.29	3.44	2.85	3.46	3.46
IFC nations	69.6	3.30	2.46	5.12	3.81	4.76	5.13
high-income	68.5	3.05	1.89	5.69	3.50	5.46	6.00
emerging markets	56.9	3.03	2.58	3.15	3.10	3.24	3.43
low-income	34.5	2.50	2.50	2.55	2.43	2.68	2.36
Korea	62.0	2.00	3.00	3.21	3.00	3.17	4.17

6) It is formed by adding 1 if: (1) the country allows the shareholders to mail their proxy to the firm; (2) shareholders are not required to deposit their shares prior to the General Shareholders Meeting; (3) cumulative voting or proportional representation of minorities on the board of directors is allowed; (4) an oppressed minorities mechanism is in place; (5) the minimum percentage of share capital that entitles a shareholder to call for an Extraordinary Shareholders Meeting is less than or equal to 10 percent (the sample median); or (6) shareholders have preemptive rights that can only be waived by a shareholders vote.

7) This index is formed by adding 1 if: (1) the country imposes restrictions, such as creditors' consent, to filing for reorganization; (2) secured creditors are able to gain possession of their security once the reorganization petition has been approved (no automatic stay); (3) secured creditors are ranked first in the distribution of the proceeds that result from the disposition of assets of a bankrupt firm; and (4) the debtor does not retain the administration of property pending the resolution of the reorganization.

8) Average over 1982-95; Source: International Country Risk Guide(ICRG).

9) Source: LLSV(1998b), using data from Economic Freedom of the World, 1975-1995.

10) Source: ICRG.

11) Average over 1982-95; Source: Knack and Keefer(1995), using data from ICRG.

As expected, high-income groups and IFC nations have higher institutional scores. Differences between two groups are not wide. Of course, institutional scores go up with income. The scores of Korea are below those of high-income groups and IFC nations, belonging to the averages of emerging markets.

Three indicators are chosen as the degrees of financial development, which most often used in the related literature. LLY is liquid liabilities as share of GDP. PRIVO is claims on the private sector by deposit money banks and other financial institutions as a share of GDP. MCAP is stock market capitalization as a share of GDP. All these indicators are averaged over 1996-2001.¹²⁾

Table 3 Financial Development by Income Group (1996-2001, averages)

	LLY	PRIVO	MCAP
entire sample	0.485	0.478	0.497
IFC nations	0.965	1.020	1.264
high-income	0.687	0.900	0.866
emerging markets	0.608	0.554	0.495
low-income	0.355	0.264	0.194
Korea	0.861	1.311	0.388

Even though half of the IFC nations are emerging markets and low-income countries, the IFC nations have a higher level of financial development than the average of the high-income group. Korea has higher LLY and PRIVO than the average of the high-income group, but her MCAP is even lower than the average of the world. This indicates that the Korean financial structure is largely bank based rather than market oriented.

III. Determinants of an International Finance Center

What is the successful environment of an IFC? In regression, the IFC can be treated as a dummy variable which is 1 if the country has an IFC or 0 otherwise. Since the dependent variable has a binary response, we analyse the determinants of an IFC with a Probit model.

12) These variables are from Beck and Levine (1999) and Demirguc-Kunt and Levine (2001), and updated using the World Bank database. The year 1996 is chosen simply because all the institutional variables are constructed as of 1995 or before.

Since the concept of an IFC implies that international financial transactions take place actively via many global financial institutions, the IFC country should be financially open. Thus we use financial openness as a control variable. However, financial liberalization including cross-border transactions had started around the late 70s and early 80s. Thus we use the index of financial openness in 1980 as an initial condition.¹³⁾

Institutional variables are considered to have additional explanatory power to foster an IFC. We use these variables one by one to check individual statistical significance. Out of seven institutional variables, regulation, law enforcement, and bureaucracy are statistically significant. When including these three variables together, only regulation has significance. Table 4 shows the results.

Constant	FOPEN	REGUL	LAW	BUREAU	dep=1 /entire sample	log -likelihood
-1.235 ^a (0.208)	0.579 ^a (0.150)				12/88	-26.10
-3.608 ^a (1.006)	0.503 ^a (0.168)	0.759 ^a (0.294)			12/84	-21.14
-2.703 ^a (0.748)	0.634 ^a (0.198)		0.388 ^a (0.162)		12/75	-19.21
-2.727 ^a (0.696)	0.682 ^a (0.205)			0.389 ^a (0.148)	12/76	-18.66
-5.014 ^a (1.527)	0.758 ^a (0.271)	0.848 ^b (0.393)	0.029 (0.447)	0.239 (0.421)	12/73	-15.60

standard errors in parentheses.
^a significant at 1%, ^b significant at 5%, ^c significant at 10%.

The results in Table 4 show that the IFC will be sustainable under freer and transparent market regulations even in the non-financial sectors, as well as a more open financial system. Now we examine whether our results are robust under alternative specifications.

Since the existence of an IFC itself may reflect a more developed (domestic) financial system, the determinants of financial development will simultaneously influence the establishment and success of an IFC. Rajan and Zingales (2003) focuses on industrial demand proxied by income and trade openness, which turn out to be the most important economic variables to financial development. If this

13) According to Chinn and Ito(2002), the mean and standard deviation of FOPEN in 1980 are -0.251 and 1.267, respectively.

is the case, when we add income(RGDP) and trade openness(TOPEN), the explanatory powers of financial openness and regulation in Table 4 may decrease or vanish.

Conatant	FOPEN	REGUL	RGDP	TOPEN	dep=1 /entire sample	log -likelihood
-4.969 ^c (2.668)	0.462 ^b (0.181)	0.671 ^b (0.335)	0.192 (0.341)		12/84	-20.97
-3.001 ^a (1.067)	0.595 ^a (0.186)	0.820 ^b (0.320)		3.3×10 ⁻⁴ (0.005)	12/79	-19.37
-5.420 ^c (2.847)	0.542 ^a (0.201)	0.704 ^c (0.374)	0.227 (0.361)	0.001 (0.005)	12/79	-17.17

standard errors in parentheses.
^a significant at 1%, ^b significant at 5%, ^c significant at 10%.

Table 5, however, shows that the explanatory powers of financial openness and regulation are still strong. Furthermore, when controlled by financial openness and regulation, income and trade openness have no additional explanatory powers. This means that IFC does not merely grow with income. Trade openness may positively affect financial development, thereby forming a favorable environment for the establishment of IFC. But for IFC, financial openness looks more important than trade openness. The result in Table 5 reinforce the importance of financial openness and regulation.

It is easy to understand the positive role of financial openness for IFCs. Then why is regulation so important? Recent financial theories emphasize the role of information in financial activity. A competitive and transparent environment can mitigate informational asymmetries, leading to higher intermediary or equity market activity. That is, it reduces uncertainty about financial contracts, leading to greater provision of financial intermediary services. Notably, as long as countries achieve a certain level of economic development, finance does not simply follow income growth, but instead depends on how the problems of informational asymmetries and market frictions are mitigated. The support of strong institutions is very important.

Unduly onerous regulations restrain free entry. High costs and complex procedures of entry reduce investment demand, thereby reducing demand for loanable funds. On the other hand, heavy regulation fosters the unofficial economy which depends more on private and internal finance.¹⁴⁾ Financing via

official intermediaries is restrained. Unpredictable regulation intensifies informational asymmetry, which in turn limits external financing.

Heavy entry regulation seems neither favorable to financial development nor the establishment of an IFC. First of all, for an IFC to be successful, physical and human resources should be moved freely. IFCs must create new financial commodities and activity in a more open and freer economic environment. Thus rational and transparent market regulations, together with more competitive financial system fostered by financial opening seem the most important criteria for an IFC to grow successfully.¹⁵⁾

IV. Effects on Financial Development

Does an IFC contribute to financial development? The existence of an IFC itself may reflect an advanced domestic financial system. However, it is not clear whether it can accelerate the overall level of domestic financing activity. Now we examine whether the existence of an IFC has additional explanatory power for financial development. Before analysing the relation in a regression framework, we review the literature on the determinants of financial development.

A growing body of literature assesses the structural determinants of financial development. The seminal work of La Porta et al.(1997, 1998) stresses that common-law countries have better investor protection and more highly developed financial markets. Beck et al.(2003) supports a law and finance view by emphasizing that common-law systems adapt quickly to changing economic circumstances, and foster financial development more effectively.

Rajan and Zingales(2003) reject the central role of legal tradition and instead stress the influence of politics on financial development. According to their view of politics and finance, incumbents tend to oppose financial development because it breeds competition, but their opposition becomes weaker with trade openness and free capital mobility.

Law and politics, however, cannot be the only explanation. Real activity is an important driver of financial development because financial services increase naturally to meet demand as real income grows. Indeed, one popular theory is

14) See Schneider and Enste(2000)

15) Heavy regulations are largely consistent with the wide presence of incumbents. In this sense, considering regulation reflects the 'interest group theory' of Rajan and Zingales(2003).

that financial demand creates its own supply, the financial sector responding passively to economic growth. Macroeconomic stability can also be crucial for financial development. For example, high inflation, by discouraging long-term financial contracting, may lead to financial repression. High-inflation environments tend to impede financial sector development. Recent work (Huybens and Smith, 1999; Boyd et al., 2001; Rousseau and Wachtel, 2002) shows that increases in inflation can intensify informational asymmetries, leading to less intermediary or equity market activity.

Based on the recent works, we use income level(RGDP), inflation(INF), trade openness(TOPEN), and legal factors as control variables to investigate the additional effects of IFC on financial indicators. The regression model takes the following form.

$$\frac{1}{T} \sum_{s=1}^T FD_{t+s}^i = \beta_0 + \beta_1 X_t^i + \beta_2 FOPEN_t^i + \beta_3 IFC_t^i + \varepsilon_i \quad (1)$$

The dependent variables, the ratio of liquid liabilities to GDP (LLY), the ratio of equity market capitalization to GDP (MCAP) and the ratio of private credit to GDP (PRIVO), are annual averages over 1996-2001. To mitigate endogeneity problems, all explanatory variables take the values before 1996, not averages over the sample period. The level of initial income is per capita GDP, adjusted for PPP, in 1995 terms. Inflation is the annual average over 1980-1995.¹⁶⁾ Trade openness(TOPEN) is measured as the ratio of the sum of exports and imports to GDP in 1995.

Table 6 Per capita GDP, inflation, and trade openness

	RGDP (1995, dollar)	INF (1980-95, %)	INF (1995, %)	TOPEN (1995, %)
mean	8,919	18.2	16.6	78.9
std. dev	8,310	29.9	28.7	52.4

Table 7 shows the results when income, inflation and trade openness are used as explanatory variables. In all three financial indicators, income is significant at the 1% level. Financial development appears to grow monotonically with income. The effects of inflation and trade openness are rather complex. Inflation impedes PRIVO, but not LLY and MCAP. On the other hand, trade openness

16) Even when the single inflation rate of 1995 is used, the results are unchanged.

positively affects LLY and MCAP, but not PRIVO. Overall, however, these three variables together seem to be good controls for the financial indicators since \bar{R}^2 is 0.39~0.56.

Table 7 Determinants of Financial Development

	LLY	PRIVO	MCAP
Constant	-1.145 ^a (0.258)	-1.763 ^a (0.220)	-2.232 ^a (0.450)
log(RGDP)	0.176 ^a (0.030)	0.259 ^a (0.025)	0.275 ^a (0.050)
INF	-0.001 (0.001)	-0.002 ^b (0.9×10 ⁻³)	-0.001 (0.001)
TOPEN	0.002 ^a (0.6×10 ⁻³)	0.6×10 ⁻³ (0.5×10 ⁻³)	0.003 ^a (0.9×10 ⁻³)
No.	88	95	72
\bar{R}^2	0.39	0.56	0.48

standard errors in parentheses.
^a significant at 1%, ^b significant at 5%, ^c significant at 10%.

Table 8 Effects of International Finance Center on Financial Development I

	LLY	PRIVO	MCAP
Constant	-0.783 ^a (0.234)	-1.398 ^a (0.222)	-1.575 ^a (0.445)
log(RGDP)	0.128 ^a (0.032)	0.213 ^a (0.026)	0.197 ^c (0.050)
INF	-0.7×10 ⁻³ (0.001)	-0.001 (0.9×0 ⁻³)	-0.6×10 ⁻³ (0.001)
TOPEN	0.002 ^a (0.6×10 ⁻³)	0.2×10 ⁻³ (0.5×10 ⁻³)	0.002 ^a (0.8×10 ⁻³)
IFC	0.311 ^a (0.096)	0.322 ^a (0.078)	0.475 ^a (0.123)
No.	88	95	72
\bar{R}^2	0.45	0.63	0.57

standard errors in parentheses.
^a significant at 1%, ^b significant at 5%, ^c significant at 10%.

Table 8 shows the additional effects of an IFC on financial indicators, when controlled by the three variables. In all cases, the IFC dummy is positively linked to financial development. The existence of an IFC raises financial indicators 0.31~0.47. Since the sample averages of LLY, PRIVO, and MCAP are

0.47~0.49, the additional effects of IFC are large enough.

Table 9 shows the results when the index of financial openness is added to the regression. The reason for adding this variable is to avoid potential problems of misspecification since financial opening fosters IFC. So when the IFC dummy and FOPEN are included together, the effect of IFC could be reduced substantially. The result though is not changed. While FOPEN does not have additional explanatory power at all, the statistical and economic significance of IFC is robust.

Table 9 Effects of International Finance Center on Financial Development II

	LLY	PRVO	MCAP
Constant	-0.863 ^a (0.275)	-1.344 ^a (0.243)	-1.355 ^a (0.454)
log(RGDP)	0.146 ^a (0.034)	0.205 ^a (0.029)	0.184 ^a (0.052)
INF	-0.001 (0.001)	-0.001 (0.9×10 ⁻³)	-0.001 (0.001)
TOPEN	0.001 ^c (0.6×10 ⁻³)	0.4×10 ⁻³ (0.6×10 ⁻³)	0.001 ^c (0.8×10 ⁻³)
FOPEN	-0.050 ^c (0.027)	-0.5×10 ⁻³ (0.024)	-0.008 (0.035)
IFC	0.335 ^a (0.101)	0.304 ^a (0.086)	0.407 ^a (0.115)
No.	81	87	67
\bar{R}^2	0.42	0.60	0.49

standard errors in parentheses.

^a significant at 1%, ^b significant at 5%, ^c significant at 10%.

Another sensitivity test is considered. Since La Porta et al.(1997, 1998) stresses that common-law countries have better investor protection and more highly developed financial markets, it is widely accepted that legal origins play an important role for financial development. In our sample 52 countries belong to the French legal tradition and a dummy for this(LEGOR_FR) is added to the regression.

According to Table 10, the French legal tradition impedes PRIVO and MCAP. As expected, civil-law systems seem to influence financial development less effectively. However, the main results are unchanged. Other thing being equal, IFC nations have 0.29~0.38 higher financial indicators. In summary, when controlled by various determinants of financial development proved by a large body of literature, the existence of an IFC appears to affects the domestic

financial activity positively.

Table 10 Effects of International Finance Center on Financial Development III

	LLY	PRVO	MCAP
Constant	-0.830 ^a (0.286)	-1.245 ^a (0.245)	-1.276 ^a (0.450)
log(RGDP)	0.144 ^a (0.034)	0.200 ^a (0.029)	0.182 ^a (0.052)
INF	-0.001 (0.001)	-0.001 (0.8×10 ⁻³)	-0.6×10 ⁻³ (0.001)
TOPEN	0.001 ^c (0.6×10 ⁻³)	-0.3×10 ⁻³ (0.6×10 ⁻³)	0.001 ^c (0.8×10 ⁻³)
FOPEN	-0.050 ^c (0.027)	-0.2×10 ⁻³ (0.023)	-0.003 (0.035)
LEGOR_FR	-0.027 (0.061)	-0.098 ^c (0.052)	-0.127 ^c (0.077)
IFC	0.332 ^a (0.101)	0.292 ^a (0.085)	0.385 ^a (0.114)
No.	81	87	67
\bar{R}^2	0.41	0.61	0.50

standard errors in parentheses.

^a significant at 1%, ^b significant at 5%, ^c significant at 10%.

IV. Conclusions

This paper examined what fosters the establishment of an international finance center and if it raises the degree of financial development. In empirical work, a cross-country sample of 106 countries are used and 18 of them are identified as IFC nations. As expected, the successful environment of an IFC is closely linked to advances in financial openness.

Among institutional factors, the regulatory environment turns out to be the most important one. The IFC will be sustainable under freer and transparent market regulations even in non-financial sectors, as well as a more widely opened financial system.

For an IFC to be successful, physical and human resources should be moved freely. The IFCs must create new financial commodities and activities in a more open and freer economic environment. Unjustified and unpredictable regulations intensify informational asymmetry, and impede business activity about

international financing as well. Thus rational and transparent market regulations (even in non-financial sectors), together with a more competitive financial system backed up by financial opening, seem most important for an IFC to grow successfully.

In general, the depth of financial markets increases steadily as the real economy grows. However, our findings show that beyond just functioning to facilitate international financial transactions, the IFC further raises the degree of domestic financial development. This result is robust. Even when controlled for various determinants of financial development, the existence of an IFC appears to positively affect the domestic financial activity.

Kindleberger(1974) argued that an IFC grows naturally as trade centers on a certain area. Our results, in contrast, show that real income and trade are not enough to explain the formation of an IFC. Regulatory reforms together with financial opening should be a policy priority for successfully building an IFC.

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