CHAPTER THREE

Domestic Institutional Homogeneity and Regional Integration: Further Evidence

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This paper explores the relationship between institutional homogeneity and integration. We argue that the homogeneity of economic institutions within a regional group and the integration process of the group jointly evolve. The paper expands on Feng and Genna (2003) by examining detailed data on national economic institutions. The data include measurements of the size of government, a country's legal framework as associated with property rights enforcement, monetary policy, and business regulation. We hypothesize that dissimilarities in these areas increase the transactions costs among economic actors and therefore reduce the level of regional integration in a region. However, as these institutions become increasingly similar, integration improves and furthers the likelihood of increased homogeneity and integration. We directly test these hypotheses in this paper. Section 2 reviews the relevant literature. Section 3 introduces our theory of domestic institutions and integration. Section 4 examines data on regional integration and institutional homogeneity. Section 5 explores data and conducts some statistical analyses followed by the conclusion in section 6.

Theories of Regional Integration

The theory of neofunctionalism states that integration results from the need to shift specific functions away from exclusively nation-state control toward supranational institutions (Mitrany 1975). It also states that the causal mechanism for this transfer is in the increasing complexity of governmental systems requiring a demand for highly trained specialists at the national level who would tend to solve problems at the international level (Haas 1958).

Nye (1971) finds that the success of integration depends upon the ability of member countries to adapt and respond to the cooperative agreements that define integration. His argument provides the foundation for the perspective that regards integration as a function of negotiations between governments to produce cooperative agreements that evolve into further integration.

Moravcsik (1995, 1991) argues that integration is due to the bargaining among the more powerful members of a regional group. This argument continues the tradition that integration is a means for member countries to obtain domestic policy preferences through regional negotiation (Keohane 1984; Taylor 1983; Wallace et al. 1977). Through negotiation, EU member countries converge economic policy in order to alleviate negative externalities due to economic interdependence while retaining national sovereignty.

Some theories look into the regional and domestic conditions that drive the demand for integration within member countries. One vein of research argues that such a demand is due to external influences on the domestic economy. Many small states have a long dependency on trade due to a lack of local resources. As a result, they tend to be highly vulnerable to any external economic shock and thereby require highly adaptive decision-making systems (Katzenstein 1985). Pauly (1997), in reference to capital mobility, suggests that the political elite will opt for integration to head off negative external impacts so as to increase domestic legitimacy. Therefore the external impacts of globalization on domestic politics lead to crisis management and become the central ingredients for the demand for integration.

Milner's argument (1997) describes the demand for integration as stemming from the degree of home benefits. It is assumed that some degree of material benefit must be present in order for a country to take the integration option. Others (Haggard 1997; Bouzas and Ros 1994) point out that, countries that have undergone severe domestic economic crises will tend to be more likely to participate in regional integration than those who have had minor crises. This would explain the higher development of regional integration in Latin America than in East Asia. Along similar lines, Cohen (1997) argues that the potential of governments to use inflationary policy will tend to make private investors voice demands for greater integration. The loss of sovereignty over fiscal and monetary policy is a plus for private investment because of the reduced risk of inflationary and exchange rate volatility. Garrett (1998a) and Ortiz (1996) state that workers, trade unions, and leftist parties are actually benefiting more under regional integration than previously thought. Integration may help mold domestic power structures depending on its societal effects.

The Institutional Theory of Integration

Before we present our theory, two definitions are warranted. First, we define institutional homogeneity as the degree of similarity of domestic institutions. Second, we define the integration process as incremental development

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1 This and next sections draw on Feng and Genna (2003).
in the areas of the mobility and exchanges of goods, services, labor and capital between states, the existence and influence of supranational agency overseeing economic relationships among states, and the coordination of fiscal and monetary policies among them.

The unit of analysis here is the regional group, comprising a number of member-states. Homogeneity is determined by the existing variance in economic institutions across member states. Integration processes are determined by the degree of interpenetration of factors and policies among states in the group. Our theory can be portrayed in the following table.

<table>
<thead>
<tr>
<th>Integration effect</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homogeneity effect</td>
<td>Yes</td>
<td>Emerging integration</td>
</tr>
<tr>
<td>No</td>
<td>Stalling integration</td>
<td>Failing integration</td>
</tr>
</tbody>
</table>

**Figure 1 Integration and institutional homogeneity**

Institutional homogeneity and integration processes should reinforce each other in order for regional integration to be successful. Institutional homogeneity leads to a reduction of uncertainty and transaction costs – a condition needed for further integration (the homogeneity effect). One classic example is the democratization and liberalization pre-conditions for Spain and Portugal prior to membership in the European Community.

Similarly, a commitment to regional integration results in the modification of domestic institutions, making them compatible across members (the integration effect). If domestic institutions remain heterogeneous between member countries during the process of regional integration, there will be a reduction in the likelihood of further integration. Figure 1 sums up this dimension and postulated integration scenarios. In the upper left corner, we have the scenario where both effects are present producing emerging integration. Where one or the other is not present, we have scenarios where integration may be produced, but the process becomes stalled. Where neither effect is present, we postulate that integration will fail.

Each scenario can be understood by closely examining the mechanism involved. When countries have similar institutions, firms have lower transaction costs and certainty increases. Each of our variables, similarities in government size, legal frameworks to protect private property rights, control of inflation through similar monetary policies, and degree of business regulation reduces the need for diverse direct investment strategies on behalf of businesses. As a firm enters a region, similarities result in minimal alteration of business plans; lowering transaction costs because planning can be centralized and production fragmentation is more likely to be conducted based on economic rather than regulatory efficiencies. If homogeneity continues to develop as a result of integration, then the further strengthening of economic ties improves the level of certainty for firms.

So far the most successful case of regional integration has been the EU, which has evolved from a free trade area into an economic union, with the possible formation of a political union. We expect to see the greatest amount of homogeneity among these countries. By contrast, integration in Latin America has not been as successful. For instance, both the Central American Common Market (CACM) and the Andean Pact (ANCOM) “fell into obscurity by the early 1980s, when the initial goals of liberalizing trade and coordinating macroeconomic policies became first delayed, then implemented only half-heartedly, and eventually postponed indefinitely” (Manetti 1993: 103). The problem with further integration in these two regional groups resides in the lack of domestic economic institutional change. Since the homogeneity of macroeconomic policies has a significant effect on regional integration, the momentum of the process was hard to sustain in the cases of CACM and ANCOM. MERCOSUR also falls into this category. For example, while the member-states have pledged to coordinate macro-economic policy such as monetary policy, no serious effort beyond data gathering and sharing is currently conducted (Genna and Hiroi 2004a). The lack of this coordination adds to the uncertainty of regional integration among firms, especially given the two events of regional economic turmoil created by the unilateral currency devaluations of Brazil (1999) and Argentina (2002).

**Measurements**

The measure of regional integration is described in Feng and Genna (2003) and elsewhere (Genna and Hiroi 2004; Efird and Genna 2002). Hubbauer and Schott also (1994) developed a reasonable framework to measure the degree of regional integration, referred to as the integration achievement score (IAS). The coding of the IAS in their work involves a smaller number of regional integration projects for only one year: 1994. We adopted their method, specified a metric, and expanded it to include a greater number of regional integration projects from their initial implementation through 1995. Each IAS is the average of scores in six categories that measure distinct components of regional integration. These categories include (1) trade in goods and services, (2) the degree of capital mobility, (3) the degree of labor mobility, (4) the level of supranational institutional importance in decision-making, (5) level of monetary policy coordination, and (6) the level of fiscal policy coordination. Each
category has a value of 0 through 5 along a Guttman scale with higher values translating to higher levels of in each category. Appendix A to this paper provides the scoring system for each category. The following sources were consulted in attributing a value for each category: Abbott (1992); Bouzas and Ros (1994); Castro (1982); Edwards (1990); Eng Fong (1988); Holland (1994); Heywood (1990); Hufbauer and Schott (1993a and 1993b); Irvine (1982); Lawrence (1996); Palmer and Reckford (1987); Smith (1993); Sweeney-Hock (1989); Urwin (1991); Williams (1991); Wood and Yesilada (1996).

Each score reflects the arrangements negotiated and agreed upon by the member countries on the year each treaty took effect.

Various indicators of economic freedom (Gwartney et al. 2003) are used as measures of economic institutions. Such measures include the size of government, legal framework, monetary policy, international trade and regulation of credit, labor and business. Each index of the five areas is based on the average of various sub-indices of relevant components. While it is both informative and interesting to examine these components, we use the aggregate indices of the five areas to conserve space. The standard deviations of these five indices for the regional groups measure the homogeneity of the domestic economic institutions of the member states within the group.

**Empirical Evidence**

In this section, we examine nine regional groups. They are the Andean Common Market (ANOCM), the Association of Southeast Asian Nations (ASEAN), the Central American Common Market (CACM), the Southern Common Market (MERCOSUR), Australia-New Zealand Closer Economic Relations Trade Agreement (ANZCETA), the Forum for Asia-Pacific Economic Cooperation (APEC), East Asian Economic Caucus (EAEC), North American Free Trade Agreement (NAFTA), and the European Union (EU).

Figure 2 presents the trends of regional integration for nine groups, among whom the EU clearly has been the most successful group, followed by ANOCM, ANZCETA, and NAFTA. The least integrated group is EAEC, led by APEC, ASEAN, CACM, and MERCOSUR.

Figure 3 shows the levels of economic freedom for the nine groups. Economic freedom is the average score of the five indices as previously discussed. ANZCETA is the leader of economic freedom, followed by NAFTA, and EU. The “least” free in this group is ANOCM, led by ASEAN and MERCOSUR. However, the general trend for all these groups is characterized by a rising pattern, except for ASEAN in 2000.

**Figure 3**

Figures 4-8 demonstrate the variances of the five areas of economic institutions. Figure 4 is about the size of government. Asian groups (ASEAN, EAEC & APEC) tend to be less homogenous in the size of the government, which include government consumption, spending, welfare transfer, and taxation. By comparison, ANZCETA has relatively homogenous institutions. The variance of EU probably is due to the difference in taxation among its member states.

**Figure 4**
Figure 5 presents legal framework variance for the nine groups. NAFTA shows the most heterogeneity in this area, largely caused by the difference between the two developed countries and Mexico. In 1990 when NAFTA consisted of only the United States and Canada, the variance was zero. ANCOM has over years reduced its variance in the legal framework, and meanwhile, its degree of integration has increased. Asian groups also tend to have relatively high variance in legal framework, compared to Latin American or Oceanic groups.

![Legal Framework](image)

Figure 5

Figure 6 displays monetary policy variance. The homogeneity of monetary policy among member states in a regional group is the most important factor for integration. The ultimate economic integration is an economic union where a common currency is adopted. Heterogeneous monetary policies in the group certainly do not bode well for this level of integration. Over the years, most of the nine groups have homogenized their monetary policies, except NAFTA and ASEAN. EU and ANZCERTA have the least heterogeneous monetary policy. The two Latin American groups — CACM and MERCOSUR — are in a good position to have their monetary policy further coordinated.

![Sound Money](image)

Figure 6

Figure 7 indicates the heterogeneity of trade policy for the nine groups. Like monetary policy, to have similar trade strategies promotes regional integration. Furthermore, as argued in the beginning of this paper, successful regional integration enhances convergence of trade practices. EU, NAFTA, ANCOM and ANZCERTA are identified with relatively homogeneity in international trade. MERCUSOR and CACM also narrow their institutional differences. APEC and EAEC continue to reduce their variances, while ANSEAN increased its between 1995 and 2000.

![International Trade](image)

Figure 7

Finally, we examine the institutional variances in regulation of credit, labor, and business. The nine groups vary appreciably not only within groups but between groups. ASEAN, EAEC, and APEC have a great deal of differentiation among their own member states, while ANZCERTA and CACM have substantial within-group similarities. ANCOM, EU and MERCOSUR have about the same level of institutional homogeneity.

![Regulation](image)

Figure 8
Table 1 shows the correlation among the variances of economic institutions and the integration achievement scores. As expected, the correlations between the two sets of variables are all negative. The higher the degree of regional integration is, the lower the variances of the domestic institutions of a regional group are. The integration achievement score is negatively correlated with government size at -0.32, trade at -0.52, monetary policy at -0.12, legal framework at -0.54 and regulation at -0.54. It should be also pointed out that there exists a high correlation between the variance of legal framework and government regulation at 0.97. This result indicates that these two conceptually different areas are actually very strongly related and will lead to multicollinearity problems in the regression analysis. Of the five institutional variables, monetary policy and trade have larger variances among regional groups. The groups that have relatively high degrees of integration tend to be also low on the variances of monetary policy and trade practices.

Next, we use an OLS regression model to test the effect of institutional heterogeneity on regional integration. Clearly, an endogeneity problem exists as our theoretical argument shows. For lack of both sample size and knowledge of the exact causal structures of the reversed effects of integration on institutional homogeneity, we settle on the following model as a tentatively first step.

\[ \text{Integration}_i = \alpha_0 + \alpha_1 \text{GOV}_i + \alpha_2 \text{Legal}_i + \alpha_3 \text{Money}_i + \alpha_4 \text{Trade}_i + \alpha_5 \text{Regulate}_i + u_i \]

The results are reported in Table 2. All five independent variables are statistically significant in the first model. However, the signs on government size and legal framework are the opposite of those expected. The variance inflation factors, which are provided below the standard errors, indicate the existence of multicollinearity as expected. Since the legal framework and regulation variables are highly correlated, they are the suspects in this problem. The second regression model removes the legal framework variable from the first model and the third regression model removes the regulation variable from the first model. In both the second and third models, multicollinearity is eradicated and all signs are correct and all the remaining variables are statistically significant beyond any conventional level of significance. The standardized coefficients show that the largest effect is from legal framework and regulation, followed by trade and monetary policy. The effect of government size is not as large as the rest.

**Conclusions**

Our data analysis finds that regional integration and institutional homogeneity (heterogeneity) are positively (negatively) related. Successful integration is generally characterized by low institutional heterogeneity among member-states. Correlation statistics demonstrate quite strong relations between integration and most of the heterogeneity indices. The regression results also show that institutional heterogeneity has a negative effect on regional integration.

In order to promote regional integration, member states need to coordinate their efforts to "clone" their domestic institutions and policies. Among the most important policy objectives are the harmonization of the legal framework and regulation of credit, labor, and business. When member states of a regional group are committed to formulating and sharing the same policy set within the group, the prospect of successful integration is brightened.

The most successful union not only demonstrates a relatively high degree of overall economic freedom, it also embodies a low degree of heterogeneity of domestic policy on legal framework and regulation of credit, labor and business. The member states' monetary policies and trade practices also tend to be similar. These similarities increase incentives for economic transactions among economic actors across member-states because transaction costs are low and certainly regarding the economic environment improves.

While it can certainly be argued that integration itself creates institutional homogeneity, purposeful efforts to homogenize domestic institutions will provide healthy stimulus for deeper regional integration and domestic homogeneity, thus instituting a virtuous cycle.

**Table 1 Simple Statistics and Correlations**

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Mean</th>
<th>Std Dev</th>
<th>Sum</th>
<th>Minimum</th>
<th>Maximum</th>
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<td>IAS</td>
<td>43</td>
<td>1.21323</td>
<td>0.91459</td>
<td>52.16900</td>
<td>0</td>
<td>3.50000</td>
</tr>
<tr>
<td>goy</td>
<td>36</td>
<td>1.15779</td>
<td>0.14656</td>
<td>41.68033</td>
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</tr>
<tr>
<td>trady</td>
<td>36</td>
<td>1.04632</td>
<td>0.40203</td>
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<tr>
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<tr>
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<tr>
<td></td>
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<td>0.70586</td>
<td>1.14909</td>
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**Pearson Correlation Coefficients**

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<th>Variable</th>
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<th>Std Dev</th>
<th>Sum</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
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<tr>
<td>IAS</td>
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<td>-0.115</td>
<td>-0.538</td>
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<td>-0.311</td>
<td>-0.186</td>
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<tr>
<td>trady</td>
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<td>1.0000</td>
<td>0.264</td>
<td>0.285</td>
<td>0.113</td>
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<tr>
<td>money</td>
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<td>1.0000</td>
<td>0.326</td>
<td>0.314</td>
<td></td>
<td></td>
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<tr>
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<td>36</td>
<td>1.0000</td>
<td>0.969</td>
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</tbody>
</table>

**Number of Observations**

<table>
<thead>
<tr>
<th>Number of Observations</th>
<th>IAS</th>
<th>goy</th>
<th>trady</th>
<th>money</th>
<th>regulaty</th>
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<tr>
<td>IAS</td>
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<td>-0.515</td>
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<td>regulaty</td>
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<td>0.969</td>
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Table 2 Regression Analysis Dependent Variable: Integration

<table>
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<th>Variable</th>
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<th>(2)</th>
<th>(3)</th>
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<td>Constant</td>
<td>21.362*</td>
<td>11.555*</td>
<td>9.965*</td>
</tr>
<tr>
<td></td>
<td>(2.253)</td>
<td>(1.124)</td>
<td>(1.044)</td>
</tr>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Govy</td>
<td>3.422**</td>
<td>-2.103*</td>
<td>-2.830*</td>
</tr>
<tr>
<td></td>
<td>(1.249)</td>
<td>(0.562)</td>
<td>(0.624)</td>
</tr>
<tr>
<td>8.94</td>
<td>1.07</td>
<td>1.18</td>
<td></td>
</tr>
<tr>
<td>Legalv</td>
<td>16.764*</td>
<td>-2.287*</td>
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</tr>
<tr>
<td></td>
<td>(3.556)</td>
<td>(0.341)</td>
<td></td>
</tr>
<tr>
<td>270.48</td>
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<td></td>
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<td>Moneyv</td>
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<td>-0.723*</td>
<td>-0.659*</td>
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<tr>
<td></td>
<td>(0.148)</td>
<td>(0.161)</td>
<td>(0.169)</td>
</tr>
<tr>
<td>1.70</td>
<td>1.20</td>
<td>1.17</td>
<td></td>
</tr>
<tr>
<td>Tradev</td>
<td>-3.692*</td>
<td>-1.180*</td>
<td>-0.841*</td>
</tr>
<tr>
<td></td>
<td>(0.556)</td>
<td>(0.208)</td>
<td>(0.229)</td>
</tr>
<tr>
<td>13.41</td>
<td>1.10</td>
<td>1.20</td>
<td></td>
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<tr>
<td>Regulatev</td>
<td>-43.226*</td>
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</tr>
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<td></td>
<td>(8.049)</td>
<td>(0.727)</td>
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<tr>
<td>235.92</td>
<td>1.14</td>
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<tr>
<td>²</td>
<td>0.85</td>
<td>0.75</td>
<td>0.72</td>
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<tr>
<td>R</td>
<td>0.36</td>
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<td>0.50</td>
</tr>
<tr>
<td>σ</td>
<td></td>
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</table>

Notes:
* = statistically significant at 0.001;
** = statistically significant at 0.01.
Standard errors in the parentheses.

Appendix A: Integration achievement score (coding system)

1. Trade in Goods and Services
   0 = No agreements made to lower tariffs and non-tariff barriers
   1 = Preferential Trade Agreement
   2 = Partial Free Trade Area
   3 = Full Free Trade Area
   4 = Customs Union
   5 = No barriers among member countries

2. Degree of Capital Mobility
   0 = No agreements made to promote capital mobility
   1 = Foreign Direct Investment allowed in limited form
   2 = Capital withdrawal allowed
   3 = Full access for foreign investment and capital withdrawal, except for national government procurement
   4 = Full capital mobility expect for large scale mergers and acquisitions
   5 = Full capital mobility without restriction

3. Degree of Labor Mobility
   0 = No agreements made to promote labor mobility
   1 = Right of movement granted for select professions
   2 = Full right of movement
   3 = Transferability of professional qualifications granted
   4 = Transferability of pensions and other retirement devices
   5 = Full freedom of movement

4. Level of Supranational Institution Importance
   0 = No supranational institutions
   1 = Establishment of nominal institutions
   2 = Information gathering and advisory role
   3 = Ability for institutions to amend proposals
   4 = Ability for institutions to veto proposals
   5 = Supranational institutions operate as primary decision node

5. Degree of Monetary Policy Coordination
   0 = No monetary policy coordination
   1 = Consultation regarding policy
   2 = Commitment to maintain parity
   3 = Coordinated interventions
   4 = Regional Central Bank establishment
   5 = Single currency

6. Degree of Fiscal Policy Coordination
   0 = No fiscal policy coordination
   1 = Consultation regarding policy
   2 = Commitments regarding deficit spending and taxation
   3 = Sanctions regarding breaking commitments
   4 = Uniform tax code
   5 = Single budget
Appendix B: Economic Institutions and Freedom

1. Size of Government
   A. Government spending as a percentage of total consumption
   B. Transfers and subsidies as a percentage of GDP
   C. Government enterprises and investment as a percentage of GDP
   D. Top marginal tax rate

2. Legal Structure
   A. Judicial independence
   B. Impartial courts
   C. Protection of intellectual property rights
   D. Military interference in rule of law and the political process
   E. Integrity of legal system

3. Access to Sound Money
   A. Average annual growth of the money supply in the last five years minus
      average annual growth of real GDP in the last ten years
   B. Standard inflation variability in the last five years
   C. Recent inflation rate
   D. Freedom to own foreign currency bank accounts domestically and abroad

4. Freedom to Exchange with Foreigners
   A. Taxes on international trade
   B. Regulatory trade barriers
   C. Actual size of trade sector compared to expected size
   D. Difference between official exchange rate and black market rate
   E. International capital market controls

5. Regulation of Credit, Labor and Business
   A. Credit market regulation
   B. Labor market regulation
   C. Business regulation

Source: Gwartney and Lawson (2003)

References


