
Towards the Measurement of Openness: A Critical Variable in Macromarketing

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We attempt to develop a measure of openness through a series of logical steps by utilizing secondary data.

Introduction

From its earliest sources macromarketing as a discipline was presented as consisting of two defining elements: “aggregations;” and “social welfare” (Bartels 1976; Fiske 1981; Hunt 1981; Hunt 1976a; Hunt 1976b; Hunt and Barnett 1982; Meade and Nason 1982; Moyer and Hutt 1978; Shower and Nickels 1981). By implication, therefore, two questions that are central to macromarketing are: (1) what constitutes human welfare and (2) what is the best economic and social system for achieving it (Pecotich and Yap 2005)? From the normative point of view it is these two questions that have been at the center of national and international ideological debate and conflict. Economists from institutions such as the World Bank, International Monetary Fund and World Trade Organization have argued that for poor nations, economic openness and liberalization are the necessary foundation for a reform agenda designed to increase human welfare (e.g. World Trade Organization 2004). However, evidence of the causal link between openness and economic development is rare and indeed not clearly supportive of the proposition. It is our intention to focus on the first step in an attempt to answer this question by developing a measure of openness that is conceptually and theoretically sound.

The Concept of Openness

Openness although widely used is a controversial concept that is often poorly understood and defined (e.g. Friedman 1962; Hayek von 1944 ; Hayek von 1960; Kuznets 1955; Lewis 1955; Mao 1967; Marx 1967; Marx 1844:1969; Myrdal 1957; Popper 1943a; Popper 1943b; Ricardo 1911; Robertson 1935; Schumpeter 1942; Smith 1776; Von Mises 1963; Weber 1958; Williamson and Buttrick 1954). However, there seems to be a degree of agreement that two elements are of essential relevance: (1) openness should infer mobility and freedom of entry and exit of material, organizations and human resources and; (2) openness should also infer an open exchange of ideas, skills and information, which in turn includes a favorable disposition towards modernization and the adoption of new technology and practices. This attribute implies that an “open society” would be one that is both dynamic and diverse, notwithstanding the conventions of cultural traditions and practices. In the process of operationalizing the concept of openness of particular interest from the macromarketing point of view are policies, infrastructure, and cultural factors that instigate, propagate, and facilitate these two attributes of openness. Emanating from this basis we propose that openness indicators will emanate from the degree of openness in five interacting systems: the (external and internal) economy, and the extent of the political, cultural, knowledge and marketing openness (Pecotich and Shultz 1998; Pecotich and Shultz 2006; Shultz and Pecotich 1997). We shall expand on the conceptual and measurement aspects of these systems below.

External Economic Openness

The issue of economic openness has been well researched by economists, but has been confined to two constructs: the extent of trade and the extent of capital mobility (Dollar 1992; Feldstein and Horioka 1980; Grassman 1980; Obstfeld 1995; Vamvakidis 2002). Several proxy measures have been developed for these constructs but no consensus exists (Krugman and Obstfeld 2003; O'Rourke 2000). In this context researchers have used the willingness to trade as a characteristic of openness in a country's external

economic system (Barro 2000; Frankel and Romer 1999; Rodrik 1998). These authors measure economic openness by total value of imports and exports as a share of national income (GDP). A more open economy is deemed to have a higher trade volume ratio to GDP. Similarly, a country that demonstrates a proclivity towards trade would also have a higher trade volume ratio to its population (trade per capita).

Rodriguez and Rodrik (2000) argue that this ratio merely indicates trade volume, rather than openness in a country's trade policy or the extent of trade liberalization. A review of the literature suggests that there is less agreement over the measurement of trade liberalization (Ben-David 1993; Edwards 1998; Leamer 1988; Rodriguez and Rodrik 2000; Sachs and Warner 1995; Wacziarg and Welch 2003). A popular indicator of liberal trade (or the lack of) is the extent of trade restrictions by way of tariffs and non-tariff barriers. Sachs and Warner (1995) and Wacziarg and Welch (2003) used the average tariffs on imports of intermediates and capital goods and the coverage of quotas on imports of intermediates and capital goods, in combination with other factors, to construct a dummy variable to represent an open/closed economy. A more open economy is deemed to have lower tariffs and non-tariff barriers.

Four additional indicators are used to measure openness to trade: the number of documents and calendar days required to export and import a container of dry goods (Djankov et al. 2006). These measures relate to trade facilitation and may be associated with both the extent of trade and trade liberalization. A more open economy is deemed to take fewer documents and less time to process export and import transactions.

In an open society, freedom of movement in goods and services should also be accompanied by freedom of movement in capital; nonetheless capital mobility is another theoretical concept that has eluded a consensus measurement among earlier researchers (Feldstein and Horioka 1980; Krugman and Obstfeld 2003; Obstfeld 1995). A measurement favored in this research study is one used by Kraay (1998) who gauges capital mobility using actual capital inflows and outflows as a percentage of GDP. This study adopts a similar approach by using foreign direct investment (FDI) inflows and outflows as a percentage of Gross Fixed Capital formation. A more open economy is deemed to have a greater proportion of FDI inflows and outflows.

Country-level data on the trade volume ratio to GDP are obtained from the World Bank Trade Indicators Report 2008 and the World Bank's Country Briefs and Trade-at-a-Glance tables available online (The World Bank, 2008b); while, trade per capita data are obtained from the World Trade Organization's World Trade Profile 2007 database (World Trade Organization, 2007). Data on the percentage of Most Favored Nation tariffs are obtained from the World Trade Organization's World Tariff Profile 2008 report (World Trade Organization, 2008). Data on the Doing Business indicators are obtained from the Doing Business online database (The World Bank, 2007c). Country-level data for FDI inflow and outflow as a share of GDP are obtained from the UNCTAD's 2007 World Investment Report (United Nations Conference on Trade and Development, 2007). Table 1 below summarizes the indicators used for this dimension.

Internal Economic Openness

The private and social benefits of competition in a market have been well documented in economic literature and do not require any further elaboration here (e.g., Hunt 2000; Lindblom 1977; 2001; Von Mises 1963). Therefore, with respect to openness, an open market would be both one that allows new firms to freely enter a market and one that allows the dynamics of competition (or the 'invisible hand') to operate.

Freedom of entry into (and exit from) a market is a hallmark for fair and equal economic participation in the Open Society. The time and costs incurred in establishing a business can vary with the extent to which government regulation and bureaucracy burden nascent entrepreneurs (De Soto 1990; Djankov et al. 2002). The time and costs of acquiring licenses and permits can also increase start-up and operating costs of a business (Beach and Kane 2007). These factors are considered in the annual Doing Business Survey conducted by the World Bank (Djankov et al. 2006), of which four indicators are of interest in this study: the number of procedures and costs involved in starting a business and applying for a license to

Table 1: Measurement Indicators for External Economic Openness

Characteristic	Indicator	Source
Extent of trade	Total value of imports and exports as a share of GDP	World Bank Trade Indicators Report 2008
	Total value of imports and exports per capita	World Trade Organization World Trade Profile 2007
Trade liberalization	Percentage of MFN tariffs	World Trade Organization World Tariff Profile 2008
Trade facilitation	Number of documents required to export container of dry-cargo	World Bank Doing Business 2008 survey
	Number of documents required to import container of dry-cargo	
	Number of days required to export container of dry-cargo (exporter to ship)	
	Number of days required to export container of dry-cargo (importer to ship)	
Capital mobility	FDI inflow as a share of Gross Capital Formation	UNCTAD 2007 World Investment Report
	FDI inflow as a share of Gross Capital Formation	

construct a building. A more open economy is deemed to require fewer procedures and less money to start a business or operations.

Another characteristic of economic freedom is that the market should be able to clear without intervention, even though this can prove difficult even in capitalist economies (Easton and Walker 1997). Several authors have acknowledged the role of the state in distorting market prices (Alesina and Rodrik 1994; Beach and Kane 2007; Easton and Walker 1997; Gwartney and Lawson 2006; Rodrik 1998), where common examples include the overstimulation of demand from the state, the imposition of price controls, and the price distortion resulting from government subsidies to producers. Whilst state intervention in markets has a redistributive effect in most circumstances, these authors agree that the economic ideal is to allow market participants to determine their own fate. The Fraser Institute and the Heritage Foundation measure freedom from distortion by examining levels of government spending (government expenditures as a percentage of GDP). A more open economy is characterised by a lower proportion of its national income attributable to government expenditures.

Country-level data on the number of procedures and costs involved in starting a business and applying for a license are available from the Doing Business website (The World Bank, 2007c). Government expenditure data are obtained from the United Nations Statistics Database online and are based on World Bank estimates for the year 2007 (United Nations Statistics Division, 2007). Table 2 below summarizes the indicators used for this dimension.

Political Openness

Democracy and political participation are the central tenets of Popper’s (1943) notion of the Open Society; however, there have been many attempts to define and measure democracy and political participation (Adelman and Morris 1971; Bollen 1980; Freedom House 2008; Gastil 1982-1983; Jackman 1973; 1975). Lipset (1959, p. 27) provides a useful conceptualization of democracy that emphasizes the role of voting in self-governance: “a political system which supplies regular constitutional opportunities for changing the governing officials, and a social mechanism which permits the largest possible part of the population to

Table 2: Measurement Indicators for Internal Economic Openness

Characteristic	Indicator	Source
Freedom of entry	Number of procedures required to establish a business	World Bank Doing Business 2008 survey
	Cost required to establish a business as a share of income per capita	
	Number of procedures required to construct a warehouse	
	Cost required to construct a warehouse as a share of income per capita	
Lack of market distortion	Government expenditure as a share of GDP	United Nations Statistics Database 2007

influence major decisions by choosing among contenders for political office.” The importance of voting has also been demonstrated in the work of other authors who use voting statistics as an indicator of self-governance or democracy (Coulter 1975; Jackman 1973; Jackman 1975; Shachar and Nalebuff 1999; Smith 1969; Stack 1979). Stack (1979) asserts that voter turnout is an indicator of active political participation and that high political participation would lead to elected officials who are more representative of the general population. We concur and use voter turnout as an indicator of political participation. An additional indicator of direct democracy is used to supplement this measure: whether a country’s constitution allows for mandatory or optional referendums. A more open political system is deemed to have a higher level of voter turnout and allows for referendums by its citizens.

It is also common for the conceptualization of democracy to comprise of the right to organized political opposition (Adelman and Morris 1971; Downs 1957; Lenski 1966). Downs (1957) and Adelman and Morris (1971) add that a democratic society is one where there is breadth and choice of representation in political parties – consistent with the characteristics of an open political system. Accordingly, efforts to measure democracy have incorporated a dimension of political pluralism or political opposition (Banks 1971; Bollen 1980; Freedom House 2008; Marshall and Jagers 2005; Vanhanen 2000). Two useful measures of political pluralism is the Political Pluralism and Participation and Associational Rights sub-indices published by Freedom House (Freedom House 2008). These indices are generated from country analyst ratings on the extent to which there is liberty to organize and vote for representation of disparate interests. A supplementary measure of political competitiveness is chosen from the POLITY IV dataset, which is also generated from analyst ratings (Marshall and Jagers, 2005). A more open political system is characterized by higher ratings of liberty in political pluralism, opposition, and competition.

A more objective measure of pluralism is added: the Herfindhal index of government and opposition. This index, published in the World Bank's Database of Political Institutions, is a measure of political concentration (Beck et al. 2001). Fragmented legislative partisanship is indicative of political pluralism; thus, a more open political system is deemed to have greater pluralism and a lower Herfindhal score.

The different conceptualizations of democracy covered in the literature review have also consistently included total accountability and transparency as defining characteristics of a liberal democracy. Bollen (1993) offered his conceptualization of liberal democracy which comprises two dimensions: political liberties and democratic rule. Like several authors before him (Huntington 1984; Lipset 1963; Vanhanen 1990), Bollen argued that democratic rule exists to the extent that the national government is accountable to the general population. As a co-requisite of democracy, openness and transparency in government also feature prominently in academic and policy discussions alike (Campos and Nugent 1997; Stiglitz 1999; Transparency International 2008). Transparency International publishes a Corruptions Perceptions Index that is of interest in this study because corruption in government undermines its accountability to the many in the interest of the few. An additional indicator of transparency is used to supplement this measure: whether a country has freedom-of-information legislation to provide its citizens access to government information (Banisar, 2006). A more open political system is deemed to have lesser perceptions of corruption and freedom of information laws.

Popper also asserts that an open society is one that has diplomatic relations with other societies (Popper 1943). A country's diplomatic relations can be enumerated in both its dyadic political ties with other individual countries, as well as, its association with a group of countries in forming an inter-governmental alliance. In an investigation of the structure and culture of the global system, Wallace and Singer (1970) looked at the increase in the number of inter-governmental associations and its constituent members. It would then be possible to measure the extent of a country's diplomatic relations through its membership in inter-governmental associations. A more open political system is deemed to have memberships in more international organizations.

The International Institute for Democracy and Electoral Assistance (2007) provides country-level statistics on voter turnout percentage, which is the total number of votes in the most recent parliamentary election divided by the total number of registered voters. The IDEA website also provides information on referendums (International Institute for Democracy and Electoral Assistance, 2008). The two sub-indices of Political Pluralism and Participation and Associational Rights are obtained from the Freedom House website (Freedom House, 2008). POLITY IV ratings are published online (Marshall and Jaggers 2007). The Herfindahl Index for political concentration is available from the World Bank's Database of Political Institutions website (Beck et al. 2001). Transparency International's Corruption Perception Index is obtained from its website (Transparency International 2008). Data on the Freedom of Information are sourced from the Freedom of Information around the World website (Banisar 2006). Information on membership of inter-governmental organizations is reported in the CIA World Factbook and is available on its website (Central Intelligence Agency 2008). Table 3 below summarizes the indicators used for this dimension.

Cultural Openness

Many of the ideals of the Open Society, such as dynamism, aspiration, equality, and individual freedom, guide the constituent beliefs, values and philosophy of its culture. To measure the cultural openness of a country, we have to assess the more observable manifestations of culture. These constructs include equity in social relations, heterogeneity or diversity in ethnic, linguistic, and religious groupings, and the extent of indoctrination and control in society. Such cultural characteristics have significant influence on the welfare of a society (Alesina et al. 2003; Hansen 1963; Inkeles 1966; Inkeles and Smith 1974; Lopez-Carlos and Zahidi 2005; Marsella and Choi 1993; Weber 1958).

Table 3: Measurement Indicators for Political Openness

Characteristic	Indicator	Source
Political participation	Total number of votes in the most recent parliamentary election as a share of total number of registered voters	The International Institute for Democracy and Electoral Assistance 2007
	Mandatory or optional referendums in constitution	The International Institute for Democracy and Electoral Assistance 2008
Political pluralism	Index of Political Pluralism and Participation	Freedom House Freedom in the World 2008
	Index of Associational Rights	
	Competitiveness of Political Participation	Polity IV data 2007
	Herfindahl index of political concentration	World Bank Database of Political Institutions 2008
Transparency and accountability	Corruption Perceptions Index	Transparency International 2008
	Freedom of information provision in constitution	Freedom of Information around the World 2006
Diplomatic relations	Number of inter-governmental organizations of which the country is a member	CIA World Factbook 2008

Gender equality is an important consideration in cultural openness because it reflects a society's fundamental beliefs and values on equity and self-assertion (Mill 1869:1970). The United Nations Development Programme publishes the Gender-related Development Index (GDI) which measures the extent to which women are given equal access to education and professional and political opportunities (UNDP 2008). Along with this indicator, we will also utilize the ratio of female to male enrolment in primary and secondary education published by the UNESCO Institute for Statistics (UNESCO Institute for Statistics 2008b) and the ratio of female to male labor force participation rate published by the International Labour Organisation (ILO 2008). A more open cultural system would exhibit greater equality for women; thus, a higher GDI score and higher levels of female participation in education and the labor force.

A society that is open to cultural exchange acts as a confluence of several sub-cultures which is evident in its ethnic, linguistic, and religious composition (Parker 1997). Popper and Bergson envision the Open Society as one that is capable of critical dualism and cultural contact with other societies (Germino and Von Beyme 1974; Musgrove 1974). As an increasing number of migrants arrive and become assimilated, the culture of a society becomes more heterogeneous. Measures of ethnic, linguistic, and religious fractionalization have been used by several researchers as a measure of cultural heterogeneity (Alesina et al. 2003; Annett 2001; Clague et al. 2001; Fearon 2003; Mauro 1995). Similar to the indicator for political pluralism, the Herfindahl index is also used to measure the concentration of ethnic, linguistic, and religious composition. A more open cultural system is one where there is greater diversity in these three groups.

Popper (1943) proposed that the Open Society is capable of critical dualism, which encompasses continual self-reflection and dissent; nonetheless, governments and societies use policies and institutions of

indoctrination and censorship to mold thought and suppress freedom of speech. The main thought control apparatus used in pre-industrial societies are tribal and religious institutions (Harris 1980). The use of religious institutions as a tool of indoctrination and control is still prevalent, although the control of mass media has become more prevalent in the post-industrial societies. Without critical dualism, religious teaching can become dogma and as a result, society becomes restrained by tribalism and fatalism (Marx 1970; Weber 1958). Without free speech and freedom of the press, the mass media can be a vehicle for propaganda by the state or ruling class.

Some researchers view secularism as a departure from religious dogma and is a characteristic of cultural openness and modernity (Granato, Inglehart, and Leblang 1996; Inglehart and Baker 2000; Weber 1958). To measure secularism at the country-level, we use two indicators: the proportion of the population that is either non-religious types or atheists according to a survey conducted by the World Christian Database. We have also added a subjective indicator of secularism: whether religious education is part of the public school curriculum. A more open cultural system is deemed to be one that is more secular; therefore one with greater proportions of non-religious types and atheists and a separation of religion and education.

Openness in the cultural system is also characterized by the freedom of expression and freedom of the press, both of which are measured in the Freedom House's Freedom of Expression and Beliefs and Press Freedom Index (Freedom House 2006b). We use these analyst ratings to measure freedom of speech. A more open cultural system is deemed to have greater freedom of speech.

Country-level scores for the GDI are available from the Human Development Reports website (United Nations Development Programme 2008). Primary and secondary school enrolment ratios are published in the UNESCO Institute for Statistics website (UNESCO Institute for Statistics, 2008b). Labor participation rates are available from the International Labour Organisation's (ILO) Key Indicators of the Labour Market 5th Edition Statistics website (International Labour Organisation, 2008a). Fractionalization scores for ethnic, linguistic, and religious groupings are calculated from demographic information obtained from the 2001 Encyclopedia Britannica and the 2000 CIA World Factbook and presented in the Alesina et al. (2003) study's dataset. Information on whether religious education is permissible as part of the public school curriculum is sourced from the United States Department of State's most recent International Religious Freedom Report, available online (The Bureau of Democracy, 2007). Country-level data on the proportion of the population that is non-religious or atheist are obtained from the Association of Religion Data Archives website, which presented data compiled by the World Christian Database (The Association of Religion Data Archives 2008a; 2008b). The sub-index of Freedom of Expression and Beliefs (Freedom House, 2008) and Press Freedom Index (Freedom House 2007) are obtained from the Freedom House website. Table 4 below summarizes the indicators used for this dimension.

Openness in the Knowledge System

The knowledge system comprises the body of public knowledge in a society, as well as, the individuals, groups and institutions that participate in the creation and diffusion of knowledge. Since knowledge has value in many areas of society and is commonly regarded as 'intangible' capital, scholars in the sociology of knowledge such as Marx and Mannheim have debated the societal effects of the creation, possession, control and diffusion of knowledge (Boronski 1987). The knowledge system of a particular society can embody many characteristics of the Open Society. For instance, the extent to which a society's body of knowledge is scientific knowledge may demonstrate its predisposition towards objectivity and critical dualism. The rate of knowledge creation may demonstrate a society's leaning towards modernity and liberalism (Inkeles 1998). Moreover, the extent to which knowledge is or can be shared and disseminated may demonstrate a society's philosophy towards transparency and open access. Even though Batscha (1974) and Pecotich and Shultz (1998) list several characteristics of a knowledge system, there are two most pertinent to this study: scientific research and scientific knowledge sharing.

Table 4: Measurement Indicators for Cultural Openness

Characteristic	Indicator	Source
Gender equality	Gender-related Development Index	United Nations Development Programme 2008
	Female enrolment in primary school as a share of male enrolment	UNESCO Institute for Statistics 2008
	Female enrolment in secondary school as a share of male enrolment	
	Female labor participation rate as a share of male labor participation rate	International Labour Organisation Key Indicators of the Labour Market 2008
Cultural diversity	Herfindahl index for ethnic groups	Encyclopedia Britannica 2004 and CIA World Factbook 2000
	Herfindahl index for linguistic groups	
	Herfindahl index for religious groups	
Secularism	Religious education permissible or prohibited in public school curriculum	United States Department of State International Religious Freedom Report 2008
	Number of non-religious types as a share of population	The Association of Religion Data Archives 2008a,b
	Number of atheists as a share of population	
Freedom of speech	Freedom of Expression and Beliefs Index	Freedom House Freedom in the World 2008
	Press Freedom Index	Freedom House Freedom of the Press 2007

An advocate of falsification (Popper 1963) and critical dualism (Popper 1943), Popper asserted that the Open Society is governed by reason and individuals are capable of differentiating natural and normative laws. Ayres (1962) argued that any society that wishes to benefit from knowledge must adopt the scientific conception of truth over the ritualistic values of the past. Inkeles (1998) also describes a modern country as one that demonstrates a proclivity towards science and research. We look to the United States Patents and Trademark Office's patents data for a measure of knowledge creation because it is the most reliable and available data at the country level. A more open knowledge system is characterized by a greater number of patents distributed.

Scientific inquiry is facilitated by the exchange of information and dissemination of knowledge. Batscha's (1974) operationalization of knowledge sharing involves three dimensions; one of which is the

publication of scientific and technical articles. We use two indicators to measure knowledge dissemination: the number of published Science and Engineering articles originating from a particular country and the number of Science and Engineering articles that are internationally co-authored (at least one author in the article from another country). A more open knowledge system is deemed to have a higher number of Science and Engineering articles.

Country-level data for utility patents granted are available from the United States Patent and Trademark Office website (United States Patent and Trademark Office, 2008). Data on the number of published Science and Engineering articles and the number of internationally co-authored Science and Engineering articles are sourced from the United States' National Science Foundation (NSF) Science and Engineering Indicators 2008 website (National Science Foundation, 2008). Table 5 below summarizes the indicators used for this dimension.

Table 5: Measurement Indicators for Knowledge Openness

Characteristic	Indicator	Source
Knowledge creation	Number of utility patents granted in 2008	United States Patent and Trademark Office 2008
Knowledge sharing	Number of published Science and Engineering articles	United States National Science Foundation Science and Engineering Indicators 2008
	Number of published Science and Engineering articles that are internationally co-authored	

Openness in the Marketing System

The marketing system is highly relevant to any research study that seeks to improve the human condition. Pecotich and Shultz (1998) identified the marketing system as one of the interactive systems affecting the progress of a society. Many authors have also underscored the importance of marketing in society (Ahuvia and Friedman 1998; Arndt 1978; Drucker 1958; Hirsch 1961; Kaynak 1986; Moyer 1965; Nason 1989; Sirgy et al. 1985; Slater 1970; Thorelli and Sentell 1982). From a “functionalist” perspective, a marketing system can be assessed for openness because the passage of goods and information through the marketing channel should be extensive and unfettered. Two characteristics of the marketing system are of interest in this study: the extent of a country’s existing distribution infrastructure and its capacity to move goods and information through the infrastructure.

The passage of goods and information between producers and consumers is constrained by the existing distribution infrastructure. An extensive transportation infrastructure will improve consumers’ access to goods while a well-developed communication infrastructure will enable information to flow more efficiently. We measure the development of transportation infrastructure with three indicators: total length of paved and unpaved roadway per thousand inhabitants, total length of railway per thousand inhabitants, total number of airports with paved and unpaved runways per million inhabitants. The communication infrastructure is measured with five indicators: total number of fixed and mobile phone subscriptions per hundred inhabitants, total number of internet subscriptions per hundred inhabitants, total number of AM and FM radio stations per million inhabitants, total number of TV stations per million inhabitants, and total number of daily newspapers per million inhabitants. A more open marketing system is deemed to have a better-developed transportation and communication infrastructure; thus, higher scores for these indicators.

The competency of marketing intermediaries to transport goods and information through the distribution infrastructure is another important consideration for the development of a marketing system. Thorelli and Sentell (1982) observed that developed countries have more open markets that often feature

efficient distribution channels with well-developed middlemen roles and greater access to the social and economic infrastructure. We use a single indicator to measure the capacity of marketing intermediaries: the size of the labor force employed in transportation, storage, and communication sectors as a ratio of the total labor force. To measure the competency of the marketing intermediaries, we employ four indicators of the Logistic Performance Index (LPI) published by the World Bank from a survey of logistics companies: overall LPI score, quality of infrastructure, competence of private and public logistic providers, and domestic logistics cost. Countries surveyed are given a rating from 1 to 5, 5 being the highest or best. A more open marketing system would be characterized by a greater capacity and competency of its marketing intermediaries.

Statistical indicators for the transportation infrastructure are obtained from the CIA World Factbook 2008 website (Central Intelligence Agency, 2008), and then divided by the reported population figures for that country. Statistics for phone subscriptions and internet users are obtained in its current form from the World Bank's World Development Indicators website based on data provided by the International Telecommunications Union (The World Bank, 2007a). The indicators for radio and television stations are generated by taking the number of radio and television stations and dividing it by the country's population, both of which are published on the CIA World Factbook 2008 website (Central Intelligence Agency, 2008). Data on newspapers are obtained from the UNESCO Institute for Statistics (UNESCO Institute for Statistics 2008a). Marketing labor force statistics are obtained from the ILO website (International Labour Organisation, 2008b). Logistic Performance Index scores are obtained from the World Bank's Trade Logistics and Facilitation report (The World Bank, 2007b). Table 6 below summarizes the indicators used for this dimension.

Table 6: Measurement Indicators for Marketing Openness

Characteristic	Indicator	Source
Transportation infrastructure	Total length of paved and unpaved roadway per thousand inhabitants	CIA World Factbook 2008
	Total length of railway per thousand inhabitants	
	Total number of airports with paved and unpaved runways per million inhabitants	
Communication infrastructure	Total number of fixed and mobile phone subscriptions per hundred inhabitants	World Bank Development Indicators 2008
	Total number of internet subscriptions per hundred inhabitants	
	Total number of AM and FM radio stations per million inhabitants	CIA World Factbook 2008
	Total number of TV stations per million inhabitants	
	Total number of daily newspapers per million	UNESCO Institute for Statistics 2008

	inhabitants	
Capacity of marketing intermediaries	Labor force of transportation, storage, and communication sectors as a share of total labor force	International Labour Organisation 2008
Competency of marketing intermediaries	Logistics Performance Index	World Bank Trade Logistics and Facilitation Report 2007
	LPI - Quality of infrastructure	
	LPI – Competence of private and public logistic providers	
	LPI – Domestic logistics cost	

Conclusions

The central objective of this paper has been to provide a basis for the measure of openness a variable that is hypothesized to be strongly linked to human welfare. It is our hope that in so doing we will contribute to the ongoing ideological debate and provide some evidence for action towards human prosperity.

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