Trade, Social Values and the Common Trust

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Kenneth S. Chan
McMaster University

Institute on Globalization and the HUMAN CONDITION
KTH 234, 1280 Main St W, McMaster University, Hamilton, ON L8S 4M4
(905) 525-9140 Ext. 27556 http://www.humanities.mcmaster.ca/~global/

Preface

In this Working Paper, Kenneth Chan examines the relationship between one dimension of economic globalization, the liberalization of trade, and levels of social trust and social capital in societies. He notes that the literature on economic globalization posits contradictory hypotheses about this relationship. Some analysts argue that trade liberalization will exacerbate social inequalities leading to declining levels of social trust and social cohesion. Others counter that increased openness from trade will bring new values and ideas into societies. As these ideas are indigenized and adapted, the societies in question develop new resources of social trust and social capital. In his examination of these hypotheses, using some mathematical models and a rich variety of data sets, Professor Chan finds conditional support for the more optimistic hypothesis. The conditions he focuses upon, however, are crucial ones. If trade liberalization significantly exacerbates social inequalities or if political institutions are singularly ineffective due to corruption or lack of capacity, a threshold can be reached where the pessimistic hypothesis becomes more credible.

The implications of these findings are important and worthy of thought. The statistics in the paper tell us that there is a relationship between trade openness and the potential exacerbating factors of social inequality and institutional effectiveness. What we do not know is whether the cycles are virtuous or vicious ones. That is, does openness lead to increasing social inequality, which, in turn, undermines social trust or does economic openness reduce social inequality thereby making higher levels of trust possible? As Professor Chan notes, both conclusions are possible depending on various conditions.

We are pleased to have this empirical investigation of some key questions on the impact of trade liberalization on social values and common trust in our series. These questions are important ones in the globalization literature and this paper permits us to reflect upon them further.

William D. Coleman
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Introduction

The present paper investigates empirically whether or not global economic integration can lead to national social disintegration, as proclaimed by Rodrik (1997). By social disintegration, Rodrik refers to the uprooting of social values of a nation, without a suitable replacement. " Nations do have legitimate reasons for worrying about what globalization does to their norms and social arrangements", says Rodrik (1997). Rodrik's pronouncement is closely akin to, if not part of, those contentious trade issues arising from differences in national labour and environmental standards, cultural practices, child labour, etc.

To tackle this problem, the present paper chooses the concept of social capital (the stock of norms, rules, shared understandings and expectations etc.)in the literature as the base of evaluation. The choice of this particular framework is discussed in Section One. A useful function of social capital is to foster collective actions of the community. The latter can be measured by the common trust among members of the community. One can argue that a drop in common trust signals a rise in social disintegration. Using the survey data on trust provided by the World Values Surveys, various predictions on trade and social disintegration, reported in Section Two, can be tested. The present paper finds that, the openness of a economy, ceteris paribus, does not lead to social disintegration (a decrease in common trust). Income distribution is found to play an important role in this openness-trust relationship. Maldistribution of income reduces the positive impact of openness on common trust. Hence, when a more open economy raises the income inequality of a nation, the chance of social disintegration increases. Finally, the impact of openness on trust is positively affected by the quality of the political institutions. Thus, if globalization weakens national governments and their ability to defend social values, it will weaken the openness-trust relationship. There is also evidence of a threshold quality of institution below which the openness-trust relationship turns negative. Section Three concludes with a discussion of results.

The Theoretical Analysis and Predictions

Rather than using the conventional utility or social welfare function to evaluate the aforementioned issues, the present paper will use output performance as a criterion to evaluate the impacts of different social values. In other words, social values are considered here as part of the so-called "social capital", discussed below, of a nation that aids domestic production[1]

Literature Survey

Recently, it is increasingly common for social scientists to use the term "social capital" — the stock of norms, values, civic traditions, conventions, etc., which constrain a person's actions — to explain collective action in a community. Coleman (1988) defines social capital as people's c*apacity* to work voluntarily together. Most researchers agree that it is this kind of civic cooperation that "glues" the community together. Similar to the concept of capital, the stock of social capital is productive because it reduces transaction costs. There is strong evidence that a large stock of social capital leads to robust growth and development [see Putnam (1993), Knack and Keefer (1997)), Zak and Knack (2001), La Porta, Lopez-de-Silanes, Shleifer and Vishny (1997)

among others][2] . The above discussion can be summarized by the following compact functional form:

$$V = v(K, I); \quad v_1 > 0 \qquad (1)$$

where V is voluntary cooperation, K is a vector of social capital, and I is the vector of exogenous and institutional variables, such as income distribution and the effectiveness of government, among others.

In the literature, Fukuyama (1995) and Dasgupta (1999) ascribe the ability to cooperate voluntarily to the common trust among the people. Fukuyama and Dasgupta define common trust as the common expectation of individuals that others' behaviour in the community will be cooperative. Indeed, as argued by Paldam (2000), trust and the ease of voluntary cooperation should be two highly interlinked, if not almost identical, concepts. Without trust, cooperation will be limited only to activities that can be easily monitored or enforced. Paldam (2000) also shows that the two concepts imply each other. Elsewhere, Putnam (1993, 171) makes a similar argument: "Trust lubricates cooperation. The greater the level of trust within a community, the greater the likelihood of cooperation. And cooperation itself breeds trust." In the same vein, Zak and Knack (2001) define trust as the resources that agents spend in production rather than in verifying or monitoring the actions of others, which is identical to the defined amount of cooperation in the community. The two concepts are therefore equivalent from the definition used by Zak and Keefer. The argument in the literature can be summarized as:

$$T = t(V); \quad t' > 0 \qquad (2)$$

where T is common trust and is directly related, if not identical, to voluntary cooperation, V.

There are two views on the impact from the economic aspect of globalization[3] , that is the presence of a liberal trade regime, on national social cohesion.

The Pessimistic View:

According to this view, globalization weakens the social cohesion within a country, which eventually leads to social disintegration [see Rodrik (1997)]. There are two channels through which this process can happen:

(a) When in conflict with the social norms and traditional values of other nations, domestic norms and values (including workplace practices, rules, social insurance, etc.), which confine how domestic goods are produced, could be eradicated through the forces of trade. In terms of eq.(1), if some of the K are destroyed from trade, there will be less common trust and cooperation. This decline will weaken the social cohesion of a nation.

(b) Globalization exacerbates tension among groups and pushes the less fortunate into despair. With increasing resentment and insecurity from those who fall victim to globalization, social order and solidarity decline (Rodrik (1997)). Moreover, the tax base of welfare states is steadily eroding away as capital and skilled workers become internationally mobile. Funding for social insurance and re-distributive programs are weakening considerably. The retreat of the welfare states everywhere aggravates social divisiveness. This problem is especially acute in less developed countries where the political institutions are weak from the start. Hence, globalization weakens the social cohesion (trust) within a country.

The Optimistic View:

According to this view, globalization integrates national cultures resulting in a better mix of pluralistic cultures. Although there is a clear loss of national cultural autonomy in a more open regime, it does not mean national cultures and values are dysfunctional. On the contrary, a better mix of pluralistic culture improves the functioning of domestic social capital, leading to a gain in social cohesion. Sen argues:

"When an economic adjustment takes place, few tears are shed for the superseded methods of production

> and for the overtaken technology. There may be some nostalgia for specialized and elegant objects (such as an ancient steam engine or an old-fashioned clock), but in general old and discarded machinery is not particularly wanted. In the case of culture, however, lost traditions may be greatly missed. The demise of old ways of living can cause anguish, and a deep sense of loss..... but it is up to the society to determine what, if anything, it wants to do to preserve old forms of living, perhaps even at significant economic cost. Ways of life can be preserved if the society decides to do just that, and it is a question of balancing the costs of such preservation with the value that the society attaches to the objects and the lifestyles preserved" (Sen 1999; 241).

In a similar vein, Bhagwati (2001) argues that trade may spread useful values that improve domestic social conditions. "Trade is the friend, not the foe, of social agendas...", he says, "Trade means cultural as well as economic interchange...It is the traditional elites who are most affected by globalization. And it is they who are most likely to react against social change".

According to the optimistic view, although globalization may eliminate some form of domestic social capital that are no longer useful, it may add some forms of foreign social capital that are more appropriate. There should be more of a choice of global norms and values in a more open regime than in a less open one.

An Analytical Framework

There is a general concern that the term social capital is just another buzz word for something we do not know rather than a precise and operational concept. In response to this concern, I will adopt in this paper a definition of social capital by Lin (2001): Social capital can be defined as the stock of rules, norms, values, traditions, etc., *embedded in a social network*, which can be mobilized by agents in the social network for collective action.

To examine the embedded social network of social capital, I will employ a simplified version of a framework developed by Jackson and Wolinsky (1996). The Jackson-Wolinsky social network model introduces a very small amount of cooperation among agents into an otherwise non-cooperative framework -– agents develop limited cooperative links among themselves — and find that small amounts of cooperation can go a long way because agents are tied together into a social network. The transitive nature of links means that weak cooperation among agents can generate strong cooperation within the network. Jackson-Wolinsky also introduce the notion of a stable social network, in which agents would neither sever any existing link nor create new links. They find that the most efficient social networks are not always stable. This is an important and surprising result because, other than instability, there is no intuitive reason why social networks will not grow unbounded, as individual agents must profit from linking disjointed networks [see Burt's (2001) similar argument on structural holes].

Given the Jackson-Wolinsky type of social network with small cooperation, social capital can easily be self-generated within the network. The reciprocity dynamics between networked agents leads to a new equilibrium in which social capital, such as social values, norms, status, new rules of conduct that govern distributions, sanctions, membership criterion, etc., can be heightened. This social capital will guide collective actions more efficiently and effectively. Within this framework, will trade destabilize an existing social network and break up the social capital that is built from that network? This research question captures the spirit of Rodrik's inquiry.

Let i (j) distinguish a representative agent in the export (import competing) sector. Consider a pure exchange economy where agents own only commodities. Let X (M) be the international value of exports (import competing goods) and x (m) be the number of homogeneous agents in the export (import competing)

sector. For convenience, define X_i (M_j) as X/x (M/m). Agent i (j) owns mainly X_i (M_j) and some of M_j (X_i) as specified by the following equation:

For Agent i: $(1-b)\ X_i + a(m/x)M_j$

For Agent j: $b(x/m)\ X_i + (1-a)M_j$ (3)

where a and b are parameters, less than unity, of cross ownership.

Consider the first scenario where b = a = 0; that is, agent i (j) owns only X_i (M_j). The net benefit, B_i (B_j), accrued to agent i (j) from joining a social network that spans both sectors is[4]:

$B_i = F_i(K(x+m, Y),x+m)X_i - c_i(x+m);$

$B_j = F_j(K(x+m,Y),x+m)M_j - c_j(x+m);$

where: $dF_q/d(x+m)>0$; $d^2F_q/d^2(x+m)<0$; $c_q'>0$ $c_q''>0$; q= i,j; (4)

The term x + m above is a good proxy for the size of the network. Cooperative links from agent i, to another member in the network, implies a bilateral commitment not to free ride on cooperative activities. This gives the social network some degree of collective governance, which in turn, lowers the market transactions cost within the network. This gain is captured by the term $F_i(K, x+m)$ in (4). It is a positive function of social capital, K , and the size of the network, x+m, through which economic transactions can be conducted.

Social values require a supporting network. One can argue that the more numerous and complex K require stronger supporting networks. Governance of the network must rise at a diminishing rate as the size of the network increases. K therefore is a function of the size of the network and a parameter (that captures learning,) discussed later.

c_i is the cost of maintaining the link for agent i. The cost of social network increases with the size of the network which determines the number of links needed. The same formula applies to agent j in the import sector.

Consider an autarkic situation where there is a stable social network, as defined by Jackson-Wolinsky. Since agent i (j) will neither sever existing links nor create new links, the current links must be optimal; B_i (B_j) must be at a maximum. The following first order condition of (4) can be assumed:

$X_i\ dF_i/d(x+m) = dc_i/d(x+m)$; and,

$M_j\ dF_j/d(x+m) = dc_j/d(x+m)$; (5)

Suppose, as a result of trade liberalization, X (or X_i) rises, M (or M_j) falls, while X + M (or $X_i + (m/x)M_j$) rises.

Consider what happens in the M-sector as M_j falls[5]:

$M_j\ dF_j(x+m, Y) - dc_j(x+m) < 0;$ (6)

Depending on the magnitude of decline of M_j, the original network may be destabilized as agents in the import sector may break away from the original network. When M_j is below the critical value:

$M_j < [c_j(x+m)- c_j(m)]/[F_j(K(x+m, Y),x+m) - F_j(K(m, Y),m)];$ (7)

the original social network will disintegrate. Agents in the M sector will form their own social network, with a new set of social capital (because $B_j(x+m,(,M_j) < B_j(m,(,M_j))$. And, when M_j is below the next critical value,

$M_j < c_j(x+m)/[F_j(K(x+m, Y), x+m) - F_j(0)];$ (8)

the social network, and the attending social capital in the M-sector will completely disintegrate. I interpret (7) and (8) as the essence of Rodrik's concern on the social disintegration effect of liberal trade.

As cautioned in the literature (see Putnam (1993), among others), social capital can also facilitate collusion that is malicious to the society. Easy examples of this are: cults, criminal and racist organizations, etc. When each sector in the economy has its own self-contained social network and social capital, each sector will

exploit its monopoly position.[6] Therefore, if trade liberalization breaks up domestic social networks into fragmented self-contained networks as warned by Rodrik, these disjointed networks could be quite harmful.

Consider the next scenario where a = b = ½ ; that is, agents i and j own equal proportion of X_i and M_j. Eq. (4) is now replaced by:

$F_i(K(x+m,Y)\ x+m)(X_i + (m/x)M_j)/2 - c_i(x+m);$ (9)

The stability of the social network at autarky can be maintained after trade liberalization, because the value $X_i + (m/x)M_j$ will go up — the first order condition is strictly positive! This is an important benchmark case. While the first scenario depicts a fragmented society, either in terms of income inequality or ethnicity, the second scenario depicts a fairly homogeneous society. The second scenario can also depict society with a social safety net. The parameters (a) and (b) in (3) can be regarded as government taxation and subsidy transfers. Consequently, the income inequality index and the quality of political institutions could distinguish which scenario is the likely outcome of trade liberalization.[7] This conclusion also means that the concept of social capital currently used is not just a circular definition for successful economies as it can predict different outcomes..

The aforementioned parameter Y captures improvement of social capital through learning-by-doing. This effect is often observed in the field. Through experience and innovation, social capital tends to improve its effectiveness by inventing better sanction mechanisms and/or membership selective criteria — Olson (1982) calls this selective incentive mechanism which develops through time. Ostrom (2000) observes from the field that social capital appreciates instead of depreciates with use. This parameter so far has been suppressed in this paper as it does not play a crucial role in the analysis. Now consider the suggestion by Sen (1999) and Bhagwati (2001) that trade liberalization also brings with it the possibility of *learning* some foreign values that can be more productive than domestic social values. This learning process may involve modification of foreign values for domestic usage. Although learning foreign values need not require openness in principle, openness nonetheless provides an important impetus for domestic values to change if they are less competitive globally. Hence, Y = Y(K*) where K* is the stock of foreign social capital that can be useful domestically, often with some modification. The amount of available K* should be a function of domestic openness. Can adopting foreign values be "counter-productive" for the home country? Under our framework that social capital aids productive activities, this cannot happen. Introducing unproductive foreign social capital is highly unlikely because it would not survive competition with the productive domestic sources. I interpret this to be the gist of Sen's (1999) and Bhagwati's(2001) arguments.[8]

The above analysis can be summarized by the following predictions:

PREDICTION I: In a fragmented society with poor political institutions, integration with the global economy can break up social networks and social capital. Consequently, an open economy lowers the common trust of the nation. Global economic integration therefore leads to domestic social disintegration.

PREDICTION II: In a homogenous society with effective political institutions, an open regime allows societies to integrate and reshape components of global culture. Some new more useful values and practices are adopted and some old less useful ones are relinquished. In this respect, an open regime fortifies, instead of diminishes, the ability of social capital to bind its citizens together for collective actions. Common trust in the more open economies should therefore be higher.

With help from equations (1) and (2), the above predictions can be tested in the following functional form:

Trust = F(Openness, Inequality, Institutional Effectiveness) (10)

Or:

$$\text{Trust} = a_0 + a_1(\text{Openness}) + a_2(\text{Inequality}) + a_3(\text{Institutional E.}) + a_4(\text{Openness})(\text{Inequality}) + a_5(\text{Openness})(\text{Institutional E.}) + a_6(\text{Inequality})(\text{Institutional E.}) + a_7(\text{Openness})(\text{Inequality})(\text{Institutional E.}) \quad (11)$$

Since the maldistribution effect of trade on social divisiveness, cautioned by Rodrik, is implicit in Prediction I, the Inequality index should be an important explanatory variable in the regression. The effect of an enlarged choice set of social values from trade in Prediction II, alerted by Sen and Bhagwati, implicitly assumes that domestic institutions are reasonably responsive and will protect domestic values if needed. An accountable government will assist the choice of appropriate social values to strengthen social cohesion. Therefore, in addition to the Inequality, an Institution Effectiveness variable should be included in the above specification.[9] Note that the two predictions above need not be mutually exclusive. In fact, the two predictions suggest non-positive (negative or zero) a_2, a_4, a_6 and a_7 coefficients and non-negative (positive or zero) a_3, a_5 coefficients in (11), without contradicting each other. The impact of openness on Trust equals the derivative of (11) with respect to openness, a function of the level of Inequality and Institution Effectiveness.

Empirical Analysis

Description of Data and Variables

As for the Trust variable, I employ the survey data from the World Values Surveys (WVS), compiled under the direction of Inglehart (1994). This is the most systematic global values survey currently available. In the World Values Surveys, common trust for each country is computed as the percentage of respondents who agree that "most people can be trusted" rather than the alternative that "you can't be too careful in dealing with people". The WVS data have three waves. The first one is in 1980, the second and the third ones are in 1990 and 1995 respectively. I ignore the first wave and average the country data from the second and the third wave surveys; The second and the third waves have more countries than the first wave and the two surveys are five years apart, reasonably close to each other.[10] A total of 39 countries, excluding only transition and non-market economies, are chosen for the present study. Inglehart (1994) believes that urban areas and better-educated persons are over-represented in the sample. Accordingly, a weight was constructed to reflect this bias. This weight is used in the present paper to adjust the "raw" trust values.

The trust values from the WVS have robust predictive power in growth accounting regressions [see Knack and Keefer (1997), Zak and Knack (2001), La Porta at al.(1997)]. Glaeser (2000) at al. also show that the survey question in the WVS evaluates subjects' trustworthiness under a laboratory environment. This finding gives additional confidence to the present choice of data.

As for the openness variable, I employ the openness index constructed by Sachs and Warner (1995), OpenSW, which measures the past years of trade policy openness for a large sample of countries. The OpenSW index describes past trade policy, an exogenous variable which gives a sense of causation to the empirical analysis. To cross check, I will employ a trade shares Index (Open), a five-year average of export and import share of GDP in the sampling period, and perform an alternative test.[11] I also employ the trade shares calculated from the gravity model (OpenGM), which captures transactions cost and market size using only "reduced form" geographic parameters. OpenGM gives the "latent" trade share of a country, free from the influence of other endogenous variables. Besides serving as an excellent instrument in an instrumental variables regression,

OpenGM is better correlated with the actual trade (the Open index) than OpenSW. The correlation coefficient between Open and OpenGM is 0.7925, while between Open and OpenSW is 0.2829.

The Gini coefficient, taken from World Development Indicators published by the World Bank, is employed to capture inequality. An alternative measure of inequality is the ratio of income shares of the richest 20 percent of the population divided by the poorest 20 percent (Income Share Ratio). This alternative measurement should be a good cross-check to the Gini coefficient.

As for the institutional effectiveness variable, I use the Corruption Index compiled by Transparency International, based on subjective rating of national political institutions. This Corruption Index is the weighted average of available reliable surveys, carefully selected by Transparency International. As an alternative to the Corruption Index, I compute an institutional effectiveness index, labeled as Bureaucratic Efficiency Index(BurEI) in the tables, based on the data from Business Environmental Risk Intelligence (BERI) [see Knack and Keefer (1997) for details]. This index is re-scaled from zero to ten. A larger BurEI indicates higher institutional effectiveness[12] . The summary statistics of the aforementioned variables are reported in Table 1.

Results

The openness index compiled by Sach-Warner, OpenSW , is tested first. A simple OLS regression of Trust on OpenSW alone suggests a positive relationship. The full equation (11) is "tested down" by dropping the (jointly) insignificant variables. This is reported as regressions (B),(C) and (D) in Tables 2. The joint test, that $a_1 = a_2 = a_3 = a_6 = a_7 = 0$ in (11), produces an F-statistics of F(5,29)= 0.77 (a p-value of 0.5813)[13] . Table 2 also reports regressions using Income-Share ratio and Bureaucratic Efficiency index (by BERI) as alternative indices for the Gini coefficient and Corruption Index, respectively. Regressions (E) and (F) are the "test down" versions of equation (11). These two regressions suggest that estimates from regression (D) are robust with respect to alternative indices of inequality and institution effectiveness. Note that regression (B), the full regression, offers a more complete interpretation than the "test-down" regressions. In spite of the weak t-statistics of the coefficients due to multicollinearity, the full regression results should not be undermined. For one thing, the F-statistic of the full regression is highly significant. For another, the test-down regressions suggest that the corresponding coefficients in the full regression should be statistically significant if multicollinearity in the full regression could be eliminated. And for another, the signs and the magnitude of the coefficients are broadly consistent with one another across all regressions.

From regressions (A) to (F) in Tables 2 and 3, predictions 1 and 2 can both be supported. The impact of openness on trust is positive, ceteris paribus. But if the income inequality is high, the impact of openness on trust will be lowered. And, if the domestic institutions are effective, the impact of openness on trust will be higher. There is complementarity between openness and income equality, as well as between openness and institutional effectiveness.

The alternative concepts of openness are the trade share (Open) and the "latent" trade share (OpenGM). These two concepts differ from the OpenSW index which records the length of time a country has been using a liberal trade policy. Regressions using these alternative concepts are reported in Table 3. Regressions (G) and (I) are simple tests between the two new concepts of openness and Trust respectively. Regressions (H) and (J) are "test down" regressions from the full regression of equation (11).[14] Comparing (J) with (H), the OpenGM index gives a better fit than the Open index mainly because the OpenGM Index is computed from geographic parameters that are uncorrelated with other endogenous variables. The down side of the OpenGM index is that it is more difficult to interpret than the Open Index, because OpenGM is a measure on the "latent capacity" to trade. There are two noteworthy features of these regressions. For one thing, the cross effect between openness and inequality is statistically insignificant (the coefficient a_4 is insignificant in the joint tests of

(H) and (J); see Footnote 14). This weakens the empirical support for Prediction I. And for another, the negative coefficient of the Openness variable, a_1, implies that there is a threshold level of institutional effectiveness above (below) which the impact of openness on trust is positive (negative). This can be seen from the partial derivative of the dependent variable in regression (H) or (J) with respect to Openness, which equals to $a_1 + a_5$(Institution Effectiveness). The *threshold* Corruption Index (= $-a_1/a_5$), calculated from the estimated coefficients of regression (H) and (J), are 55.2 and 80.2 respectively, in a scale from 1 to 100. It is difficult to interpret what that threshold Corruption Index means for the case of the OpenGM index, as the latter relates to the "latent capacity" to trade. Nevertheless, the coefficient a_1 can be adjusted to be comparable to the a_1 in the Open index regression. The sample mean of the OpenGM variable in Table 1 should correspond to the sample mean of Open variable. An adjustment can therefore be made for the threshold corruption index by adjusting the a_1 coefficient by the ratio of the means of the OpenGM variable to the Open variable. After the adjustment, the threshold corruption index should be 44.6 instead of 80.2.

Tests for Omitted variables

As in all empirical works, the possibility of omitted variables could create biased estimates and spurious relationships. The possible omitted variables for the present model are those structural variables that capture cultural, historical and economic characteristics of different countries. Since they are difficult to identify, I choose the following broad set of structural variables hoping to register some of these effects. The stock of human capital in a country can be approximated by the years of education [taken from Barro and Lee (1993)]. The size of the domestic market and polity can be captured by GDP per capita and the size of population. The Democracy Index, the average of the political rights index and the civil liberties Index in the Freedom House Data Set, captures democracy and civility. The regional dummies (African, East Asian and Latin American countries) depict cultural and historical characteristics. The distinction of high and low income countries, an OECD dummy, picks up the impact coming from the different stage of economic development. And, an oil-exporting country dummy catches the most apparent difference in economic structure. To test how these structural variables may bias the estimations, they are used as regressors, one at a time, to check the consistency of the estimated coefficients. This is reported in Tables 4, 5 and 6 for Regressions (D), (H) and (J) respectively. From the tables, the original estimated coefficients are fairly robust. Therefore, the chance of getting a biased result from omitted variables seems low.

Conclusion

Global integration requires nations to make adjustments in some of their social values and practices or be left behind economically. This process is deemed to improve or degrade some cultural practices, depending on interests that stand to gain or lose from these practices. This is similar to the principles of free trade where there are winners and losers in spite of an overall welfare gain. The present paper uses the common trust as a criterion to reckon the all-inclusive impact of globalization on national values. The present empirical analysis suggests that openness *generally* improves the common trust, and hence strengthens the civic glue that holds societies together rather than fragmenting them. Although globalization may eliminate certain dated social values and may transmit some "foreign" values to a community, its total impact on community trust *can* be positive. However, there are qualifications. Economic inequality and ineffective political institutions weaken this positive effect. When globalization undermines domestic institutions and worsens domestic income distribution, it can have a negative impact on a nation's common trust through these channels. There is evidence of a threshold institutional effectiveness below which an increase in the share of trade lowers common trust instead of raising it.

NOTES

[1] There are numerous difficulties with the traditional utility analysis on national social values. General speaking, social values should be an integral part of the utility function, often assumed to be completely autonomous. There is no room for change in social values within this framework. It is therefore difficult to trace how social values can be transmitted to or uprooted in a country. Moreover, traditional utility analysis is based on individual rationality while social values are based on collective rationality.

[2] Sceptics question what should be counted as social capital and how should social capital be measured, let alone the scantiness of available data [see Solow in Dasgupta and Serageldin(2000)]. Proponents of social capital counter that, since social capital makes the economy more productive, it can be measured from its output. By adding market value to existing physical assets, the contribution (value) of social capital can be reckoned [see Stiglitz in Dasgupta and Serageldin (2000,P.60)].

[3] Globalization is a general phenomenon too broad to operationalize empirically. In this paper I will confine myself to the economic aspect of globalization. Hence, globalization will mean an open regime or a liberal trade regime. These few terms will be used interchangeably to mean the same thing in this paper.

[4] A primary concern of the Jackson-Wolinsky model is the simple and complex links of agents, and how switching from one form of links to another can occur. This detail is not the main concern in the present framework. To simplify the Jackson-Wolinsky framework and introduce social capital into social network, I reformulate the Jackson-Wolinsky model into a simple framework by assuming identical agents within the export or import sector.

[5] If domestic social capital is not competitive globally, that is, it cannot lower domestic transactions costs as much as its trading partners can, the decrease in M or M_j will be much larger.

[6] The Keiretsu in Japan provides an interesting illustrative example. Keiretsu is a form of social capital embedded in economic networks that overlap and pretty much span the entire Japanese economy. Critics argue that Keiretsu may have acted as anti-competitive business practices in reducing foreign imports and direct investments. Supporters rebut that Keiretsu only lowers the transactions cost of doing business. In an empirical study, Lawrence (1991) finds that Keiretsu helps to improve the competitiveness of the Japanese economy by lowering transactions (enforcement, information, etc) costs rather than as a monopoly device.

[7] This conclusion is opaquely implied from the Jackson-Wolinsky paper, that a Pareto welfare maximum social network, such as the social network after trade liberalization, need not be stable. To assure that a stable network is efficient, Jackson-Wolinsky argue that "one is forced to allocate resources to nodes that are not responsible for any of the production. We characterize one such allocation rule: the equal split rule, and another rule that arises naturally from bargaining of the players." (p.44, 1996)

[8] Perhaps without the intense global competitive pressure, the chance of adopting "counterproductive" foreign social values could be higher than otherwise.

[9] In the literature, Zak and Keefer (2001) have shown the independent impact of the income inequality and institution effectiveness on trust. Nonetheless, the present paper is interested in the impact of openness, the interaction between Openness and Inequality as well as the interaction between Openness and Institution Effectiveness.

[10] Some countries are in one but not both of the surveys. Also, in the third survey, some countries complete the survey in 1997/8 instead of 1995. To adjust for this, I pick the other variables in the regressions corresponding to the survey dates.

[11] The OpenSW and the OpenGM (see later) are better indices than the Open index since the former are exogenous variables while the latter is endogenous. Reverse causation, that trust affects openness, may exist and may lead to the simultaneous equation problem in the estimation. Despite that, the estimated results from OpenGM and from Open are largely consistent with each other. Therefore, the chance of getting a simultaneous equation problem in the data appears unlikely.

[12] The institutional effective index is constructed from averaging the four indices in the BERI data set: Contract Enforcement, nationalization risk, bureaucratic delays and infrastructure quality. I do not *use the popular data set complied by International Country Risk Guide [see in Knack and Keefer(1997)] because that data set is already a part of the Corruption Index constructed by Transparency International.*

[13] The joint tests for all the combinations of subsets of the five coefficients are also performed and found to be statistically insignificant. Note that the coefficients of the "test down" regressions are consistent with those in the

full regression. The Ramsey RESET test of regression(D), using the powers of the fitted values of Trust as additional regressors, produces a value of F(3, 31) = 0.80 (Prob > F = 0.5008). Hence, the null that the model has no omitted higher order variables cannot be rejected.

[14] The joint tests that $a_3 = a_6 = a_7 = 0$ produce F-statistics 1.20 (Prob > F = 0.3286) and 0.48(Prob > F = 0.6991) for regressions using Open Index and OpenGM Index respectively. The F-statistics that all the dropped coefficients in regressions (H) and (j) are jointly insignificant (i.e., $a_3 = a_4 = a_6 = a_7 = 0$) are 1.89 (Prob > F = 0.1387) and 0.55 (Prob > F = 0.7033) respectively. The coefficients of the "test down" regressions are consistent with those in the full regression. The RESET tests produce value of F(3, 30) = 1.99 (Prob > F = 0.1368) and F(3, 30) = 1.93 (Prob > F = 0.1459), respectively. Hence, the null that the specification of (H) and (J) has no omitted higher order variables cannot be rejected.

BIBLIOGRAPHY

Barro R. J. and J-W. Lee (1993) "International Comparison of Education Attainment." *Journal of Monetary Economics 32*, December: 363-394.

Bhagwati (2001) "IMF Seminar", *IMF Survey*, April 2, 2001.

Burt, R.S. (2001) " Structural Holes versus Network Closure as Social Capital" in Lin, N., K. Cook and R.S. Burt Ed., *Social Capital: Theory and Research*. Aldine De Gruyter, Inc. N.Y.

Coleman J.S. (1988) "Social Capital in the Creation of Human Capital" *American Journal of Sociology* 94 (Supplement): 95-120.

Dasgupta P. and I. Serageldin (2000), eds. "Social Capital: A Multifaceted Perspective" *The World Bank*, Washington D.C.

Fukuyama, F. (1995) " Trust: Social Virtues and the Creation of Prosperity", New York: Free Press.

Frankel, J.A. and D. Romer (1999) " Does Trade Cause Growth?" *American Economic Review* 89(3): 379-399.

Freedom House Publisher. *Annual Survey of Freedom Country Scores*; Various issues.

Glaeser, E. L. , D. Laibson, J. Scheinkman and C. Soutter (2000) " Measuring Trust" *Quarterly Journal of Economics*. 115(3):811-46.

Inglehart, R.(1994) *Codebook for World Values Surveys*. Ann Arbor Michigan: Institute for Social Research.

Jackson M.O. and A. Wolinsky (1996) "A Strategic Model of Social and Economic Networks" *Journal of Economic Theory*. 71, 44-74

Knack, S. and P. Keefer (1997), " Does Social Capital have an Economic Payoff? A Cross-country Investigation" *Quarterly Journal of Economics* 112(4): 1252-88

La Porta, R., F. Lopez-de-Silanes, A. Shleifer and R.W. Vishny (1997) "Trust in Large Organization" *American Economic Review*, Papers and Proceedings 87(2): 333-8.

Lawrence, R. Z. (1991) " Efficient or Exclusionist? The Import Behavior of Japanese Corporate Groups". *Brookings Papers on Economic Activity* 1: 311-31.

Lin, Nan (2001), *Social Capital: A Theory of Social Structure and Action*. N.Y., Cambridge University Press.

Olson, M. (1982) *The Rise and Decline of Nations: Economic Growth, Stagflation, and Social Rigidities*. New Haven: Yale University Press.

Ostrom E. (2000) " Collective Action and the Evolution of Social Norms" *Journal of Economic Perspectives*, 14(3): 137-158.

Paldam M., (2000) "Social Capital: One or Many? Definition and Measurement" *Journal of Economic Surveys* 14(5): 629-53

Putnam, R.D. (1993) *Making Democracy Work: Civic Traditions in Modern Italy.* Princeton N.J.: Princeton University Press.

Rodrik, D. (1997) *Has Globalization Gone Too Far?* Washington D.C.: Institute For International Economics.

Sachs J. and A. Warner (1995) " Economic Reform and the Process of Global Integration". *Brookings Papers on Economic Activity*. No. 1:1-118.

Sen A. (1999) *Development As Freedom*, Anchor Book. New York: Random House.

Solow R.M.(2000) " Notes on Social Capital and Economic Performance" in Dasgupta P. and I. Serageldin (eds.) *Social Capital: A Multifaceted Perspective*. The World Bank, Washington D.C.: 6-10.

Stiglitz, J.E.(2000) "Formal and Informal Institutions" in Dasgupta P. and I. Serageldin (eds.) *Social Capital: A Multifaceted Perspective*. The World Bank, Washington D.C.: 59-68.

World Development Indicators, *World Bank*. Various Issues

Zak P.J. and S. Knack (2001) " Trust And Growth" *Economic Journal*, 111 (April): 295-321.

TABLE 1: SUMMARY STATISTICS

VARIABLE	MEAN	STANDARD DEVIATION	MINIMUM	MAXIMUM
Trust	31.7546	16.0259	4.1112	65.2141
OpenSW	22.4474	15.5975	0	45
Open	28.7121	13.7885	8.0209	67.2252
OpenGM	15.9474	11.6082	2.56	52.46
Gini Coefficient	37.5836	10.7174	23.1	59.3
Income Share Ratio	8.1145	5.4253	3.2019	24.2308
Corruption Index	57.1345	25.293	9.275	90.4833
Bureaucratic Efficiency Index (BurEI)	6.0761	1.6027	3.5729	8.8406

Notes: The data on Trust are taken from World Values Surveys (1990-5). OpenSW is the years of liberal trade policy taken from Sachs-Warner (1995). Open is the average export and import share of GDP. OpenGM is the trade share of GDP calculated from the Gravity Model from Frankel-Romer(1999). The Corruption Index is taken from Transparency International. The *higher* is the number (1 to 100), the *less* corrupted is the national government. BurEI is the Bureaucratic Efficiency Index constructed from BERI, the higher the number (from 1 to 10), the higher the efficiency of institutions. Income-Share-Ratio equals the income share of the highest 20 percent of population over the income share of the lowest 20 percent. Data on Open, Income-Share-Ratio and the Gini Coefficient are taken from World Development Indicator, World Bank (various years).

Table 2: Dependent Variable: Trust

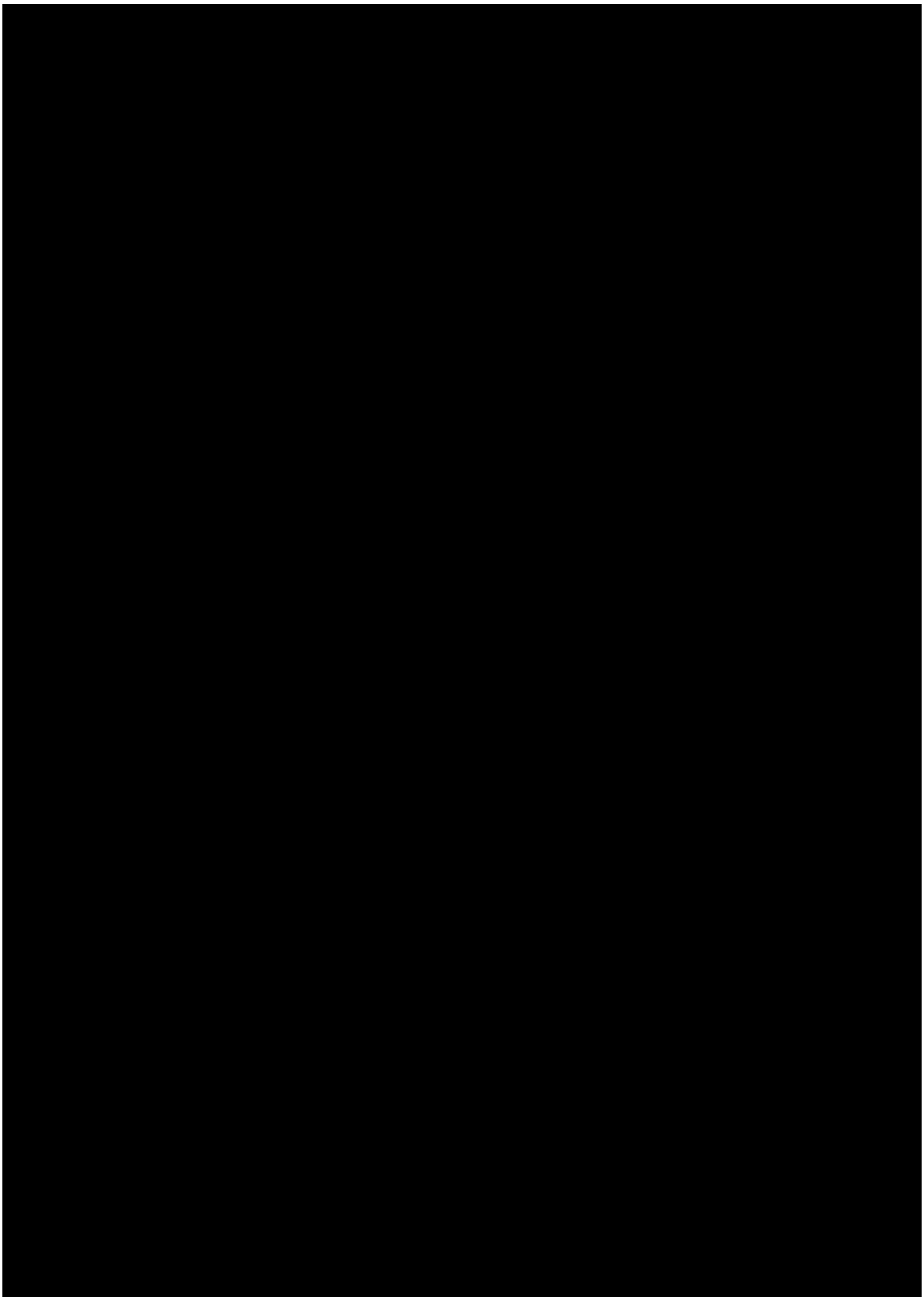
	(A)	(B)	(C)	(D)	(E)	(F)
OpenSW	0.6861 (5.766)#	0.3497 (0.256)				
Gini		-0.1910 (0.392)	-0.3142 (1.837)*			
Corruption Index		0.3786 (0.602)				
OpenSW X Gini		-0.050 (0.605)	-0.0170 (2.976)#	-0.0212 (3.848)#	-0.02664 (3.917)#	
OpenSW X Income Share Ratio						-0.0722 (3.129)#
OpenSW X Corruption Index		0.0002 (0.009)	0.0128 (5.504)#	0.0157 (7.606)#		0.0124 (7.724)#
OpenSW X BurEI					0.1940 (6.340)#	
Gini X Corruption Index		-0.0055 (0.430)				
OpenSW X Gini X Corruption Index		0.0002 (0.363)				
Constant	16.0420 (5.063)#	25.8843 (1.177)	35.2144 (4.405)#	21.9858 (7.489)#	21.5847 (5.679)#	21.3924 (7.509)#
R-square	0.4407	0.71	0.7052	0.6839	0.6649	0.6798

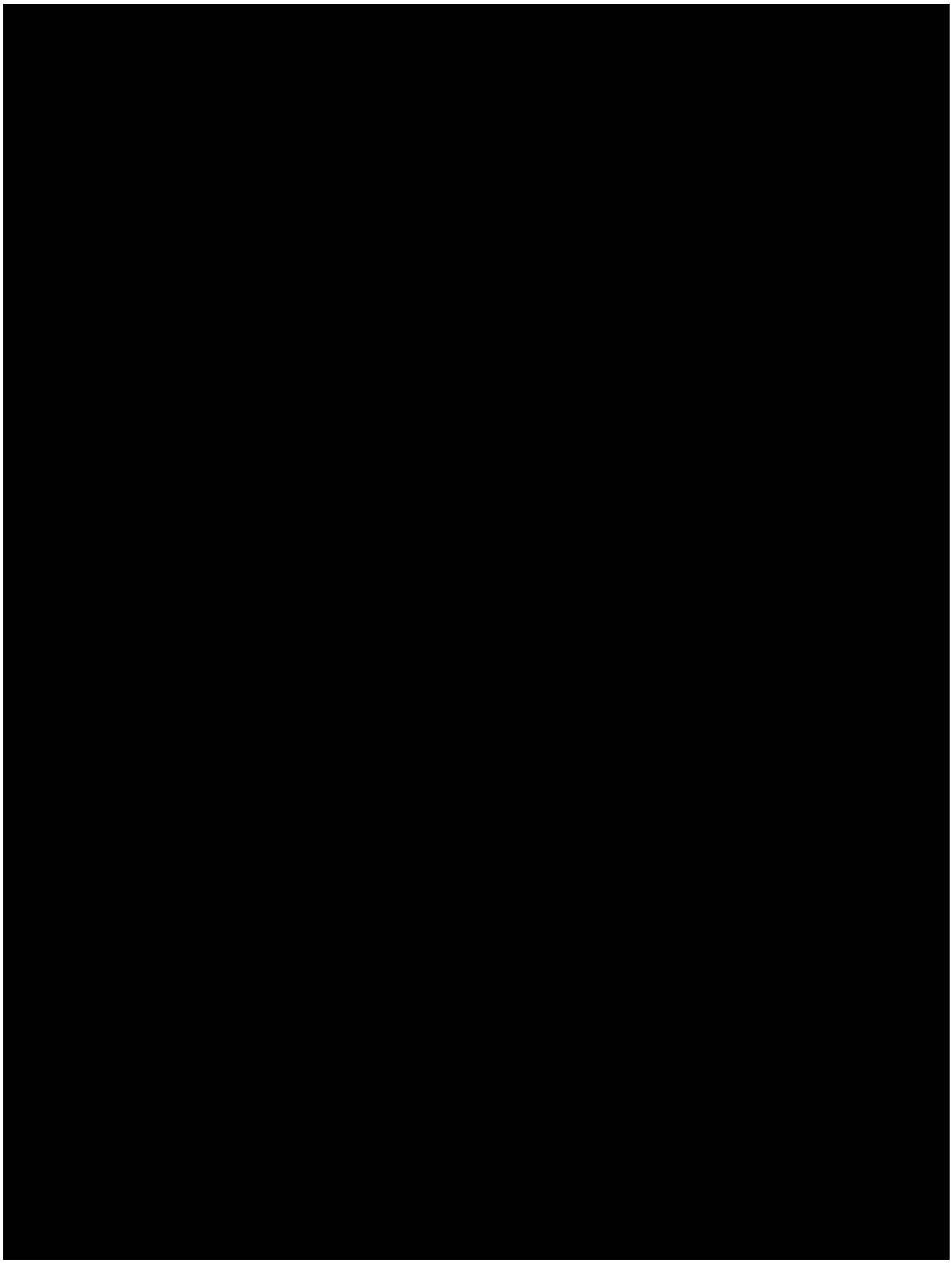
Notes: Regressions are OLS estimates and are adjusted for heteroscedasticity. Sample size is 38. Brackets are t-statistics. The *, ** and # are the 10, 5 and 1 percent level of significance respectively. OpenSW is the years of Openness taken from Sachs-Warner. See also the Notes from Table 1.

Table 3: Dependent Variable: Trust

	(G)	(H)	(I)	(J)
Open	0.3579 (1.969)*	-0.5728 (2.643)#		
OpenGM			0.5802 (2.817)#	-2.2067 (4.840)#
Gini		-0.6510 (3.554)#		-0.8493 (5.025)#
Open X Corruption Index		0.0104 (4.072)#		
OpenGM X Corruption Index				0.0275 (5.344)#
Constant	21.4783 (3.718)#	54.2284 (6.346)#	22.5013 (5.564)#	69.2643 (8.747)#
Adjusted R-square	0.0704	0.6268	0.1544	0.6935

Notes: Regressions are OLS estimates. The *, ** and # are the 10, 5 and 1 percent level of significance respectively. The data on Trust are taken from World Values Surveys. Open is the average of export and import share of GDP, taken from World Development Indicator, World Bank. OpenGM is the trade share calculated from the Gravity Model, taken from Frankel and Romer (1999). See also the Notes from Table 1.





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To assist scholars at McMaster and elsewhere to clarify and refine their research on globalization in preparation for eventual publication.

"Trade, Social Values and the Common Trust"

Kenneth S Chan
Chanken@mcmaster.ca
Department of Economics
McMaster University
Hamilton ON, L8S 4M4
tel (905) 525-9140, ext. 23808
fax (905) 521-8232