International Risk Sharing and Globalization

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December 31, 2011

Abstract

The main research question of this empirical work is whether or not globalization, in its various forms, has had an impact upon international risk sharing. The empirical literature so far has only investigated on one aspect of globalization: economic and financial integration. By decomposing globalization in its economic, political and social aspects, and using a standard framework of consumption insurance tests to gauge the extent of risk sharing among countries, we obtain some interesting results. One of the main findings is that economic and social integration help better cope with idiosyncratic risk, but also that without political integration this might result in an increasing exposure to systemic (uninsurable) risk.

Keywords: International risk sharing; globalization; social and political integration **JEL codes:** C33; D80; E2; F15

1 Introduction and literature

The globalization process is a controversial issue. The economic literature has been investigating (theoretically and empirically) into its consequences (in terms of risk sharing, composition of government expenditure, contagion effects etc.) on global economy (and on the economy of groups of countries) reaching different results and conclusions. Recently, a growing number of contributions argue in favor of a negative impact of globalization. Dreher et al. (2008) find no effect of several measures of globalization on the composition of government expenditure. Koster (2008) claims that social security transfers have increased less in countries with a higher level of social openness and that welfare state is not affected by political openness. Stiglitz (2010) tries to provide a general framework to analyze the optimal degree of financial integration, highlighting the undesirability of a complete integration among countries. Mendoza and Quadrini (2009) attempt to uncover the contribution of increased financial integration to the surge in debt in the US and its influence on the spillover of the crisis across countries. Kose et al. (2009) conclude that only industrial countries have benefitted of improvements in risk sharing in the recent period of globalization, arguing towards the existence of a threshold level of integration, beyond which countries start appreciating a positive impact of financial globalization on consumption insurance. In addition, they warn about the influence of other country specific characteristics which, despite the increased level of financial integration, may preclude the possibility of improvements in risk sharing. Proceeding of net capital inflows is a further reason singled out by the empirical literature (Kaminsky et al. (2004)) as a cause of inability to attain the expected benefits of financial integration. The empirical and theoretical literature on risk sharing moved in two different directions. A first strand of the literature has been investigating the effects of the documented¹ increase in financial integration on international risk sharing; another, more recent strand is exploring (theoretically and empirically) the role of social networks among individuals (and households) on consumption insurance (e.g. Fafchamps and Lund (2003); De Weerdt (2004); Bramoulli and Kranton (2007); Ambrus et al. (2010); Fafchamps (2011); Bloch et al. (2008)). We will focus on the first strand, but before reviewing the most influential contributions might be helpful to stress two things. First, risk sharing itself can work as a measure of financial integration since measurements of the degree of risk sharing are given by comparison with the benchmark case of complete markets. Recent contributions have documented, at global level, that countries have accumulated cross border holdings and enlarged the size of their external portfolio over the last twenty years (Lane and Milesi-Ferretti (2007)). Moreover the European monetary unification, with the introduction of a common currency, has produced a unique case of study which is perfectly suitable to investigate the impact of financial integration. These two issues have probably addressed the scholars interest predominantly on that aspect of globalization which is financial integration. The literature we explore next tries to understand whether the degree of risk sharing actually tracks some of financial integration indices. On financial integration, the empirical literature is strongly divided. Part of it claims an increased degree of risk sharing starting from the early 1990s, arguing that this result has been led by improvements in integration of markets due to globalization (see Giannone and Reichlin (2006) and Sorensen et al. (2007)). On the same line Leibrecht and Scharler (2008) realize that countries whose foreign asset and liability position is below the average, experience a shorter mean lag of adjustment, meaning that consumption reacts more rapidly to income shocks, while countries that are characterized by above average foreign asset and liability position have a much higher mean lag of adjustment. Conversely, other empirical contributions are unable to document improvements in risk sharing. Some calls for the existence of a threshold mechanism: improved financial integration does not guarantee per se a rise in the degree of risk sharing or the presence of risk pooling (for instance, Bai and Zhang (2004)). Others impute this failure of detecting an augmented degree of insurance to standard regression tests which exploit data at

¹see Lane and Milesi-Ferretti (2007)

business cycle frequency strengthening the link between consumption and output volatility (e.g. Artis and Hoffmann (2007)). Kose et al. (2003) suggest that risk sharing rises at an intermediate level of financial integration, while falling at higher levels of integration. Kose et al. (2007) find very weak links between financial globalization and risk sharing, over the period 1960-2004, and for the two subsamples 1960-2004 (pre-globalization) and 1987-2004 (globalization). However, on the shorter globalization sample, only developed countries seem to have reaped some benefits from financial globalization in term of risk sharing, whereas the subset of emerging economies does not seem to have been affected. at least in a statistically significant way. On the other hand, Kose et al. (2003) find that financial openness, as measured by gross capital flows as a ratio to GDP, is associated with an increase in the ratio of consumption volatility to income volatility, contrary to the notions of improved international risk-sharing opportunities through financial integration. Broner and Ventura (2011) claim that even though globalization may increase demand of insurance, we might observe a decline in availability of insurance because globalization strengths also other underlying frictions such as sovereign risk. Our aim in this work is to assess the effects of various aspects of globalization on international risk sharing. The empirical literature, so far, has mainly focused on a single measure of globalization, i.e. financial and trade integration, leaving out of the investigation (virtually) all other aspects of integration. We will try to fill this gap in the literature and end up with the conjecture that financial integration, alone, might not be sufficient to produce positive effects on consumption smoothing. Social and political integration turn out to be also necessary. The next section reviews some interesting measures of globalization; section 3 describes the empirical strategy we use in our analysis, and relate it to the rest of the literature. Our estimation results are presented in section 4. Section 5 concludes, with final remarks.

2 A composite index of globalization

Globalization is a multi faceted phenomenon. That is why it may be inappropriate to reduce it only to its financial dimension. Moreover, as it should be clear from the previous section, virtually all contributions dealing with risk sharing and globalization have done so by focussing on the financial economic and trade aspect. The main research question of this work is therefore whether or not other dimensions of globalization have exerted any role in shaping the risk sharing opportunities enjoyed by countries, and in particular its political and the cultural sides. To explore this issue we need a more comprehensive dataset, covering all these aspects, in addition to the standard ones. A.T.Kearney (2007), Dreher (2006) and Dreher et al. (2008) provide such datasets. In its earlier releases, the former was possibly the first dataset to include several dimensions (fourteen variables measuring economic integration, technological connectivity and political engagement, for a large set of countries). However, the scores obtained on the basis of those variables are only available for a few, and rather recent, years. The latter, on the other hand, combines 23 variables related to economic, social and political integration, to generate three sub indices, which

are in turn aggregated in an overall index, for a very large number of countries (208) and a time horizon of several years (1970-2007 for the countries with the largest availability of data). The three sub-indices concern, respectively, the economic, political and social sides of globalization. Economic integration is measured both by actual flows (trade, foreign direct investments, portfolio investments, income payments to foreign nationals and capital employed) and by restrictions on trade and capital, measured by hidden import barriers, mean tariff rates, taxes on international trade and capital controls. Political globalization is proxied by such variables as the number of embassies in a country, the number of international organizations and the number of UN peace missions participated by the country. Social globalization, the hardest to pin down, is proxied by data on personal contacts (international tourism, internet users, number of radios, telephone calls and telephone costs, foreign population), data on information flows (telephone mainlines, internet hosts, internet users, cable television users, daily newspapers and radios), and data on cultural proximity (the number of McDonalds restaurants per capita, the number of Ikea outlets per capita, and trade in books, as a percentage of GDP). The rationale for combining these 23 variables into three indices is given by their being largely collinear, which makes it virtually impossible to use all of them in isolation for regression purposes. That the three dimensions of globalization tell a (sometimes very) different story is shown by table 1, featuring the Spearman rank correlation index among the rankings obtained with respect to economic, social, political and overall globalization, for those countries possessing data on all those dimensions in 2000, and the coefficients of correlation between the time series of economic, social and political globalization, for all countries with available data, in levels and in delta logs. A quick inspection of table 1 reveals that average correlations among the three indices are not particularly large (with mean values of about 0.73, 0.61 and 0.76 respectively), and become extremely small when we look at their yearly rates of growth (with mean values of about 0.04, -0.004 and 0.06). On the other hand, the Spearman correlations among the rankings obtained by the various forms of globalization is always smaller than 0.79. These results seem to suggest that the three indices, and even more the corresponding sub indices, convey different pieces of information, which could be lost if one only looked at one dimension of globalization, or only at their overall summary index.

3 Globalization and risk sharing: the empirical strategy

Under the hypothesis of complete markets economic theory predicts full insurance (perfect consumption smoothing across time and states of nature).² Consider two endowment economies: a domestic and a foreign country with one homogeneous tradable good, two periods and two states of nature. Representative agents are identical and can access a complete set of Arrow-Debreu securities. Agents are risk averse and with Constant Relative

 $^{^{2}}$ See Obstfeld and Rogoff (1996) for a complete description of the model.

Risk Aversion (CRRA) preferences. The solution of this simple model allows all individuals in home and foreign countries to equate their marginal rates of substitution between current consumption and state contingent future consumption to the same state contingent security prices. If marginal utility growth is equalized across countries correlation between domestic and foreign per capita consumption growth is perfect (or high) even though countries discount factors might be different. Consumption is then internationally diversified in the sense that the only type of risk absorbed by consumption is due to aggregate uncertainty in world output (systemic risk). This means that, in this framework, domestic consumption growth should not be affected by idiosyncratic risk. An empirical counterpart of this strong theoretical prediction is given by a test regression of the following type ³, first proposed by Cochrane (1991) and Mace (1991);

$$\Delta \log c_{it} = \alpha + \beta I S_{it} + \gamma \Delta \log(C_{at}) + \epsilon_{it} \tag{1}$$

where IS_{it} an idiosyncratic shock variable (usually proxied by domestic output growth from which the world output growth is subtracted in order to account for common shocks to income); $\Delta \log c_{it}$ is the rate of growth of domestic consumption for country i at time t and $\Delta \log c_{it}$ is the rate of growth of aggregate consumption. Under the null of perfect (idiosyncratic) risk sharing β should equal zero, while γ should be high or equal to 1, under the assumption of identical risk aversion coefficients among agents.Crucini (1999) and Crucini and Hess (1999) stress stringent assumptions underlying the model and its predictions. In particular, they highlight that those theoretical predictions rely on the possibility of contract enforcement at zero cost and emphasize that individuals pool risk to the extent of equating benefits and costs. This idea is formalized using a permanent income model for varying degrees of income pooling. Permanent income is defined as a weighted average of individual permanent income and per capita permanent income of others engaged in risk sharing. These weights are given by the fraction of income stream that individuals pool to share risk. Crucini's methodology nests Mace's test specification with small changes.

$$\Delta \log c_{it} = \lambda_i \Delta \log(C_{at}) + (1 - \lambda_i) \Delta \log(y_{it}) + \epsilon_{it}$$
⁽²⁾

For $\lambda = 1$ risk is perfectly shared and consumption changes $(\Delta \log(c_{it}))$ co-move perfectly with aggregate consumption changes $(\Delta \log(C_{at}))$. If $\lambda = 0$ agents do not share risk and consumption changes are perfectly correlated to revisions in permanent income $\Delta \log(y_{it})^4$ assuming innovations to log permanent income proxied by changes in income (Crucini and Hess (1999)). For $0 < \lambda > 1$ risk sharing is not complete and this incompleteness is determined by the fraction of income stream that agents devote to risk sharing pool.

The hypothesis of complete risk sharing has been extensively tested empirically at household level and with panels of countries. The empirical literature, with the exception of

³An alternative empirical approach studies consumption and output correlations in order to prove the economic prediction of the model in an international business cycle framework (among others: Devereux et al. (1992); Tesar (1993); Obstfeld (1994); Stockman and Tesar (1995)).

⁴This is a λ weighted average of changes in individual permanent income and changes in permanent income of the group of individuals sharing risk

very few contributions (e.g. Mace (1991) and Lewis (1997)), has pervasively documented rejections of the null hypothesis of complete risk sharing. However, intra-nationally agents seem to be able to better cope with idiosyncratic risk than internationally: this evidence is mainly due to the presence of income smoothing through the fiscal channel which is almost absent with international data ⁵ (e.g. Asdrubali et al. (1996); Sorensen and Yosha (1998); Crucini (1999)). For example, Sorensen and Yosha (2000) prove that geography can affect the ability to share risk. They estimate income and consumption smoothing within and between regions in the US and show that more overall risk sharing occurs within than between regions: risk sharing through saving seems to be more a local phenomenon. From these contributions come out how geographical, cultural and political proximity as well as personal contacts and information flows boost agents to insure against shocks to income. Besides that, financial integration facilitates diversification of risk through the access to a wider range of insurance possibilities.

The most common specification of macroeconomic risk sharing regression tests is due to Asdrubali et al. (1996) and Sorensen and Yosha (1998) (respectively ASY and SY hereafter) who use the following regressions:

$$\Delta \log(c_{it}) - \Delta \log(C_{at}) = const + \beta (\Delta \log(y_{it}) - \Delta \log(y_{at})) + \epsilon_{it}$$
(3)

where $\Delta \log(y_{it})$ is country i GDP growth rate and $\Delta \log(y_{at})$ is the average GDP growth rate of the reference area (which captures common shocks to income). Here, β is the unsmoothed part of risk, since it represents co-movements with idiosyncratic income and argue that $(1 - \beta)$ can be interpreted as the degree of insurance achieved by internal and external channels. In fact, theory predicts that the higher the degree of international risk sharing, the smaller the co-movements between relative consumption and relative income. Melitz and Zumer (1999) (MZ in the sequel) revise ASY's approach by adding some structure to β so that $\beta = \beta_0 + \beta_1 z_i$ where z_i is an interaction variable affecting the degree of international risk sharing that a country obtains and which, according to ASY's interpretation, is equal to $1 - \beta_0 - \beta_1 z_i$ Kose et al. (2007) and Kose et al. (2011) interact idiosyncratic income with a measure of financial openness with the aim of understanding and measuring the impact of financial globalization on international risk sharing, and estimate the following:

$$\Delta \log(c_{it}) - \Delta \log(C_{at}) = const + \beta_0 (\Delta \log(y_{it}) - \Delta \log(y_{at})) + \beta_1 FO_i (\Delta \log(y_{it}) - \Delta \log(y_{at})) + \epsilon_{it} \quad (4)$$

where the degree of risk sharing achieved by country i is equal to $1 - \beta_0 - \beta_1$. A negative interaction term (β_1) implies that financial openness has a positive impact on international risk sharing or, equivalently, a negative one on co-movements between state specific risk and domestic relative consumption. Sorensen et al. (2007) modify the empirical methodology introduced by MZ allowing β to change over time (running year by year cross sectional

⁵This point has been first outlined in a early work due to Sachs and Sala-i Martin (1992)

regressions) and introducing a time trend in order to control for downward trends in the interaction variable (namely, home bias and financial integration measures), which might capture changes in the trend of risk sharing imputable to other developments in financial markets. In this framework, β in equation 3 is then modelled as

$$\beta = \beta_0 + \beta_1 (t - \overline{t}) + \beta_2 (EHB_{it} - \overline{EHB_t}).$$
(5)

 \overline{t} is the median value of the trend variable, EHB_{it} is a measure of equity home bias and $\overline{EHB_t}$ represents its mean. Our empirical strategy is mainly based on these contributions (Asdrubali et al. (1996); Sorensen and Yosha (1998); Melitz and Zumer (1999); Crucini (1999); Crucini and Hess (1999); Kose et al. (2007); Kose et al. (2011); Sorensen et al. (2007)) but we depart from them in several ways. First, we do not constrain γ in equation (1) to be equal to 1, privileging a test specification similar to that used in the pioneering contribution by Mace (1991) (equation 1), and an interpretation of the estimated results la Crucini (1999), and Crucini and Hess (1999). Secondly, we interact globalization indices with both idiosyncratic income and aggregate consumption growth as a way to quantify the extent of the impact of globalization on the ability of countries to deal with idiosyncratic risk and on reactions of domestic consumption growth to systemic risk. Third and foremost, we do not focus almost exclusively on financial integration as a source of larger insurance opportunities, but explore the role of economic integration⁶ as well as several other aspects of social and political integration. Our estimated test equation is the following:

$$\Delta \log(c_t^i) = \alpha + \beta_0 (\Delta \log(y_{it}) - \Delta \log(y_{at})) + \beta_1 (GI_{it} - \overline{GI_t}) (\Delta \log(y_{it}) - \Delta \log(y_{at})) + \gamma_0 (\Delta \log(C_{at})) + \gamma_1 (GI_{it} - \overline{GI_t}) (\Delta \log(C_{at})) + \epsilon_t^i \quad (6)$$

with

$$\beta = \beta_0 + \beta_1 (GI_{it} - \overline{GI_t}) \tag{7}$$

$$\gamma = \gamma_0 + \gamma_1 (GI_{it} - \overline{GI_t}) \tag{8}$$

where GI_{it} is a globalization index which might be an overall index or several indices (and sub-indices) for economic, social and political globalization (see section 2). β_1 and γ_1 are expected to be negative and represent the impact of these aspects of globalization on co-movements between domestic consumption growth and idiosyncratic and systemic risk. Our panel analysis allows for heteroskedasticity by using Generalized Least Square (GLS), and individual dummies are included. We do not include in equation (5) controls la Levine and Renelt (1992), usually included in cross-country growth regressions, as we do not search for linkages between average growth rates in consumption and other factors (for instance, social and institutional factors).

 $^{^{6}}$ For example, the elimination of barriers to trade and financial flows

4 Estimation results

Table 2 and 3 report descriptive statistics for globalization indices; as expected, EMU and OECD countries show a remarkable higher level of globalization than other groups of countries (e.g., LAC, SAS and SSA). Table 4 and 5 contain estimation results for two sets of countries: OECD and non-OECD⁷. Mean values for economic, social and political integration (indices a, b and c) have been computed for the two groups (table (3)). Equation (1) has been estimated for any possible combination of indices. More precisely, we estimated equation (1) splitting (for instance) OECD countries in subgroups with respect to their level of integration. Column (1) and (2) in table 4 report consumption insurance test for countries with a level of integration (economic, social and political) respectively above (column 1) and below (column 2) the average level of integration achieved by OECD countries, whereas column (3) displays test results for a panel of countries, among OECD members, above the average in terms of economic integration, but below the average in terms of social and political integration. This has been done to gauge differences in risk sharing across countries with levels of integration below or above the average. Were these differences remarkable, we might conjecture the presence of a threshold level of integration which, once exceeded, brings about a tangible increase in the degree of risk sharing. One of the most interesting results of our analysis is revealed by column (3) and (9) in table 4. Subgroups of countries (within OECD and non-OECD sets of countries) above the average in terms of economic and cultural integration, but below the average in terms of political integration, feature the lowest value of the estimated coefficient on idiosyncratic GDP, denoting a particularly high level of insurance. However, the coefficient attached to the rate of growth of aggregate consumption is well above unity (1.28) for OECD countries, while reaching a stunning value of 2.32 for non-OECD countries. Let us stress the fact that a very small value of β goes with an unusually large value of γ , which can be interpreted as an over-reaction of domestic to aggregate consumption growth. In other words, countries characterized by levels of economic and social integration above the groups mean, and by a level of political integration below the average, seem to be more able to cope with idiosyncratic risk (displaying a rather small estimated coefficient on relative income growth), but to be (much) more exposed to aggregate (systemic) risk, uninsurable by definition. For this group of countries an aggregate negative shock is more expensive in terms of contraction of domestic consumption growth. Analyzing the symmetric case, where economic integration is below the average while social and political integration are above the average (for OECD) countries column (4) in table 4), we observe a value of 0.65 for the estimated coefficient attached to idiosyncratic GDP, and a coefficient on aggregate consumption approaching unity (0.92). It is worth comparing this result with column (1) where, on top of social and political integration, economic integration is above average. We can see that a larger than average level of economic integration (once political and social integration are also above their cross country mean values) seems to play no or little role in reducing the sensitivity of relative domestic consumption growth to relative income growth. On the contrary, it

⁷See the appendix for a complete list of countries.

produces a large reaction of consumption changes to aggregate risk (γ exceeds unity). Table 5 presents the results of a similar exercise as in table 4, but using rates of growth of globalization indices, which might be taken to proxy the speed of convergence to full integration. In the light of previous results, it is not surprising to detect that the best results (in terms of domestic consumption changes to idiosyncratic risk and in terms of response of domestic to aggregate consumption growth) are achieved by those groups of countries (column (6) and (12)) characterized by above the average rates of growth in political integration, and by rates of growth of social and economic integration below the average. Summing up, results in table 4 and 5 are highly suggestive of the importance of political integration. Economic integration (in particular financial markets integration) can widen viable insurance opportunities; nevertheless the elimination of barriers to trade and financial flows, if it is not accompanied by an equally important process of political integration, (for instance in the form of numbers of diplomatic relations which may promote agreements on international contract enforcement), might have a destabilizing effect on countries economies, which can better diversify idiosyncratic risk, but become more "fragile with respect to systemic risk and more exposed to contagion effects."

Table 6 displays estimation results for equation (6) for the whole set of countries and for several groups economically and/or geographically related. Along with the whole time sample we considered two subsamples (1970-1989 and 1990-2007) in order to identify possible changes in the effects of the integration process on risk sharing for pre and post globalization periods. In table 6 the interaction term is given by an overall index of integration which encompasses all aspects of integration. In six (seven for subsamples 1970-1989 and 1990-2007) out of ten cases, the interaction term produces a positive effect (i.e., have a negative sign) on risk sharing, reducing reactions of the rate of growth of domestic consumption to idiosyncratic shocks. A similar impact is exerted on aggregate consumption growth: globalization reduces co-movements between domestic and aggregate consumption growth. Table 7, 8, and 9 display results including three interaction terms are given by subcomponents of integration, while in table 10, 11 and 12 interaction terms are given by subcomponents of integration indices in order to understand which measure of integration (within the three main indices) determines improvements in consumption smoothing.

On the whole sample (between 1970 and 2007) we detect the prominent role of economic integration in buffering the effect of idiosyncratic risk on consumption. Political integration plays the same role on aggregate consumption. Once again, we are led to formulate the intuitively appealing conjecture that economic integration helps buffering domestic consumption growth against idiosyncratic shocks while political integration helps in reducing reactions of domestic consumption growth with respect to aggregate shocks.

At a closer look at table 10, where sub-indices are considered, we observe for OECD, EMU and LAC countries that the positive effect of economic integration (previously revealed in table 7) is mainly due to actual flows (ai), while quite surprisingly information flows (bii) significantly exacerbate responses of domestic consumption growth to relative income.

5 Concluding remarks

The effects of globalization on international risk sharing are far from clear. There is mixed evidence in the empirical literature as to whether we should expect an increase in risk sharing and in consumption insurance due to the recent surge in financial integration. This might be partly due, in our opinion, to the fact that only the economic dimensions of globalization have been taken into account. Social, cultural and political aspects of globalization should also be considered, to get a clearer and more realistic picture. Just to give an example of the way political globalization might have an influence in shaping international risk sharing opportunities, it suffices to recall that sovereign wealth funds (SWF), government managed investment funds, have gained a tremendous momentum in the last few years, and are expected to continue growing. According to some recent estimates by the International Monetary Fund (2008, a,b), SWF's are currently controlling some 2 to 3 trillion USD in asset value worldwide, and are expecting to reach 10 trillion USD in the next few years, which exceeds the market capitalization of even large European economies. Although many such funds strive to convey the impression that their investments are led solely by financial and economic considerations, we cannot reject the hypothesis that some of the investments are also led by political considerations (political proximity, strategic trades, etc). That political globalization does have a role in determining countries exposure to aggregate and idiosyncratic risks is the main empirical result of our work, as we showed that both economic and political integration is necessary in order to maximize full insurance opportunities. This is an interesting result, but more empirical research is needed to get an insight as to the actual, non economic, channels of risk sharing.

6 Appendix. List of countries

Eastern Asia and Pacific (EAP)

Cambodia (KHM), China (CHN), Fiji (FJI), Indonesia (IDN), Kiribati (KIR), Korea (KOR), Laos (LAO), Malaysia (MYS), Mongolia (MNG), Papua New Guinea (PNG), Philippines (PHL), Samoa (WSM), Salomon (SLB), Thailand (THA), Tonga (TON), Vanuatu (VUT), Vietnam (VNM).

Eastern and Continental Asia (ECA)

Albania (ALB), Armenia (ARM), Azerbaijan (AZE), Byelorussia (BLR), Bosnia Herzegovina (BIH), Bulgaria (BGR), Georgia (GEO), Kazakhstan (KAZ), Kirghizstan (KGZ), Leetonia (LVA), Lithuania (LTU), Macedonia (MKD), Moldavia (MDA), Montenegro (MNE), Poland (POL), (ROM), Russia (RUS), Tajikistan (TJK), Turkey (TUR), Turkmenistan (TKM), Ukraine (UKR), Uzbekistan (UZB).

European Monetary Union (EMU)

Austria (AUT), Belgium (BEL) Germany (DEU), Spain (ESP), Finland (FIN), France (FRA), Greece (GRC), Ireland (IRL), Italy (ITA), Netherlands (NLD), Portugal (PRT). Latin American and Caribbean (LAC)

Argentina (ARG), Antigua and Barbuda (ATG), Bahamas (BHS), Belize (BLZ), Bolivia (BOL), Brazil (BRA), Barbados (BRB), Chile (CHL), Colombia (COL), Costa Rica (CRI), Cuba (CUB), Dominica (DMA), Dominican Republic (DOM), Ecuador (ECU), El Salvador (SLV), Grenada (GRD), Guatemala (GTM), Guyana (GUY), Haiti (HTI), Honduras (HND), Jamaica (JAM), Mexico (MEX), Nicaragua (NIC), Panama (PAN), Porto Rico (PRI), Paraguay (PRY) Peru (PER), Saint Christopher and Nevis (KNA), Santa Lucia (LCA), San Vincent and Grenadine (VCT), Suriname (SUR), Trinidad and Tobago (TTO), Uruguay (URY), Venezuela (VEN).

Middle East and North Africa (MNA)

Algeria (DZA), Djibouti (DJI), Egypt (EGY), Kuwait (KWT), Iran (IRN), Jordan (JOR), Lebanon (LBN), Libya (LBY), Morocco (MAR), Oman (OMN), Qatar (QAT), Saudi Arabia (SAU), Singapore (SGP), Syria (SYR), Tunisia (TUN), Turkey (TUR), United Emirates (ARE).

New European Countries (NEC)

Estonia (EST), Czech Republic (CZE), Croatia (HRV), Leetonia (LVA), Moldavia (MDA), Macedonia (MKD), Montenegro (MNE), Poland (POL), Russia (RUS), Serbia (SRB), Slovakia (SVK), Slovenia (SVN), Ukraine (UKR).

OECD countries (OECD)

Australia (AUS), Austria (AUT), Belgium (BEL), Canada (CAN), Switzerland (CHE), Germany (DEU), Denmark (DNK), Spain (ESP), Finland (FIN), France (FRA), Great Britain (GBR), Greece (GRC), Hungary (HUN), Ireland (IRL), Iceland (ISL), Italy (ITA), Japan (JPN), Korea (KOR), Mexico (MEX), Netherlands (NLD), Norway (NOR), New Zealand (NZL), Portugal (PRT), Sweden (SWE), United States (USA).

South Asia (SAS)

Bangladesh (BGD), Bhutan (BTN), India (IND), Maldives (MDV), Nepal (NPL), Pakistan (PAK), Sri Lanka (LKA).

Sub-Saharan Africa (SSA)

Angola (AGO), Benin (BEN), Botswana (BWA), Burkina Faso (BFA), Burundi (BDI), Cameron (CMR), Cape Verde (CPV), Central Africa (CAF), Chad (TCD), Comore (COM), (ZAR), Congo (COG), Ivory Coast (CIV), Ethiopia (ETH), Gabon (GAB), Gambia (GMB), Ghana (GHA), Guinea (GIN), Guinea Bissau (GNB), Kenya (KEN), Lesotho (LSO), Madagascar (MDG), Malawi (MWI), Mali (MLI), Mauritania (MRT), Mauritius (MUS), Mozambique (MOZ), Namibia (NAM), Niger (NER), Nigeria (NGA), Rwanda (RWA), Sao Tomé and Principe (STP), Senegal (SEN), Seychelles (SYC), Sierra Leone (SLE), Somalia (SOM), South Africa (ZAF), Sudan (SDN), Swaziland (SWZ), Tanzania (TZA), Togo (TGO), Uganda (UGA), Zambia (ZMB), Zimbabwe (ZWE).

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| | political integration) between 90-07 | 26 |

| Panel a) Spearman rank correlation in | dex | | |
|---|--|--|---|
| Rank EG Correlation coefficient valid cases one-sided significance | Rank EG 1 141 0 | Rank SG 1 141 0 | Rank PG 0 141 0 |
| Rank SG Correlation coefficient valid cases one-sided significance | $0.79 \\ 141 \\ 0.00$ | $1.00 \\ 141 \\ 0.00$ | $\begin{array}{c} 0.44\\ 141\\ 0.00\end{array}$ |
| Rank PG Correlation coefficient valid cases one-sided significance | $\begin{smallmatrix}&0\\141\\0\end{smallmatrix}$ | $\begin{smallmatrix}&0\\141\\0\end{smallmatrix}$ | $\begin{smallmatrix}&1\\141\\&0\end{smallmatrix}$ |
| Rank OG Correlation coefficient valid cases one-sided significance | $\begin{array}{c} 0.86\\ 141\\ 0.00\end{array}$ | $0.93 \\ 141 \\ 0.00$ | $ \begin{array}{c} 0.61 \\ 141 \\ 0.00 \end{array} $ |
| Panel b) Coefficients of correlation be | tween the time series of economic, so | cial and political globalization, for all c | ountries |
| Mean Std. Dev. Mean Std. Dev. | $0.7350 \\ 0.3621 \\ 0.0422 \\ 0.1928$ | 0.6071 0.3557 -0.0046 0.1503 | $egin{array}{c} 0.6376 \\ 0.3346 \\ 0.0605 \\ 0.1965 \end{array}$ |

Table 1: Spearman rank correlation index and coefficients of correlation

EG, SG, PG and OG correspond to economic, social, political and overall globalization

| | | | World | | | | | ECA | | |
|--|--------------|------------------|------------------|--------|------------------|------------|-----------------|------------------|------------------|------------|
| Variable | Obs | Mean | Std. | Min | Max | Obs | Mean | Std. | Min | Max |
| | 51.40 | 10.001 | Dev. | 0.000 | 00.007 | 201 | 50.000 | Dev. | 04 500 | 04.101 |
| Economic (a) | 5143 | 48.934 | 18.825 | 9.083 | 98.897 | 601 601 | 50.936 | 12.073 15.174 | 24.796 14.270 | 84.101 |
| Actual nows (al) Bestrictions (aii) | 0001 2001 | 30.022 49.448 | 21.101 | 4.933 | 97 705 | 601 | 40.379 | 13.174 13.027 | 14.279 | 88 111 |
| Social (b) | 6875 | 49.448 | 23.224 20.787 | 2 697 | 95.006 | 753 | 38 999 | 12 809 | 19.87 | $77 \ 244$ |
| Personal contact (bi) | 6609 | 48 753 | 23.608 | 3 759 | 97 47 | 753 | 43.62 | 12.009 | 22 285 | 73 124 |
| Information flows (bij) | 6799 | 48.66 | 23.06 | 0.105 | 98.511 | 715 | 51.103 | 19.554 | 12.767 | 94.384 |
| Cultural proximity (biii) | 6875 | 22.797 | 25.683 | 1 | 97.237 | 753 | 20.196 | 19.972 | 1 | 85.686 |
| Political (c) | 6837 | 47.897 | 25.631 | 1.279 | 98.778 | 715 | 36.503 | 28.311 | 5.19 | 94.63 |
| Overall Index (oi) | 6647 | 44.249 | 17.268 | 9.048 | 93.811 | 715 | 41.066 | 13.709 | 15.364 | 81.258 |
| | | | OECD | | | | | EMU | | |
| Variable | Obs | Mean | Std. | Min | Max | Obs | Mean | Std. | Min | Max |
| (di lubio | 0.00 | moun | Dev. | | man | 0.00 | moun | Dev. | | man |
| Economic (a) | 988 | 66.493 | 16.328 | 26.348 | 98.897 | 456 | 70.849 | 16.344 | 39.999 | 98.897 |
| Actual flows (ai) | 988 | 56.498 | 22.645 | 11.112 | 100 | 456 | 60.303 | 24.803 | 17.966 | 100 |
| Restrictions (aii) | 988 | 77.188 | 13.625 | 32.612 | 97.705 | 456 | 82.353 | 8.721 | 63.674 | 97.705 |
| Social (b) | 988 | 66.023 | 17.667 | 22.447 | 95.006 | 456 | 66.104 | 16.966 | 30.947 | 92.77 |
| Personal contact (bi) | 988 | 68.74 | 14.804 | 30.161 | 94.744 | 456 | 72.612 | 10.959 | 48.394 | 94.744 |
| Information flows (bii) | 988 | 71.874 | 15.63 | 32.142 | 98.511 | 456 | 72.179 | 16.216 | 37.856 | 98.511 |
| Cultural proximity (biii) | 988 | 56.476 | 32.395 | 1.614 | 95.584 | 456 | 52.383 | 33.971 | 2.719 | 94.248 |
| Political (c) Overall Index (ci) | 988 | 81.021 | 14.088 | 31.388 | 98.778 | 456 | 83.341 | 14.104 | 45.769 | 98.778 |
| Overall lidex (01) | 988 | 09.874 | 14.102 | 20.12 | 93.811 | 450 | 12.013 | 12.835 | 40.591 | 93.382 |
| | | | LAC | | | | | MNA | | |
| Variable | Obs | Mean | Std. Dev. | Min | Max | Obs | Mean | Std. Dev. | Min | Max |
| Economic (a) | 928 | 46.775 | 14.402 | 13.216 | 87.135 | 418 | 48.093 | 19.422 | 14.188 | 97.476 |
| Actual flows (ai) | 893 | 51.533 | 18.705 | 6.518 | 95.201 | 570 | 47.55 | 19.916 | 5.521 | 99.26 |
| Restrictions (aii) | 928 | 41.95 | 16.314 | 5.387 | 87.916 | 456 | 50.633 | 24.442 | 18.653 | 96.101 |
| Social (b) | 1270 | 42.283 | 12.786 | 13.158 | 74.084 | 646 | 44.731 | 18.25 | 17.435 | 94.078 |
| Personal contact (bi) | 1194 | 50.197 | 21.33 | 15.506 | 93.575 | 646 | 58.756 | 21.823 | 17.733 | 94.59 |
| Information flows (bii) | 1270 | 54.295 | 16.057 | 19.672 | 94 | 646 | 51.98 | 17.546 | 18.32 | 94.534 |
| Cultural proximity (biii) | 1270 | 22.596 | 16.486 | 1 | 50.856 | 646 | 22.576 | 27.639 | 1 | 97.237 |
| Political (c) | 1270 | 49.16 | 21.253 | 3.793 | 93.38 | 646 | 54.545 | 18.116 | 8.821 | 93.393 |
| Overall Index (01) | 1232 | 45.21 | 9.818 | 18.87 | 73.735 | 646 | 48.417 | 13.429 | 21.653 | 88.95 |
| | | | EAP | | | | | NEC | | |
| Variable | Obs | Mean | Std. | Min | Max | Obs | Mean | Std. | Min | Max |
| | | | Dev. | | | | | Dev. | | |
| Economic (a) | 456 | 48.766 | 13.201 | 18.287 | 77.868 | 285 | 57.712 | 14.813 | 24.796 | 92.619 |
| Actual flows (ai) | 418 | 53.619 | 21.837 | 4.935 | 91.884 | 285 | 53.482 | 18.216 | 14.279 | 94.388 |
| Restrictions (aii) | 380 | 42.054 | 13.58 | 18.932 | 74.475 | 323 | 62.513 | 13.395 | 33.984 | 94.43 |
| Social (b) | 646 | 28.756 | 14.549 | 7.064 | 75.49 | 323 | 55.078 | 13.822 | 28.676 | 84.011 |
| Personal contact (bi) | 608 | 33.22 | 18.53 | 8.304 | 67.156 | 323 | 60.658 | 11.097 | 35.15 | 80.314 |
| Cultural provinity (biii) | 646 | 14.086 | 19.416 | 0.545 | 00.40 97.271 | 200 | 27 782 | 20.699 | 23.460 | 90.452 |
| Political (c) | 646 | 40.282 | 21 217 | 8 154 | 88 233 | 285 | 48 804 | 20.715 | 6 200 | 91.501 |
| Overall Index (oi) | 646 | 36.719 | 12.737 | 15.877 | 77.946 | 285 | 54.952 | 15.374 | 29.422 | 86.87 |
| | | | SAS | | | | | SSA | | |
| | | | | | | | | | | |
| Variable | Obs | Mean | Std. Dev. | Min | Max | Obs | Mean | Std. Dev. | Min | Max |
| Economic (a) | 190 | 24.014 | 9.814 | 11.382 | 50.485 | 1368 | 37.026 | 14.473 | 9.083 | 77.223 |
| Actual flows (ai) | 190 | 32.53 | 17.941 | 11.717 | 69.686 | 1330 | 41.922 | 19.524 | 5.964 | 95.742 |
| Restrictions (aii) | 190 | 24.958 | 10.714 | 11.048 | 56.914 | 1254 | 31.951 | 16.152 | 5.436 | 73.597 |
| Social (b) | 266 | 22.286 | 11.881 | 6.923 | 52.392 | 1672 | 24.031 | 11.2 | 4.365 | 66.79 |
| Fersonal contact (b) | 266 | 32.263 | 15.492 | 12.464 | 03.344 | 1596 | 34.291 | 16.000 | (.25 | 81.173 |
| Cultural provinity (biii) | 200 | 20.700 | 0 491 | 4.27 | 80.983 33 706 | 1672 | 31.423 6 799 | 5.915 | 1 | 88.800 |
| Political (c) | 200 | 47 704 | 24 027 | 9 771 | 92.693 | 1672 | 44 042 | 17 499 | 4 944 | 90.24 |
| Overall Index (oi) | 266 | 29.64 | 8,924 | 13,185 | 52.689 | 1634 | 33.445 | 9.279 | 15.811 | 68,285 |
| | | | | | | | | . = | | |

Table 2: Descriptive statistics by group

| Variables | OECD | NON OECD |
|--------------------------------------|-------------------|----------|
| GDP per capita | 18278.06 | 3028.513 |
| Consumption per capita | 10354.87 | 1353.268 |
| GDP per capita (growth rate) | 0.0233 | 0.0154 |
| Consumption per capita (growth rate) | 0.0219 | 0.0167 |
| Globalization | Index (levels) | |
| Economic (a) | | |
| Actual flows (ai) | 56.5 | 49.26 |
| Restrictions (aii) | 77.19 | 43.79 |
| Social (b) | 66.02 | 36.89 |
| Personal contact (bi) | 68.74 | 46.06 |
| Information flows (bii) | 71.87 | 45.94 |
| Cultural proximity (biii) | 56.48 | 18.18 |
| Political (c) | 81.02 | 42.82 |
| Overall Index (oi) | 69.87 | 40.61 |
| Globalization Inde | ex (growth rates) | |
| Economic (a) | | |
| Actual flows (ai) | 0.021 | 0.017 |
| Restrictions (aii) | 0.006 | 0.015 |
| Social (b) | 0.015 | 0.012 |
| Personal contact (bi) | 0.005 | 0.002 |
| Information flows (bii) | 0.011 | 0.018 |
| Cultural proximity (biii) | 0.055 | 0.022 |
| Political (c) | 0.007 | 0.027 |
| Overall Index (oi) | 0.011 | 0.015 |

| Table 3: | Mean | values. | OECD | and | non-OECD | countries |
|----------|------|---------|------|-----|----------|-----------|
| | | | | | | |

| | $(12) \\ 1-0-1$ | $\Delta \log c_t^i$ | 0.6306*** -0.0960 0.8576*** -0.0870 -0.0029 -0.0020 | 165 0.397 5 | BGR HND ZAF ZMB ZMB | |
|----------|--------------------|---|--|---|---|---|
| | $(11) \\ 0-0-1$ | $\Delta \log c_t^i$ | 0.7357*** -0.0300 0.8245*** -0.0340 0.0038*** -0.0010 | $1020 \\ 0.793 \\ 31$ | BEN BGD CHV CHN CHN CHN CHN CHN CHN BCU GHA GIN CHA GIN CHN IDN IDN IDN IDN IDN IDN IDN IDN IDN ID | |
| | $(10) \\ 0-1-1$ | $\Delta \log c_t^i$ | 0.7911*** -0.0670 0.7255*** -0.0620 0.0129*** -0.050 | $\begin{array}{c} 212\\ 0.558\\ 7\end{array}$ | ARG COL DOM GAB SLV VEN VEN | |
| VON-OECD | $(9) \\ 1-1-0$ | $\Delta \log c_t^i$ | 0.4369*** -0.1070 2.3214** -0.2820 0.0001 0.0000 | $\begin{array}{c} 175\\0.41\\10\end{array}$ | AZE BLZ GUY GUY KGZ LVA MDA OMN SWZ | |
| 4 | $(8) \\ 1-0-0$ | $\Delta \log c_t^i$ | 0.4619*** -0.0790 0.8085*** -0.1780 -0.110 -0.0110 | $\begin{array}{c} 154 \\ 0.335 \\ 6 \end{array}$ | ARM BWA KHAZ KHAZ FNG PNG | |
| | 0-0-0 (2) | $\Delta \log c_t^i$ | 0.8128*** -0.0700 0.7490*** -0.1480 0.0000 -0.030 | $289 \\ 0.273 \\ 12$ | ALB BFA C AF C AF C DDG MDG MWD T TCD T TCD T TCD ZWE ZWE | |
| | $(6) \\ 1-1-1$ | $\Delta \log c_t^i$ | 0.8515*** -0.0610 0.8565*** -0.0940 -0.0005 -0.0030 | 340 0.581 13 | CHL CRI JOR LTTU LTTU LTTU POL TUN UKR UUKR | |
| | $(5) \\ 0-0-1$ | $\Delta \log c_t^i$ | 0.8391*** -0.0550 1.1691*** -0.0970 -0.0017 -0.0020 | $\begin{array}{c} 108\\ 0.689\\ 3\end{array}$ | ESP FIN ITA | |
| | $(4) \\ 0-1-1$ | $\Delta \log c_t^i$ | 0.6545** -0.0500 0.9186*** -0.0540 0.0019* -0.0010 | $\begin{array}{c} 144\\ 0.857\\ 4\end{array}$ | AUT AUT FRA USA | |
| 0 | (3) 1-1-0 | $\Delta \log c_t^i$ | $\begin{array}{c} 0.3760***\\ -0.0840\\ 1.2803***\\ -0.1510\\ 0.0000\\ 0.0000\end{array}$ | 108 0.68 3 | GBR LUX | |
| OECD | $(2) \\ 0-0-0$ | $\Delta \log c_t^i$ | 0.8720*** -0.0540 0.9839*** -0.1080 0.0011 -0.0020 | $\begin{array}{c} 180\\ 0.712\\ 5\end{array}$ | GRC JPN MEX MEX | |
| | $(1) \\ 1 - 1 - 1$ | $\Delta \log c_t^i$ | 0.6686*** -0.0510 1.1206*** -0.0740 -0.0009*** 0.0000 | 252 0.64 7 | BEL CAN DNK DNLD NULD SWE SWE | |
| | a-b-c | VARIABLES | $\Delta \log(y_{it})^{id}$ $\Delta \log(C_{at})$ Constant | Observations R-squared Number of id | | |
| | OECD NON-OECD | OECD NON-OECD NON-OECD a-b-c (1) (2) (3) (4) (5) (6) (7) (8) (9) (11) (12) (12) a-b-c 1-1-1 0-0-0 1-1-1 0-0-0 1-1-1 0-0-0 1-1-0 0-1-1 0-1-1 10-1 | OECD NON-OECD a-b-c (1) (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12) a-b-c 1-1-1 0-0-0 1-1-10 0-1-1 0-0-0 1-1-1 0-0-1 1-1-1 0-0-1 1-1-1 0-1-1 0-1-1 0-1-1 0-1-1 1-1-1 1-1-1 1-1-1 0-1-1 0-1-1 0-1-1 1-1-1 1-1-1 0-1-1 0-1-1 1-1-1 1-1-1 1-1-1 1-1-1 0-1-1 0-1-1 1-1-1 1-1-1 1-1-1 1-1-1 0-1-1 0-1-1 1-1-1 <t< td=""><td>OECD OECD a-b-c (1) (2) (3) (4) (5) (6) (7) NON-OECD a-b-c 1-11 (1) <th <="" colspa="6" td="" th<=""><td>DECDION-DECDa-b-c(1)(2)(3)(4)(5)(6)ION-DECDa-b-c1-1-1(2)(1)<th colspan="6</td></td></th></td></t<> | OECD OECD a-b-c (1) (2) (3) (4) (5) (6) (7) NON-OECD a-b-c 1-11 (1) <th <="" colspa="6" td="" th<=""><td>DECDION-DECDa-b-c(1)(2)(3)(4)(5)(6)ION-DECDa-b-c1-1-1(2)(1)<th colspan="6</td></td></th> | <td>DECDION-DECDa-b-c(1)(2)(3)(4)(5)(6)ION-DECDa-b-c1-1-1(2)(1)<th colspan="6</td></td> | DECDION-DECDa-b-c(1)(2)(3)(4)(5)(6)ION-DECDa-b-c1-1-1(2)(1)<th colspan="6</td> |

Table 4: Risk sharing and levels of integration.

*** p<0.01, ** p<0.05, * p<0.1. Standard errors reported in brackets. Estimated equation: $\Delta \log(c_t^i) = \alpha + \beta_0 \Delta \log(y_{it})^{id} + \gamma_0 (\Delta \log(C_{at})) + \epsilon_t^i$ where: $\Delta \log(y_{it})^{id} = (\Delta \log(y_{it}) - \Delta \log(y_{at}))$

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| | (13) 1-0-1 | | 0.7365*** -0.1330 0.9966** -0.3900 -0.0116 -0.0100 | $\begin{array}{c} 44\\ 0.584\\ 2\end{array}$ | ALB MOZ |
|----------|------------------|---------------------|--|---|--|
| | $(12) \\ 0-0-1$ | $\Delta \log c_t^i$ | 0.5836*** -0.0610 1.0368*** -0.1350 -0.0011 -0.0050 | 332 0.118 13 | AZE BFA BFA BWA BWA BWA GAB GAB GAB GAB GAB GAB GAB GAB CAB GAB CAB CAB CAB CAB CAB CAB CAB CAB CAB C |
| | $(11) \\ 0-1-1$ | $\Delta \log c_t^i$ | 0.7219*** -0.0950 0.9981*** -0.1190 0.0050** -0.0020 | $\begin{array}{c} 121\\ 0.652\\ 6\end{array}$ | ARM BLR BLZ BLZ KAZ MDA ZAF ZAF |
| NON-OECD | (10) 1-1-0 | $\Delta \log c_t^i$ | 0.7503*** -0.0310 0.6859*** -0.0320 0.0050*** -0.0010 | 781 0.737 26 | BEN BGR COL DOM BCU ECU BGR GTM HND HND IND HND IND MLI NAR MAR MAR MAR MAR MAR NAR NUS SIV SIV COL COL COL COL COL COL COL COL COL COL |
| L | (9) 1-0-0 | $\Delta \log c_t^i$ | 0.9591*** -0.0670 0.8401*** -0.1340 -0.0009 -0.0010 | 268 0.541 8 | CHL CIV CMR CRI MDG NUC SEN TZA |
| | $^{(8)}_{0-0-0}$ | $\Delta \log c_t^i$ | 0.5769** -0.0590 1.0599** -0.1060 -0.0014 -0.0020 | $418 \\ 0.642 \\ 16$ | BOL BRB CAF IRN ISR KWT KWT LSO LSO LSO LSO TTO TTO URY ZMB ZMB |
| | (7) 1-1-1 | $\Delta \log c_t^i$ | 0.7226*** -0.0720 1.1203*** -0.0760 -0.0044 -0.0040 | $\begin{array}{c} 182\\ 0.844\\ 7\end{array}$ | BGD CHN LVTU NUS PRY UKR |
| | $(6) \\ 0-0-1$ | $\Delta \log c_t^i$ | $\begin{array}{c} 0.3301 * * * \\ -0.0600 \\ 0.9422 * * * \\ -0.1150 \\ 0.0000 \\ 0.0000 \end{array}$ | 108 0.486 3 | CHE LUX |
| | (5) 0-1-1 | $\Delta \log c_t^i$ | 0.7344^{***} -0.0910 0.3396 -0.2400 0.0074^{**} -0.0030 | 72 0.556 2 | GRC |
| | (4) 1-1-0 | $\Delta \log c_t^i$ | $\begin{array}{c} 0.8049^{***} \\ -0.0500 \\ 1.0056^{***} \\ -0.0710 \\ 0.0002 \\ -0.0010 \end{array}$ | $\begin{array}{c} 144\\0.67\\4\end{array}$ | AUT FIN ITA ITA |
| OECD | (3) 1-0-0 | $\Delta \log c_t^i$ | 0.7129*** -0.0650 1.1118*** -0.1140 -0.0008** 0.0000 | $\begin{array}{c} 180\\ 0.652\\ 5\end{array}$ | AUS GBR ISL NZL SWE |
| | $(2) \\ 0-0-0$ | $\Delta \log c_t^i$ | 0.7903*** -0.0550 0.9807*** -0.0650 0.0009 -0.0010 | $\begin{array}{c} 216\\0.701\\6\end{array}$ | CAN DDNK MLEX NDR USA USA |
| | $(1) \\ 1-1-1$ | $\Delta \log c_t^i$ | 0.8590*** -0.0480 1.1355*** -0.0760 -0.0008 -0.0010 | $\begin{array}{c} 180\\ 0.767\\ 5\end{array}$ | DEU ESP JPUN KOR |
| | a-b-c | VARIABLES | $\Delta \log(y_{it})^{id}$ $\Delta \log(C_{at})$ Constant | Observations R-squared Number of id | |

| of integration. |
|-----------------|
| speed a |
| and |
| sharing |
| Risk |
| 5: |
| Table |

*** p<0.01, ** p<0.05, * p<0.1. Standard errors reported in brackets. Estimated equation: $\Delta \log(c_t^i) = \alpha + \beta_0 \Delta \log(y_{it})^{id} + \gamma_0 (\Delta \log(C_{at})) + \epsilon_t^i$ where: $\Delta \log(y_{it})^{id} = (\Delta \log(y_{it}) - \Delta \log(y_{at}))$

| 70-07 VADIADIES | World | OECD | LAC A log s ⁱ | EAP A log a^i | ECA $\Delta \log a^i$ | EMU A log a^i | MNA Aloga ⁱ | NEC A log s ⁱ | SAS $\Delta \log a^i$ | SSA |
|--|---------------------|---------------------|-----------------------------|------------------------|-------------------------|-------------------------|---------------------------|-----------------------------|-------------------------|-------------------------------|
| VARIABLES | $\Delta \log c_t$ | $\Delta \log c_t$ | $\Delta \log c_t$ | $\Delta \log c_t$ | $\Delta \log c_t$ | $\Delta \log c_t$ | $\Delta \log c_t$ | $\Delta \log c_t$ | $\Delta \log c_t$ | $\Delta \log c_t$ |
| $\Delta \log(y_{it})^{id}$ | 0.7354 * * | * 0.7342** | * 0.8319*** | 0.7107*** | 0.6812*** | 0.7645*** | 0.5211*** | 0.8628*** | 0.5963*** | 0.7330*** |
| | (0.0180) | (0.0240) | (0.0350) | (0.0630) | (0.0610) | (0.0460) | (0.0580) | (0.0850) | (0.1350) | (0.0410) |
| $(oi_{it} - \overline{oi_t})\Delta \log(y_{it})^{id}$ | -0.0017* | -0.0084** | * 0.0388*** | 0.0042 | -0.0114** | 0.0048 | -0.0135 ** | -0.0106 | 0.0153 | -0.0194*** |
| $\Delta \log(C_{-1})$ | (0.0010) | (0.0020) | (0.0060) | (0.0060) | (0.0050) 1.2280### | (0.0060) | (0.0060) | (0.0090) 0.0225 mm | (0.0220) | (0.0060) |
| $\Delta \log(C_{at})$ | (0.0230) | * 1.0397** | (0.0430) | (0.8429*** (0.0670) | (0.1010) | (0.0420) | (0.0920) | (0.0940) | (0.0750) | (0.0790) |
| $(oi_{it} - \overline{oi_t})\Delta \log(C_{at})$ | 0.0023* | -0.0044 | 0.0177** | 0.0009 | -0.0236*** | -0.0013 | -0.0087 | -0.0295*** | -0.0103 | 0.0107 |
| | (0.0010) | (0.0030) | (0.0080) | (0.0040) | (0.0080) | (0.0050) | (0.0120) | (0.0110) | (0.0150) | (0.0080) |
| Constant | 0.0095 | -0.0093 ** | 0.0034 | -0.0185 | 0.0780 ** | 0.0012 | 0.0345 | -0.0101 | -0.0220 * * * | 0.0150 |
| | (0.0530) | (0.0050) | (0.0240) | (0.0230) | (0.0340) | (0.0050) | (0.0280) | (0.0160) | (0.0080) | (0.0540) |
| Observations Number of id | 3637 | 900 | 801 | 293 | 293 | 406 | 301 | 173 | 104 | 1025 |
| Number of Id | 129 | 23 | 20 | 10 | 18 | 11 | 15 | 12 | 4 | |
| 70-89 | World | OECD | LAC | EAP | ECA | EMU | MNA | NEC | SAS | SSA |
| VARIABLES | $\Delta \log c_t^i$ | $\Delta \log c_t^i$ | $\Delta \log c_t^i$ | $\Delta \log c_t^i$ | $\Delta \log c_t^i$ | $\Delta \log c_t^i$ | $\Delta \log c_t^i$ | $\Delta \log c_t^i$ | $\Delta \log c_t^i$ | $\Delta \log c_t^i$ |
| AL ()id | 0.0000 | 0.7271 | 0.0040 | 0.0005 | 0.6910 | 0.7010 | 0.4200 | 0.0000 | 0.0000 | 0.7501 |
| $\Delta \log(y_{it})^{-1}$ | 0.0900** | * 0.7371** | * 0.8048*** (0.0540) | 0.6025*** (0.0700) | · 0.0812*** (0.0610) | · 0.7819*** (0.0660) | · 0.4322*** | 0.8628*** (0.0850) | · 0.0003*** (0.1010) | <pre>0.7581*** (0.0500)</pre> |
| $(ai = \overline{ai}) \wedge \log(a =)^{id}$ | -0.0005 | -0.0020 | 0.0577*** | (0.0730) | -0.0114** | 0.0030 | (0.0350) | (0.0000) | 0.0153 | -0.0311*** |
| $(0i_{it} - 0i_{t})\Delta \log(g_{it})$ | (0.0010) | (0.0030) | (0.0100) | (0.0090) | (0.0050) | (0.0030) | (0.0120) | (0.0090) | (0.0340) | (0.0080) |
| $\Delta \log(C_{at})$ | 0.7982** | * 1.0391** | * 0.6686*** | 0.5129*** | 1.2380*** | 0.9893*** | 0.8688*** | • 0.9225*** | 0.9115*** | 0.6219*** |
| | (0.0310) | (0.0460) | (0.0590) | (0.1000) | (0.1010) | (0.0610) | (0.1330) | (0.0940) | (0.0830) | (0.1290) |
| $(oi_{it} - \overline{oi_t})\Delta \log(C_{at})$ | 0.0063** | * 0.0009 | 0.0119 | -0.0323 * * * | -0.0236*** | 0.0010 | 0.0121 | -0.0295 *** | -0.0822 * * | 0.0373 * * |
| <i>a</i> | (0.0020) | (0.0040) | (0.0140) | (0.0110) | (0.0080) | (0.0080) | (0.0210) | (0.0110) | (0.0410) | (0.0180) |
| Constant | -0.1336 | -0.0075 ** | (0.0112) | (0.0200) | 0.0780 * * | -0.0038 | (0.0165) | -0.0101 | (0.0052) | -0.0087 |
| Observations | (0.1500) | (0.0040) | (0.0310) | (0.0170) | 293 | 209 | (0.0100) | (0.0100) | (0.0130) | (0.0450) |
| Number of id | 94 | 25 | 22 | 7 | 18 | 11 | 8 | 12 | 3 | 31 |
| | | | | | | | | | | |
| 90-07 | World | OECD | LAC | EAP | ECA | EMU | MNA | NEC | SAS | SSA |
| VARIABLES | $\Delta \log c_t^i$ | $\Delta \log c_t^i$ | $\Delta \log c_t^i$ | $\Delta \log c_t^i$ | $\Delta \log c_t^i$ | $\Delta \log c_t^i$ | $\Delta \log c_t^i$ | $\Delta \log c_t^i$ | $\Delta \log c_t^i$ | $\Delta \log c_t^i$ |
| $\Delta \log(u_{ij})^{id}$ | 0.8034** | * 0.7321** | * 0.9438*** | 0.6003*** | 0.6812*** | 0.6450*** | 0.6698*** | 0 8628*** | 0.3388* | 0.7264*** |
| $\Delta \log(g_{it})$ | (0.0240) | (0.0360) | (0.0430) | (0.1280) | (0.0610) | (0.0610) | (0.0670) | (0.0850) | (0.1730) | (0.0630) |
| $(q_{iit} - \overline{q_{it}}) \Delta \log(y_{it})^{id}$ | -0.0032** | *-0.0230** | * 0.0104* | 0.0234** | -0.0114** | -0.0238** | -0.0080 | -0.0106 | 0.0893** | -0.0030 |
| (| (0.0010) | (0.0030) | (0.0060) | (0.0100) | (0.0050) | (0.0100) | (0.0080) | (0.0090) | (0.0400) | (0.0080) |
| $\Delta \log(C_{at})$ | 0.9480** | * 1.0518** | * 0.8139*** | 0.8802*** | 1.2380*** | 0.9252*** | 0.7205*** | × 0.9225*** | 0.3432** | 0.8866*** |
| | (0.0300) | (0.0780) | (0.0580) | (0.0830) | (0.1010) | (0.0620) | (0.1110) | (0.0940) | (0.1730) | (0.0860) |
| $(oi_{it} - oi_t)\Delta \log(C_{at})$ | -0.0015 | -0.0262 ** | * 0.0129* | -0.0016 | -0.0236*** | 0.0083 | -0.0276* | -0.0295 *** | 0.0863*** | 0.0104 |
| | (0.0020) | (0.0080) | (0.0080) | (0.0070) | (0.0080) | (0.0080) | (0.0150) | (0.0110) | (0.0240) | (0.0070) |
| Constant | (0.0476) | -0.0261 ** | * 0.0034 | 0.0307** | 0.0780** | 0.0066** | (0.0422) | -0.0101 | (0.0044) | -0.0150 (0.0210) |
| Observations | (0.0490) 2107 | 425 | 413 | 153 | 293 | 186 | 189 | 173 | 60 | 544 |
| Number of id | 129 | 25 | 26 | 10 | 18 | 11 | 13 | 12 | 4 | 35 |
| | | | | | | | | | | |

Table 6: Internation risk sharing and overall index of Globalization.

*** p<0.01, ** p<0.05, * p<0.1. Standard errors reported in brackets. Estimated equation: $\Delta \log(c_t^i) = \alpha + \beta_0 \Delta \log(y_{it})^{id} + \beta_1 (o_{it} - \overline{o_{it}}) \Delta \log(y_{it})^{id} + \gamma_0 (\Delta \log(C_{at})) + \gamma_1 (o_{it} - \overline{o_{it}}) (\Delta \log(C_{at})) + \epsilon_t^i$ where: $\Delta \log(y_{it})^{id} = (\Delta \log(y_{it}) - \Delta \log(y_{at}))$

Table 7: International risk sharing and economic, social and political globalization between 70-07

| VARIABLES | World $\Delta \log c_t^i$ | $\begin{array}{c} \mathrm{OECD} \\ \Delta \log c_t^i \end{array}$ | $LAC \\ \Delta \log c_t^i$ | $\begin{array}{c} \text{EAP} \\ \Delta \log c_t^i \end{array}$ | $	ext{ECA} \\ \Delta \log c_t^i 	ext{}$ | $\begin{array}{c} \text{EMU} \\ \Delta \log c_t^i \end{array}$ | $\begin{array}{c} \text{MNA} \\ \Delta \log c_t^i \end{array}$ | $_{\Delta \log c_t^i}^{\rm NEC}$ | $^{\rm SAS}_{\Delta \log c^i_t}$ | $\frac{\text{SSA}}{\Delta \log c_t^i}$ |
|--|---------------------------|---|----------------------------|--|--|--|--|--|--|--|
| $\Delta \log(y_{it})^{id}$ | 0.6958*** (0.0230) | 0.7233*** (0.0250) | 0.8500 * * * (0.0540) | 0.6375 * * * (0.1180) | 0.6831 * * * (0.0580) | 0.7679 * * * (0.0430) | 0.4167*** (0.1020) | 0.9388*** (0.0920) | 0.6683* (0.3670) | 0.6909*** |
| $(a_{it} - \overline{a_t}) \Delta \log(y_{it})^{id}$ | -0.0055*** (0.0020) | -0.0080*** (0.0030) | 0.0028 (0.0040) | -0.0062 (0.0070) | -0.0020 (0.0070) | -0.0200*** (0.0050) | 0.0009 (0.0090) | 0.0069 (0.0100) | -0.0908* (0.0540) | -0.0080 (0.0050) |
| $(b_{it} - \overline{b_t}) \Delta \log(y_{it})^{id}$ | 0.0009 (0.0010) | $ \begin{array}{c} -0.0021 \\ (0.0020) \end{array} $ | 0.0191 *** (0.0040) | 0.0075 (0.0080) | 0.0161 *** (0.0060) | 0.0163 *** (0.0040) | -0.0128 (0.0090) | 0.0013 (0.0100) | 0.0412 (0.0360) | $ \begin{array}{c} -0.0101 \\ (0.0060) \end{array} $ |
| $(c_{it} - \overline{c_t})\Delta \log(y_{it})^{id}$ | 0.0026*** (0.0010) | 0.0017 (0.0020) | 0.0101 *** (0.0030) | 0.0032 (0.0060) | $ \begin{array}{r} -0.0034 \\ (0.0020) \end{array} $ | 0.0012 (0.0040) | 0.0064 (0.0060) | -0.0125*** (0.0040) | 0.0132 (0.0100) | $0.0030 \\ (0.0030)$ |
| $\Delta \log(C_{at})$ | 0.8921 * * * (0.0340) | 1.0591 * * * (0.0390) | 0.7158*** (0.0780) | 0.6978 * * * (0.1280) | 1.1959 * * * (0.1090) | 1.0233 * * * (0.0460) | 0.8929*** (0.2620) | 0.9861*** (0.1120) | 1.6870*** (0.2730) | 0.8380 * * * (0.0880) |
| $(a_{it} - \overline{a_t})\Delta \log(C_{at})$ | $0.0026 \\ (0.0020)$ | $\begin{array}{c} 0.0021 \\ (0.0030) \end{array}$ | 0.0013 (0.0060) | -0.0107 (0.0070) | $0.0070 \\ (0.0090)$ | 0.0055 (0.0040) | $ \begin{array}{c} -0.0070 \\ (0.0140) \end{array} $ | -0.0184* (0.0100) | $ \begin{array}{c} -0.0027 \\ (0.0240) \end{array} $ | $0.0110 \\ (0.0070)$ |
| $(b_{it} - b_t)\Delta \log(C_{at})$ | 0.0004 (0.0020) | -0.0039 (0.0030) | 0.0113 ** (0.0060) | 0.0011 (0.0050) | 0.0014 (0.0090) | -0.0041 (0.0030) | 0.0006 (0.0150) | 0.0110 (0.0170) | $0.0106 \\ (0.0120)$ | -0.0057 (0.0090) |
| $(c_{it} - c_t)\Delta \log(C_{at})$ | (0.0009) (0.0010) | -0.0017 (0.0020) | (0.0060) (0.0040) | (0.0056) | -0.0029 (0.0040) | -0.0041* (0.0020) | -0.0055 (0.0120) | -0.0178*** (0.0060) | (0.0285***) | (0.0050) (0.0060) |
| Constant | (0.0360) | (0.0050) | (0.0120) | (0.0110) | (0.0230) | (0.0027*) | (0.0036) (0.0180) | (0.0199) (0.0180) | (0.0043) (0.0090) | (0.0350) |
| Observations Number of id | $3342 \\ 114$ | $900 \\ 25$ | 720 23 | 286 9 | $276 \\ 17$ | $\begin{array}{c} 406 \\ 11 \end{array}$ | $271 \\ 10$ | $\begin{array}{c} 173 \\ 12 \end{array}$ | $95 \\ 3$ | |

*** p<0.01, ** p<0.05, * p<0.1. Standard errors reported in brackets. $\Delta \log(c_t^i) = \alpha + \beta_0 \Delta \log(y_{it})^{id} + \beta_1(a_{it} - \overline{a_t}) \Delta \log(y_{it})^{id} + \beta_2(b_{it} - \overline{b_t}) \Delta \log(y_{it})^{id} + \beta_3(c_{it} - \overline{c_t}) \Delta \log(y_{it})^{id} + \gamma_0(\Delta \log(C_{at})) + \gamma_1(a_{it} - \overline{a_t}) (\Delta \log(C_{at})) + \gamma_2(b_{it} - \overline{b_t}) (\Delta \log(C_{at})) + \gamma_3(c_{it} - \overline{c_t}) (\Delta \log(C_{at})) + \epsilon_t^i$ where: $\Delta \log(y_{it})^{id} = (\Delta \log(y_{it}) - \Delta \log(y_{at}))$

Table 8: International risk sharing and economic, social and political globalization between 70-89

| | | 0.0.00 | T 1 0 | | 501 | | | NEG | <i></i> | |
|---|---------------------|---------------------|---------------------|--------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| | World | OECD | LAC | EAP | ECA | EMU | MNA | NEC | SAS | SSA |
| VARIABLES | $\Delta \log c_t^i$ | $\Delta \log c_t^i$ | $\Delta \log c_t^i$ | $\Delta \log c_t^i$ | $\Delta \log c_t^i$ | $\Delta \log c_t^i$ | $\Delta \log c_t^i$ | $\Delta \log c_t^i$ | $\Delta \log c_t^i$ | $\Delta \log c_t^i$ |
| $\Delta l_{r} = (a_{r})^{id}$ | 0.6625 | 0.7296 | 0.7604 | 0 6082 | 0.6921 | 0.7970 | 0 5260 | . 0.0200 | . 2.0207 | 0.7564 |
| $\Delta \log(y_{it})$ | (0.0035*** | (0.0240) | (0.1050) | (0.1500) | (0.0520) | * 0.7279*** | (0.1600) | (0.0020) | * 3.2301 | (0.0600) |
| id id | (0.0400) | (0.0340) | (0.1050) | (0.1300) | (0.0380) | (0.0020) | (0.1000) | (0.0920) | (2.3230) | (0.0000) |
| $(a_{it} - a_t)\Delta \log(y_{it})^{\circ \alpha}$ | -0.0054** | -0.0085** | 0.0079 | -0.0049 | -0.0020 | -0.0245*** | • 0.0117 | 0.0069 | -0.1145 | -0.0122* |
| | (0.0030) | (0.0040) | (0.0080) | (0.0110) | (0.0070) | (0.0060) | (0.0160) | (0.0100) | (0.1570) | (0.0070) |
| $(b_{it} - b_t)\Delta \log(y_{it})^{ia}$ | -0.0009 | 0.0035 | 0.0293 * * * | ⊧ 0.0001 | 0.0161 * * * | * 0.0193*** | -0.0260 | 0.0013 | 0.2893 | -0.0171 ** |
| | (0.0020) | (0.0030) | (0.0090) | (0.0160) | (0.0060) | (0.0050) | (0.0160) | (0.0100) | (0.2570) | (0.0090) |
| $(c_{it} - \overline{c_t})\Delta \log(y_{it})^{id}$ | 0.0035 * * | 0.0002 | 0.0204*** | ×−0.0123 | -0.0034 | -0.0032 | -0.0200* | -0.0125 ** | * 0.0182 | 0.0000 |
| | (0.0020) | (0.0030) | (0.0070) | (0.0100) | (0.0020) | (0.0050) | (0.0110) | (0.0040) | (0.0210) | (0.0040) |
| $\Delta \log(C_{at})$ | 0.7357*** | < 1.0573*** | 0.6524*** | ⊧ 0.4150 [′] ** | 1.1959*** | * 1.0932*** | < 1.3041** | * 0.9861** | * 4.2907*** | * `0.6008*** |
| 0(0) | (0.0590) | (0.0500) | (0.1350) | (0.1870) | (0.1090) | (0.0700) | (0.3770) | (0.1120) | (1.5790) | (0.1470) |
| $(a_{it} - \overline{a_t}) \Delta \log(C_{at})$ | 0.0059* | 0.0049 | 0.0054 | -0.0056 | 0.0070 | 0.0158** | -0.0060 | -0.0184* | 0.0040 | 0.0249* |
| (-11 -1)=8(-11) | (0, 0030) | (0, 0050) | (0,0080) | (0.0110) | (0, 0090) | (0.0070) | (0.0240) | (0, 0100) | (0.0810) | (0.0130) |
| $(h_{ij} - \overline{h_{ij}}) \wedge \log(C_{ij})$ | _0.0018 | -0.0016 | 0.0037 | -0.0246* | 0.0014 | _0.0008** | 0.0248 | 0.0110 | 0.2437 | _0.0005 |
| $(v_{it} - v_t) \Delta \log(v_{at})$ | (0.0020) | (0.0010) | (0.0100) | (0.0140) | (0.0000) | (0.0050) | (0.0240) | (0.0170) | (0.1640) | (0.0260) |
| (| 0.0030) | (0.0040) | 0.0048 | (0.0140) | (0.0090) | 0.0050) | 0.0157 | 0.0170) | (0.1040) | 0.0200) |
| $(c_{it} - c_t)\Delta \log(c_{at})$ | (0.0047** | -0.0013 | (0.0048) | -0.0027 | -0.0029 | -0.0079** | -0.0157 | -0.0178** | *-0.0312** | (0.0084) |
| | (0.0020) | (0.0030) | (0.0080) | (0.0130) | (0.0040) | (0.0040) | (0.0200) | (0.0000) | (0.0150) | (0.0140) |
| Constant | 0.0170 | -0.0099 | -0.0195 | 0.0400** | -0.0001 | -0.0119** | -0.0032 | 0.0199 | -0.0385* | -0.0193 |
| | (0.0400) | (0.0070) | (0.0290) | (0.0160) | (0.0230) | (0.0050) | (0.0240) | (0.0180) | (0.0200) | (0.0400) |
| Observations | 1439 | 475 | 329 | 133 | 276 | 209 | 104 | 173 | 41 | 395 |
| Number of id | 86 | 25 | 19 | 7 | 17 | 11 | 8 | 12 | 3 | 26 |
| rumber of fu | 80 | 20 | 13 | ' | 11 | 11 | 0 | 12 | 5 | 20 |

*** p<0.01, ** p<0.05, * p<0.1. Standard errors reported in brackets.

Estimated equation:

Estimated equation: $\Delta \log(z_t^i) = \alpha + \beta_0 \Delta \log(y_{it})^{id} + \beta_1(a_{it} - \overline{a_t}) \Delta \log(y_{it})^{id} + \beta_2(b_{it} - \overline{b_t}) \Delta \log(y_{it})^{id} + \beta_3(c_{it} - \overline{c_t}) \Delta \log(y_{it})^{id} + \gamma_0(\Delta \log(c_{at})) + \gamma_1(a_{it} - \overline{a_t})(\Delta \log(c_{at})) + \gamma_2(b_{it} - \overline{b_t})(\Delta \log(c_{at})) + \gamma_3(c_{it} - \overline{c_t})(\Delta \log(c_{at})) + \epsilon_t^i$ where: $\Delta \log(y_{it})^{id} = (\Delta \log(y_{it}) - \Delta \log(y_{at}))$

Table 9: International risk sharing and economic, social and political globalization between 90-07

| VARIABLES | World $\Delta \log c_t^i$ | $\begin{array}{c} \text{OECD} \\ \Delta \log c_t^i \end{array}$ | $_{\Delta \log c_t^i}^{\rm LAC}$ | $\begin{array}{c} \text{EAP} \\ \Delta \log c_t^i \end{array}$ | $\begin{array}{c} \text{ECA} \\ \Delta \log c_t^i \end{array}$ | $\begin{array}{c} \text{EMU} \\ \Delta \log c_t^i \end{array}$ | $\begin{array}{c} \text{MNA} \\ \Delta \log c_t^i \end{array}$ | $_{\Delta \log c_t^i}^{\rm NEC}$ | $\begin{array}{c} {\rm SAS} \\ \Delta \log c_t^i \end{array}$ | $\frac{\text{SSA}}{\Delta \log c_t^i}$ |
|--|---------------------------|---|----------------------------------|--|--|--|--|----------------------------------|---|--|
| $\Delta \log(y_{it})^{id}$ | 0.7641** | * 0.7382*** | 0.9009*** | 0.5977*** | 0.6831*** | 0.7132*** | 0.4687** | * 0.9388*** | 0.2366 | 0.6732*** |
| | (0.0270) | (0.0370) | (0.0570) | (0.1770) | (0.0580) | (0.0660) | (0.1180) | (0.0920) | (1.3220) | (0.0680) |
| $(a_{it} - \overline{a_t})\Delta \log(y_{it})^{id}$ | -0.0038* | -0.0024 | -0.0082* | -0.0087 | -0.0020 | -0.0217 *** | -0.0063 | 0.0069 | -0.0523 | 0.0132 |
| | (0.0020) | (0.0040) | (0.0050) | (0.0120) | (0.0070) | (0.0070) | (0.0110) | (0.0100) | (0.0480) | (0.0080) |
| $(b_{it} - \overline{b_t}) \Delta \log(y_{it})^{id}$ | -0.0005 | -0.0176 * * * | 0.0093** | 0.0170** | 0.0161*** | 0.0098 | -0.0032 | 0.0013 | 0.0584 | -0.0186 * * |
| | (0.0020) | (0.0040) | (0.0040) | (0.0080) | (0.0060) | (0.0110) | (0.0090) | (0.0100) | (0.0450) | (0.0080) |
| $(c_{it} - \overline{c_t})\Delta \log(y_{it})^{id}$ | 0.0031** | * 0.0007 | 0.0048* | 0.0070 | -0.0034 | 0.0082 | 0.0165*** | *-0.0125*** | 0.0333 | 0.0107** |
| | (0.0010) | (0.0040) | (0.0030) | (0.0070) | (0.0020) | (0.0140) | (0.0060) | (0.0040) | (0.0490) | (0.0050) |
| $\Delta \log(C_{at})$ | 0.9573** | * 1.0370*** | 0.8348*** | 0.6632*** | 1.1959*** | 0.9386*** | 0.7812** | 0.9861*** | 1.3409** | 0.8182*** |
| | (0.0410) | (0.0830) | (0.0790) | (0.1760) | (0.1090) | (0.0620) | (0.3200) | (0.1120) | (0.6720) | (0.0980) |
| $(a_{it} - \overline{a_t})\Delta \log(C_{at})$ | -0.0032 | -0.0125 | -0.0018 | -0.0169 * * | 0.0070 | -0.0014 | 0.0090 | -0.0184* | 0.0342 | 0.0114 |
| | (0.0020) | (0.0080) | (0.0050) | (0.0080) | (0.0090) | (0.0070) | (0.0140) | (0.0100) | (0.0240) | (0.0070) |
| $(b_{it} - \overline{b_t}) \Delta \log(C_{at})$ | 0.0022 | -0.0039 | 0.0144 * * | 0.0019 | 0.0014 | 0.0027 | -0.0327* | 0.0110 | 0.0396* | -0.0112 |
| | (0.0020) | (0.0090) | (0.0060) | (0.0050) | (0.0090) | (0.0100) | (0.0200) | (0.0170) | (0.0210) | (0.0080) |
| $(c_{it} - \overline{c_t})\Delta \log(C_{at})$ | -0.0005 | -0.0134* | 0.0042 | 0.0083 | -0.0029 | 0.0080 | -0.0138 | -0.0178*** | -0.0135 | 0.0123** |
| | (0.0020) | (0.0070) | (0.0040) | (0.0060) | (0.0040) | (0.0130) | (0.0120) | (0.0060) | (0.0240) | (0.0050) |
| Constant | 0.0037 | -0.0249 * * * | 0.0045 | 0.0390 * * | -0.0001 | 0.0073 * * | 0.0090 | 0.0199 | 0.0032 | 0.0279 * * * |
| | (0.0280) | (0.0060) | (0.0050) | (0.0190) | (0.0230) | (0.0030) | (0.0200) | (0.0180) | (0.0040) | (0.0070) |
| Observations | 1903 | 425 | 371 | 146 | 276 | 186 | 159 | 173 | 51 | 453 |
| Number of id | 114 | 25 | 23 | 9 | 17 | 11 | 10 | 12 | 3 | 29 |

*** p<0.01, ** p<0.05, * p<0.1. Standard errors reported in brackets. Estimated equation:

Estimated equation: $\Delta \log(c_t^i) = \alpha + \beta_0 \Delta \log(y_{it})^{id} + \beta_1(a_{it} - \overline{a_t}) \Delta \log(y_{it})^{id} + \beta_2(b_{it} - \overline{b_t}) \Delta \log(y_{it})^{id} + \beta_3(c_{it} - \overline{c_t}) \Delta \log(y_{it})^{id} + \gamma_0(\Delta \log(C_{at})) + \gamma_1(a_{it} - \overline{a_t})(\Delta \log(C_{at})) + \gamma_2(b_{it} - \overline{b_t})(\Delta \log(C_{at})) + \gamma_3(c_{it} - \overline{c_t})(\Delta \log(C_{at})) + \epsilon_t^i$ where: $\Delta \log(y_{it})^{id} = (\Delta \log(y_{it}) - \Delta \log(y_{at}))$

Table 10: International risk sharing and disaggregated measure of globalization (actual flows, restriction, information flows, personal contact, cultural proximity, political integration) between 70-07

| VADIADIES | World $\Delta \ln \pi a^i$ | OECD | LAC | EAP | ECA | EMU | MNA | NEC | SAS | SSA |
|--|----------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| VARIABLES | $\Delta \log c_t$ | $\Delta \log c_t$ | $\Delta \log c_t$ | $\Delta \log c_t$ | $\Delta \log c_t$ | $\Delta \log c_t$ | $\Delta \log c_t$ | $\Delta \log c_t$ | $\Delta \log c_t$ | $\Delta \log c_t$ |
| $\Delta \log(u_{it})^{id}$ | 0.7012*** | * 0.7405*** | 0.9151*** | 0.7935** | * 0.7144*** | * 0.7403*** | 0.4390*** | 0.8266*** | 0.6342 | 0.7414 * * * |
| 0(011) | (0.0250) | (0.0250) | (0.0680) | (0.1730) | (0.0600) | (0.0450) | (0.1060) | (0.0820) | (0.6740) | (0.0550) |
| $(ai_{it} - \overline{ai_t})\Delta \log(y_{it})^{id}$ | -0.0017 | -0.0011 | -0.0035 | -0.0049 | -0.0054 | -0.0100*** | -0.0040 | -0.0175 | -0.0689 | -0.0025 |
| | (0.0010) | (0.0020) | (0.0030) | (0.0060) | (0.0070) | (0.0040) | (0.0060) | (0.0120) | (0.0460) | (0.0050) |
| $(aii_{it} - \overline{aii_t})\Delta \log(y_{it})^{id}$ | -0.0003 | -0.0020 | 0.0040 | 0.0046 | 0.0006 | -0.0039 | 0.0045 | 0.0158* | 0.0191 | -0.0049 |
| | (0.0010) | (0.0030) | (0.0040) | (0.0110) | (0.0060) | (0.0090) | (0.0060) | (0.0090) | (0.0550) | (0.0050) |
| $(bi_{it} - \overline{bi_t}) \Delta \log(y_{it})^{id}$ | -0.0040 *** | *-0.0102*** | 0.0111*** | ×−0.0001 | 0.0161* | -0.0013 | 0.0010 | -0.0088 | 0.0607 | -0.0014 |
| | (0.0020) | (0.0030) | (0.0040) | (0.0110) | (0.0080) | (0.0080) | (0.0070) | (0.0070) | (0.0450) | (0.0060) |
| $(bii_{it} - \overline{bii_t})\Delta \log(y_{it})^{id}$ | 0.0048*** | ∗ 0.0044 | 0.0092 * * | 0.0096 | 0.0155*** | * 0.0141*** | -0.0046 | 0.0322 * * * | -0.0173 | -0.0042 |
| | (0.0020) | (0.0030) | (0.0040) | (0.0090) | (0.0060) | (0.0050) | (0.0080) | (0.0080) | (0.0670) | (0.0040) |
| $(biii_{it} - \overline{biii_t}) \Delta \log(y_{it})^{id}$ | -0.0010 | 0.0003 | 0.0008 | -0.0046 | -0.0107 *** | * 0.0039** | -0.0106 ** | -0.0092 * * | 0.0348 | 0.0261* |
| | (0.0010) | (0.0010) | (0.0030) | (0.0050) | (0.0040) | (0.0020) | (0.0050) | (0.0040) | (0.0270) | (0.0150) |
| $(c_{it} - \overline{c_t})\Delta \log(y_{it})^{id}$ | 0.0016 | 0.0016 | 0.0114*** | ×−0.0009 | -0.0012 | -0.0018 | 0.0110 | -0.0172 * * * | 0.0028 | 0.0001 |
| | (0.0010) | (0.0020) | (0.0040) | (0.0090) | (0.0030) | (0.0050) | (0.0070) | (0.0060) | (0.0160) | (0.0050) |
| $\Delta \log(C_{at})$ | 0.9102*** | * 1.0394*** | 0.6609*** | 0.5767** | * 1.2407*** | * 1.0271*** | 1.2551 * * * | 0.9748*** | 2.5329 * * * | × 0.8497*** |
| | (0.0390) | (0.0420) | (0.0990) | (0.1660) | (0.1150) | (0.0470) | (0.2880) | (0.0960) | (0.5060) | (0.1090) |
| $(ai_{it} - ai_t)\Delta \log(C_{at})$ | -0.0017 | -0.0010 | 0.0048 | -0.0067 | -0.0012 | 0.0031 | -0.0089 | 0.0074 | 0.0093 | 0.0058 |
| | (0.0010) | (0.0020) | (0.0040) | (0.0050) | (0.0080) | (0.0030) | (0.0090) | (0.0110) | (0.0140) | (0.0080) |
| $(aii_{it} - aii_t)\Delta \log(C_{at})$ | 0.0048*** | ∗ 0.0045 | -0.0008 | 0.0005 | -0.0003 | 0.0079 | 0.0151 | -0.0236*** | -0.0058 | 0.0037 |
| | (0.0020) | (0.0030) | (0.0040) | (0.0080) | (0.0070) | (0.0070) | (0.0100) | (0.0080) | (0.0230) | (0.0070) |
| $(bi_{it} - bi_t)\Delta \log(C_{at})$ | 0.0006 | 0.0039 | -0.0027 | -0.0068 | -0.0068 | -0.0078 | -0.0117 | 0.0106 | 0.0568 * * | 0.0031 |
| | (0.0020) | (0.0030) | (0.0040) | (0.0080) | (0.0140) | (0.0060) | (0.0120) | (0.0130) | (0.0280) | (0.0110) |
| $(bii_{it} - bii_t)\Delta \log(C_{at})$ | 0.0014 | 0.0000 | 0.0078** | 0.0048 | 0.0113 | 0.0016 | 0.0188* | 0.0120 | -0.0010 | -0.0054 |
| | (0.0020) | (0.0030) | (0.0040) | (0.0070) | (0.0100) | (0.0040) | (0.0110) | (0.0100) | (0.0200) | (0.0090) |
| $(biii_{it} - biii_t)\Delta \log(C_{at})$ | -0.0020*** | *-0.0023** | 0.0022 | -0.0017 | -0.0070 | -0.0022 | -0.0015 | -0.0068 | 0.0071 | 0.0012 |
| $() \wedge h \sim (C -)$ | (0.0010) | (0.0010) | (0.0030) | (0.0030) | (0.0040) | (0.0020) | (0.0080) | (0.0060) | (0.0110) | (0.0100) |
| $(c_{it} - c_t)\Delta \log(C_{at})$ | -0.0003 | -0.0032 | (0.0070) | (0.0071) | -0.0036 | -0.0027 | -0.0141 | -0.0150*** | -0.0210** | -0.0013 |
| Constant | -0.0034 | (0.0020) | (0.0030) | 0.0118 | 0.0030 | (0.0030) | 0.0001 | 0.0076 | (0.0110) | (0.0030) |
| Constant | (0.0034) | (0.0050) | (0.0140) | (0.0110) | (0.0130) | (0.0012) | (0.0001) | (0.0070) | (0.0070) | (0.0110) |
| | (0.0050) | (0.0000) | (0.0110) | (0.0110) | (0.0100) | (0.0020) | (0.0010) | (0.0100) | (0.0010) | (0.0110) |
| Observations | 3064 | 900 | 705 | 259 | 259 | 406 | 271 | 173 | 95 | 655 |
| Number of id | 103 | 25 | 22 | 7 | 16 | 11 | 10 | 12 | 3 | 22 |

*** p<0.01, ** p<0.05, * p<0.1. Standard errors reported in brackets.

Estimated equation:

Estimated equation: $\Delta \log(z_t^i) = \alpha + \beta_0 \Delta \log(y_{it})^{id} + \beta_1(ai_{it} - \overline{ai_t}) \Delta \log(y_{it})^{id} + \beta_2(bi_{it} - \overline{bi_t}) \Delta \log(y_{it})^{id} + \beta_4(bi_{it} - \overline{bi_{it}}) \Delta \log(y_{it})^{id} + \beta_5(bii_{it} - \overline{bii_{t}}) \Delta \log(y_{it})^{id} + \beta_5(bii_{it} - \overline{bii_{t}}) \Delta \log(y_{it})^{id} + \beta_6(c_{it} - \overline{c_t}) \Delta \log(y_{it})^{id} + \gamma_0(\Delta \log(C_{at})) + \gamma_1(ai_{it} - \overline{ai_t})(\Delta \log(C_{at})) + \gamma_2(ai_{it} - \overline{ai_t})(\Delta \log(C_{at})) + \gamma_3(bi_{it} - \overline{bit})(\Delta \log(C_{at})) + \gamma_4(bi_{it} - \overline{bit})(\Delta \log(C_{at})) + \gamma_5(bii_{it} - \overline{bii_{t}})(\Delta \log(C_{at})) + \gamma_6(c_{it} - \overline{c_t})(\Delta \log(C_{at})) + \epsilon_t^i$ where: $\Delta \log(y_{it})^{id} = (\Delta \log(y_{it}) - \Delta \log(y_{at}))$

Table 11: International risk sharing and disaggregated measure of globalization (actual flows, restriction, information flows, personal contact, cultural proximity, political integration) between 70-89

| | World | OECD | LAC | EAP | ECA | EMU | MNA | NEC | SAS | SSA |
|---|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| VARIABLES | $\Delta \log c_t^i$ |
| $\Delta \log(y_{it})^{id}$ | 0.7034*** | * 0.7261*** | 0.8686*** | 0.6210*** | * 0.7144*** | • 0.7319*** | 0.2789 | 0.8266*** | 15.2733 | 0.8040*** |
| | (0.0430) | (0.0360) | (0.1220) | (0.1770) | (0.0600) | (0.0640) | (0.4200) | (0.0820) | (23.0110) | (0.0740) |
| $(ai_{it} - \overline{ai_t})\Delta \log(y_{it})^{id}$ | -0.0035 * * | -0.0046* | 0.0000 | -0.0081 | -0.0054 | -0.0127 ** | 0.0089 | -0.0175 | -0.1410 | -0.0151* |
| | (0.0020) | (0.0030) | (0.0050) | (0.0080) | (0.0070) | (0.0060) | (0.0100) | (0.0120) | (0.2200) | (0.0080) |
| $(aii_{it} - \overline{aii_t})\Delta \log(y_{it})^{id}$ | -0.0004 | -0.0039 | 0.0090 | 0.0085 | 0.0006 | -0.0112 | 0.0000 | 0.0158* | -1.1383 | -0.0134 ** |
| | (0.0020) | (0.0040) | (0.0090) | (0.0320) | (0.0060) | (0.0120) | (0.0200) | (0.0090) | (0.7580) | (0.0060) |
| $(bi_{it} - \overline{bi_t})\Delta \log(y_{it})^{id}$ | -0.0026 | -0.0003 | 0.0135 * * | 0.0059 | 0.0161* | -0.0011 | -0.0081 | -0.0088 | 0.9920*** | * 0.0128 |
| | (0.0020) | (0.0040) | (0.0070) | (0.0270) | (0.0080) | (0.0140) | (0.0100) | (0.0070) | (0.3780) | (0.0110) |
| $(bii_{it} - \overline{bii_t})\Delta \log(y_{it})^{id}$ | 0.0027 | 0.0032 | 0.0092 | -0.0088 | 0.0155 * * * | * 0.0164** | -0.0081 | 0.0322 * * * | -0.6135 | -0.0033 |
| | (0.0020) | (0.0040) | (0.0070) | (0.0160) | (0.0060) | (0.0080) | (0.0130) | (0.0080) | (0.9130) | (0.0050) |
| $(biii_{it} - \overline{biii_t})\Delta \log(y_{it})^{id}$ | 0.0008 | 0.0011 | 0.0037 | 0.0081 | -0.0107 *** | ⊧ 0.0046∗ | -0.0202 | -0.0092 * * | 5.3610 | -0.0521 |
| | (0.0010) | (0.0010) | (0.0050) | (0.0090) | (0.0040) | (0.0030) | (0.0220) | (0.0040) | (4.0840) | (0.0470) |
| $(c_{it} - \overline{c_t})\Delta \log(y_{it})^{id}$ | 0.0008 | 0.0004 | 0.0159 * * | -0.0085 | -0.0012 | -0.0085 | -0.0138 | -0.0172 * * * | 0.0833 | -0.0155 ** |
| | (0.0020) | (0.0030) | (0.0080) | (0.0120) | (0.0030) | (0.0060) | (0.0150) | (0.0060) | (0.0720) | (0.0070) |
| $\Delta \log(C_{at})$ | 0.8211*** | * 1.0345*** | 0.6092*** | 0.4051** | 1.2407*** | 1.0290*** | 2.3208** | * 0.9748*** | -9.7676 | 0.8745*** |
| | (0.0650) | (0.0520) | (0.1510) | (0.1880) | (0.1150) | (0.0720) | (0.5570) | (0.0960) | (9.4220) | (0.2230) |
| $(ai_{it} - ai_t)\Delta \log(C_{at})$ | -0.0028 | -0.0016 | 0.0099 | -0.0043 | -0.0012 | 0.0000 | -0.0110 | 0.0074 | -0.1200 | -0.0038 |
| | (0.0020) | (0.0030) | (0.0060) | (0.0090) | (0.0080) | (0.0050) | (0.0140) | (0.0110) | (0.1510) | (0.0180) |
| $(aii_{it} - aii_t)\Delta \log(C_{at})$ | 0.0091*** | * 0.0086* | -0.0020 | 0.0540** | -0.0003 | 0.0387*** | 0.0405** | -0.0236*** | 0.2971 | -0.0074 |
| | (0.0030) | (0.0050) | (0.0100) | (0.0220) | (0.0070) | (0.0120) | (0.0190) | (0.0080) | (0.2670) | (0.0150) |
| $(bi_{it} - bi_t)\Delta \log(C_{at})$ | -0.0001 | 0.0013 | -0.0045 | -0.0438* | -0.0068 | -0.0078 | -0.0032 | 0.0106 | -0.1056 | 0.0412 |
| $(1::]$ $\overline{1::}$ (C_1) | (0.0030) | (0.0050) | (0.0070) | (0.0240) | (0.0140) | (0.0090) | (0.0180) | (0.0130) | (0.2720) | (0.0290) |
| $(bii_{it} - bii_t)\Delta \log(C_{at})$ | (0.0002) | (0.0050) | (0.0073) | -0.0097 | (0.0113) | (0.0022) | (0.0215) | (0.0120) | -0.1264 | -0.0019 |
| $(h_{iii}, \overline{h_{iii}}) \wedge h_{i} = r(C, i)$ | 0.0020) | (0.0030) | (0.0000) | 0.00130) | (0.0100) | 0.0010) | (0.0130) | 0.0100) | 0.3940) | (0.0190) |
| $(biii_{it} - biii_t) \Delta \log(C_{at})$ | -0.0022** | -0.0023 | (0.0012) | (0.0040) | -0.0070 | -0.0047 ** | (0.0213) | -0.0008 | -2.8343* | -0.2133* |
| $(c_{ij} = \overline{c_i}) \Delta \log(C_{ij})$ | 0.0003 | -0.0045 | 0.0092 | -0.0055 | -0.0036 | 0.00020) | -0.02280 | -0.0150*** | 0.0249 | -0.0327 |
| $(c_{it} c_t) \Delta \log(c_{at})$ | (0.0020) | (0.0040) | (0.0100) | (0.0140) | (0.0050) | (0.0050) | (0.0260) | (0.0060) | (0.0730) | (0.0230) |
| Constant | -0.0083 | -0.0090 | -0.0218 | 0.0337* | 0.0032 | 0.0041 | -0.0025 | 0.0076 | 0.0079** | 0.0247 |
| | (0.0460) | (0.0070) | (0.0290) | (0.0180) | (0.0130) | (0.0040) | (0.0220) | (0.0190) | (0.0040) | (0.0300) |
| Observations | 1343 | 475 | 329 | 133 | 259 | 209 | 104 | 173 | 41 | 299 |
| Number of id | 79 | 25 | 19 | 7 | 16 | 11 | 8 | 12 | 3 | 19 |
| | | | | | | | | | | |

*** p<0.01, ** p<0.05, * p<0.1. Standard errors reported in brackets.

Estimated equation:

Estimated equation: $\Delta \log(z_t^i) = \alpha + \beta_0 \Delta \log(y_{it})^{id} + \beta_1(ai_{it} - \overline{ai_t}) \Delta \log(y_{it})^{id} + \beta_2(bi_{it} - \overline{bi_t}) \Delta \log(y_{it})^{id} + \beta_4(bi_{it} - \overline{bi_{it}}) \Delta \log(y_{it})^{id} + \beta_5(bii_{it} - \overline{bii_{t}}) \Delta \log(y_{it})^{id} + \beta_5(bii_{it} - \overline{bii_{t}}) \Delta \log(y_{it})^{id} + \beta_6(c_{it} - \overline{c_t}) \Delta \log(y_{it})^{id} + \gamma_0(\Delta \log(C_{at})) + \gamma_1(ai_{it} - \overline{ai_t})(\Delta \log(C_{at})) + \gamma_2(ai_{it} - \overline{ai_t})(\Delta \log(C_{at})) + \gamma_3(bi_{it} - \overline{bit})(\Delta \log(C_{at})) + \gamma_4(bi_{it} - \overline{bit})(\Delta \log(C_{at})) + \gamma_5(bii_{it} - \overline{bii_{t}})(\Delta \log(C_{at})) + \gamma_6(c_{it} - \overline{c_t})(\Delta \log(C_{at})) + \epsilon_t^i$ where: $\Delta \log(y_{it})^{id} = (\Delta \log(y_{it}) - \Delta \log(y_{at}))$

Table 12: International risk sharing and disaggregated measure of globalization (actual flows, restriction, information flows, personal contact, cultural proximity, political integration) between 90-07

| $\begin{array}{c c c c c c c c c c c c c c c c c c c $ | W DI DI DA | World | OECD | LAC | EAP | ECA | EMU | MNA | NEC | SAS | SSA |
|--|---|---------------------|---------------------|-----------------------|-------------------------|---------------------|---------------------|---------------------|---------------------|-------------------------|---------------------|
| $ \begin{array}{llllllllllllllllllllllllllllllllllll$ | VARIABLES | $\Delta \log c_t^*$ | $\Delta \log c_t^i$ | $\Delta \log c_t^{*}$ | $\Delta \log c_t^{\nu}$ | $\Delta \log c_t^*$ | $\Delta \log c_t^*$ | $\Delta \log c_t^*$ | $\Delta \log c_t^*$ | $\Delta \log c_t^{\nu}$ | $\Delta \log c_t^*$ |
| $ \begin{array}{cccccccccccccccccccccccccccccccccccc$ | $\Delta \log(y_{it})^{id}$ | 0.7387** | * 0.7277*** | * 0.9477** | * 0.7258* | 0.7144 * * * | * 0.6873*** | • 0.4804** | * 0.8266** | * 1.6876 | 0.7096*** |
| $ \begin{array}{cccccccccccccccccccccccccccccccccccc$ | 8(<i>911</i>) | (0.0310) | (0.0370) | (0.0770) | (0.4190) | (0.0600) | (0.0670) | (0.1310) | (0.0820) | (1.7200) | (0.0860) |
| $ \begin{array}{c} (1 + t - t - t - t - t - t - t - t - t - t$ | $(ai_{i+} - \overline{ai_t})\Delta \log(y_{i+})^{id}$ | 0.0025 | 0.0135*** | ∗−0.0066* | -0.0119 | -0.0054 | -0.0257*** | 0.0028 | -0.0175 | -0.0007 | 0.0144* |
| $ \begin{array}{llllllllllllllllllllllllllllllllllll$ | | (0.0020) | (0.0030) | (0.0040) | (0.0120) | (0.0070) | (0.0060) | (0.0070) | (0.0120) | (0.0420) | (0.0080) |
| $ \begin{array}{cccccccccccccccccccccccccccccccccccc$ | $(aii_{it} - \overline{aii_t})\Delta \log(y_{it})^{id}$ | -0.0006 | 0.0025 | -0.0058 | -0.0059 | 0.0006 | 0.0871*** | ∗-0.0030 | 0.0158* | 0.1468 * * | 0.0216*** |
| | | (0.0020) | (0.0050) | (0.0040) | (0.0160) | (0.0060) | (0.0280) | (0.0080) | (0.0090) | (0.0650) | (0.0080) |
| $ \begin{array}{cccccccccccccccccccccccccccccccccccc$ | $(bi_{it} - \overline{bi_t}) \Delta \log(y_{it})^{id}$ | -0.0025 | -0.0338*** | ∗ 0.0069 | 0.0095 | 0.0161* | 0.0246* | -0.0005 | -0.0088 | -0.0385 | -0.0131 |
| $ \begin{array}{lllllllllllllllllllllllllllllll$ | | (0.0020) | (0.0060) | (0.0040) | (0.0140) | (0.0080) | (0.0130) | (0.0110) | (0.0070) | (0.0570) | (0.0100) |
| $ \begin{array}{cccccccccccccccccccccccccccccccccccc$ | $(bii_{it} - \overline{bii_t})\Delta \log(y_{it})^{id}$ | 0.0017 | 0.0021 | 0.0032 | 0.0169 | 0.0155 * * | *-0.0029 | -0.0082 | 0.0322 * * | *-0.0238 | -0.0193 * * |
| $ \begin{array}{lllllllllllllllllllllllllllllll$ | | (0.0020) | (0.0050) | (0.0050) | (0.0140) | (0.0060) | (0.0090) | (0.0130) | (0.0080) | (0.0610) | (0.0090) |
| $ \begin{array}{cccccccccccccccccccccccccccccccccccc$ | $(biii_{it} - \overline{biii_t})\Delta \log(y_{it})^{id}$ | -0.0030 * * | 0.0030 | 0.0046 | -0.0137 | -0.0107 *** | *-0.0053 | 0.0009 | -0.0092 * * | 0.0413* | 0.0205 |
| $ \begin{array}{cccccccccccccccccccccccccccccccccccc$ | | (0.0010) | (0.0020) | (0.0040) | (0.0090) | (0.0040) | (0.0040) | (0.0050) | (0.0040) | (0.0220) | (0.0170) |
| $ \begin{array}{cccccccccccccccccccccccccccccccccccc$ | $(c_{it} - \overline{c_t})\Delta \log(y_{it})^{id}$ | 0.0043 * * | *-0.0030 | 0.0058 | 0.0120 | -0.0012 | 0.0328 * * | 0.0170 * * | -0.0172 * * | *-0.0346 | 0.0178 * * * |
| $ \begin{array}{llllllllllllllllllllllllllllllllllll$ | | (0.0010) | (0.0040) | (0.0040) | (0.0150) | (0.0030) | (0.0170) | (0.0080) | (0.0060) | (0.0570) | (0.0060) |
| $ \begin{array}{cccccccccccccccccccccccccccccccccccc$ | $\Delta \log(C_{at})$ | 0.9563 * * | * 0.9785*** | * 0.8274** | * 0.4350 | 1.2407*** | * 0.9254*** | € 0.5732 | 0.9748 * * | * 3.9985** | * 0.8856*** |
| $ \begin{array}{cccccccccccccccccccccccccccccccccccc$ | | (0.0490) | (0.0850) | (0.1130) | (0.3690) | (0.1150) | (0.0600) | (0.3850) | (0.0960) | (1.1550) | (0.1210) |
| $ \begin{array}{cccccccccccccccccccccccccccccccccccc$ | $(ai_{it} - ai_t)\Delta \log(C_{at})$ | -0.0027 | -0.0083* | -0.0019 | -0.0090 | -0.0012 | 0.0090** | 0.0189 | 0.0074 | 0.0298* | 0.0097 |
| $ \begin{array}{cccccccccccccccccccccccccccccccccccc$ | · · · · · · · · · · · · · · · · · · · | (0.0020) | (0.0050) | (0.0050) | (0.0090) | (0.0080) | (0.0040) | (0.0130) | (0.0110) | (0.0160) | (0.0090) |
| | $(aii_{it} - aii_t)\Delta \log(C_{at})$ | -0.0017 | -0.0166 ** | -0.0006 | -0.0070 | -0.0003 | -0.0427 ** | 0.0052 | -0.0236 * * | * 0.0198 | 0.0107 |
| | (1) | (0.0020) | (0.0080) | (0.0040) | (0.0100) | (0.0070) | (0.0170) | (0.0120) | (0.0080) | (0.0270) | (0.0090) |
| $ \begin{array}{cccccccccccccccccccccccccccccccccccc$ | $(bi_{it} - bi_t)\Delta \log(C_{at})$ | 0.0052** | 0.0213** | 0.0089 | -0.0013 | -0.0068 | -0.0175* | -0.0438 | 0.0106 | 0.1114*** | * 0.0032 |
| | | (0.0030) | (0.0090) | (0.0060) | (0.0120) | (0.0140) | (0.0100) | (0.0300) | (0.0130) | (0.0340) | (0.0110) |
| $ \begin{array}{cccccccccccccccccccccccccccccccccccc$ | $(bii_{it} - bii_t)\Delta \log(C_{at})$ | -0.0022 | -0.0257** | *-0.0018 | 0.0043 | 0.0113 | -0.0200** | -0.0057 | 0.0120 | 0.0227 | -0.0121 |
| $ \begin{array}{cccccccccccccccccccccccccccccccccccc$ | | (0.0030) | (0.0070) | (0.0060) | (0.0110) | (0.0100) | (0.0080) | (0.0230) | (0.0100) | (0.0220) | (0.0110) |
| $ \begin{array}{cccccccccccccccccccccccccccccccccccc$ | $(biii_{it} - biii_t)\Delta \log(C_{at})$ | 0.0011 | 0.0051 | 0.0095** | 0.0006 | -0.0070 | 0.0095*** | ≈−0.0041 | -0.0068 | 0.0177 | -0.0157 |
| $ \begin{array}{cccccccccccccccccccccccccccccccccccc$ | $() \wedge h \sim (C -)$ | (0.0020) | (0.0040) | (0.0050) | (0.0050) | (0.0040) | (0.0040) | (0.0090) | (0.0060) | (0.0110) | (0.0130) |
| $ \begin{array}{cccccccccccccccccccccccccccccccccccc$ | $(c_{it} - c_t) \Delta \log(C_{at})$ | -0.0005 | -0.0082 | (0.0050) | (0.0111) | -0.0036 | -0.0111 | -0.0290 | -0.0150** | * -0.0463 | (0.0115) |
| $\begin{array}{c} \text{Constant} & \begin{array}{c} 0.0051 & -0.0511 & 0.0071 & 0.0052 & 0.0051 & 0.0054 & 0.0054 & 0.0070 & 0.0110 & -0.0141 & -0.0240 \\ 0.0250) & (0.0050) & (0.0060) & (0.0150) & (0.0130) & (0.0050) & (0.0070) & (0.0190) & (0.0140) & (0.0440) \\ \end{array}$ | Constant | 0.0020) | -0.0021 | (0.0030) | 0.0064 | 0.0030 | 0.0130) | 0.0046 | 0.0076 | (0.0300) | -0.0298 |
| $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | Constant | (0.0250) | (0.0021) | (0.0060) | (0.0150) | (0.0032) | (0.0050) | (0.0040) | (0.0190) | (0.0147) | (0.0238) |
| Observations 1721 425 257 110 250 186 150 172 51 227 | | (0.0200) | (0.0000) | (0.0000) | (0.0100) | (0.0100) | (0.0000) | (0.0010) | (0.0130) | (0.0110) | (0.0440) |
| Observations 1721 425 557 119 259 180 159 175 51 557 | Observations | 1721 | 425 | 357 | 119 | 259 | 186 | 159 | 173 | 51 | 337 |
| Number of id 103 25 22 7 16 11 10 12 3 22 | Number of id | 103 | 25 | 22 | 7 | 16 | 11 | 10 | 12 | 3 | 22 |

*** p<0.01, ** p<0.05, * p<0.1. Standard errors reported in brackets.

Estimated equation:

Estimated equation: $\Delta \log(z_t^i) = \alpha + \beta_0 \Delta \log(y_{it})^{id} + \beta_1(ai_{it} - \overline{ai_t}) \Delta \log(y_{it})^{id} + \beta_2(bi_{it} - \overline{bi_t}) \Delta \log(y_{it})^{id} + \beta_4(bi_{it} - \overline{bi_{it}}) \Delta \log(y_{it})^{id} + \beta_5(bii_{it} - \overline{bii_{t}}) \Delta \log(y_{it})^{id} + \beta_5(bii_{it} - \overline{bii_{t}}) \Delta \log(y_{it})^{id} + \beta_6(c_{it} - \overline{c_t}) \Delta \log(y_{it})^{id} + \gamma_0(\Delta \log(C_{at})) + \gamma_1(ai_{it} - \overline{ai_t})(\Delta \log(C_{at})) + \gamma_2(ai_{it} - \overline{ai_t})(\Delta \log(C_{at})) + \gamma_3(bi_{it} - \overline{bit})(\Delta \log(C_{at})) + \gamma_4(bi_{it} - \overline{bit})(\Delta \log(C_{at})) + \gamma_5(bii_{it} - \overline{bii_{t}})(\Delta \log(C_{at})) + \gamma_6(c_{it} - \overline{c_t})(\Delta \log(C_{at})) + \epsilon_t^i$ where: $\Delta \log(y_{it})^{id} = (\Delta \log(y_{it}) - \Delta \log(y_{at}))$