МИНОБРНАУКИ РОССИИ

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«Юго-западный государственный университет»
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«___» ___01___ _____2022 г.

ПРАКТИКУМ ПО ЭКОНОМИЧЕСКОМУ ПЕРЕВОДУ

Методические указания для выполнения самостоятельной работы по дисциплине «Практикум по экономическому переводу»

Курск 2022

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Методические указания соответствуют требованиям программы, утвержденной учебно-методическим объединением по направлению подготовки 38.03.01 Экономика, направленность (профиль) «Внешнеэкономическая деятельность и международный бизнес».

Предназначено для студентов направления подготовки 38.03.01 Экономика, направленность (профиль) «Внешнеэкономическая деятельность и международный бизнес».

Текст печатается в авторской редакции

Введение

Методические указания для выполнения самостоятельной работы по дисциплине «Практикум по экономическому переводу» представляют собой изложение основ перевода в сфере западной экономики и предназначены для студентов направления подготовки 38.03.01 Экономика, направленность (профиль) «Внешнеэкономическая деятельность и международный бизнес».

Особенности перевода экономических текстов — сложность в интерпретации, подборе соответствия, а также грамматическая, лексическая и стилистическая специфика:

- лексико-грамматические нюансы — обилие в текстах специальных терминов, идиоматических выражений, фразеологизмов, присущих только конкретной области бизнеса, а не языку в общелитературном смысле;

- стилистические отклонения от литературной нормы — сокращенные конструкции, устоявшиеся обороты официальных документов, специфичные аббревиатуры и сокращения;

- присущие конкретному языку сочетания общеупотребительной и сугубо экономической лексики в специфичных пропорциях — некоторые слова устоялись в деловой практике в первоначальном виде, другие нужно переводить;

- наличие «микро-контекста» — сочетаний слов с особыми уровнями внутренней организованности, присущими специальной лексике;

- использование общеупотребимых слов в специфичном значении и так далее.

В основе данных методических указаний лежит работа с различными материалами экономической тематики на английском языке.

1.1 Vocabulary Notes

1. Fractionalization – фракционирование

2. Diminishing – уменьшающийся

3. Environment – окружающая среда

4. Growth-hampering – сдерживание роста

5. Methodology – методология

6. Suggests – предполагать

7. Polarized – поляризованный

8. Hypothesized – выдвинута гипотеза

9. Appropriation – выделение

10. Reminded – напомнил

11. Tradeimmigration – торговая миграция

12. Enhanced – улучшенный

13. Enhancing – усиление

14. Strongest – самый сильный

15. Cross-country – бег по пересеченной местности

16. Analyzed – проанализировать

17. Causality – причинно-следственная связь

18. Underlying – фундаментальный

19. Unchanged – неизменившийся

20. Significance – значимость

21. Measures – меры

22. Significant – существенный

23. Phenomenon – явление

24. Governance – управление

25. Descendants – наследники

26. Downward-biased – смещенный вниз

1.2 Ethnic fractionalization, migration and growth

A wide range of studies have found robust evidence for the negative effect of high ethnic fractionalization on long-term growth in a cross section of countries. This growth diminishing effect of ethnic fractionalization has been found to be operating through an adverse policy environment and the suboptimal provision of public goods (Easterly and Levine (1997), Easterly (2001), Alesina et al. (2003)). However, the channels through which ethnic fractionalization has an impact on growth have only been partially analyzed by these studies. Furthermore, the impact of ethnic fractionalization on economic progress might be far more complex than the existing empirical studies would suggest. For this reason this paper intends to extend the existing analyses.

First of all, it seems reasonable and desirable to update the data set used by Alesina et al. (2003) into the 1990s to analyze the robustness of their results in a wider time range. Interestingly, we find a prevailing negative direct effect of ethnic fractionalization on growth after the inclusion of the 1990s, despite the inclusion of policy control variables. Hence, we apply decade and region specific regressions, as well as a region specific ethnic fractionalization interaction term, in order to identify whether this result is driven by decade or regional specific effects. We find that the growth-hampering impact of ethnic fractionalization remains only in the 1990s and in Sub-Saharan Africa once the policy framework of Alesina et al. (2003) is controlled for. Moreover, we show that this 1990s effect vanishes if we implement the Kaufman-Kraay–Zoido Lobaton-Indicator of governance in the existing model framework of Alesina et al. The specific Sub-Saharan effect of fractionalization instead shows an indirect effect via investment on growth, and not via governance. In line with recent research on violent conflict (Montalvo and Reynal–Querol, 2005), we cannot confirm the hypothesis that the remaining negative impact of ethnic fractionalization is due to violent conflicts. Thus, our results indicate that the original model specification of Alesina et al. is incomplete

as it fails to fully account for the recent 1990s and Sub–Saharan growth experience.

In addition, it might be the case that the alleged negative effect of ethnic fractionalization on growth, described above, is possibly mitigated by positive effects prevailing in multi-ethnic societies. In particular, there is a large body of literature which suggests that the existence of co–ethnic networks has a large positive impact on trade and thus on growth. The theoretical argument is, that immigrants have an informational and trust advantage in arranging trade with their home countries over their local counterparts (Epstein and Gang (2004), Casella and Rauch (1997), Rauch (2001)). Co-ethnic networks are also found to promote foreign direct investment (Tong, 2005). Hence, we empirically investigate, whether ethnic fractionalization might be a positive factor in a nation which is ethnically diverse according to our indicator, partially due to past immigration. We find some indication that countries which are ethnically diverse due to past immigration can mitigate the negative impact of ethnic fractionalization on growth. We are the first, to our knowledge, to distinguish between these two different kinds of ethnic fractionalization in order to determine whether the result empirically in licates this multidimensionality of ethnic diversity. We find the positive effect but we cannot confirm the trade and foreign direct investment hypothesis.

This paper is structured as follows: in Sections 3.2 and 3.3 of this chapter we will focus on the existing theoretical consideration and empirical research which has been produced so far. This is followed by a brief discussion of our data and methodology in Section 3.4. Then we shall present and discuss our results in Section 3.5. In Section 3.6 we identify potentially interesting future research questions and conclude.

1.3 Theoretical Frameworks

There are two different strands of literature, one of which suggests that ethnic diversity is harmful to growth and another which suggests the opposite. The first strand is based on economic growth theory and subsequent cross-country

growth regressions, while the strand which argues that high ethnic diversity is good for growth is normally a case country study using micro data to evaluate the impact of co-ethnic trading networks on trade and growth.

Zak and Knack (2001), for instance, argue that high ethnic diversity increases the social distance between groups, which in turn reduces the amount of trust in a society. Due to the significant information and enforcement problems in many (particularly risky) economic transactions, lack of trust will reduce the amount of beneficial economic transactions, increase transaction costs on monitoring and enforcement and will make some contracts impossible. A related insight emerges from the literature on 'social capital' which measures the number and intensity of social interactions and linkages between members of a society and has found that social capital is potentially conducive to economic development because it favors cooperation and reduces problems due to asymmetric information. The theoretical argument is that social capital is harder to establish between divided ethnic groups in a society.

Furthermore, some authors argue that ethnic diversity increases the likelihood of conflict. Collier and Hoeffel (1998) model the likelihood of a civil war as a cost-benefit calculation of potential rebels. While ethnic diversity is likely to increase the incentive to incite rebellion due to grievances (perceived and actual) experienced by individual ethnic groups, having very large numbers of ethnic groups might make the coordination of a successful rebellion difficult. Thus, Collier and Hoeffel argue that civil wars are particularly likely in ethnically polarized societies, where a few ethnic groups vie for political control.

However, not only violent, but also political conflict has been hypothesized as a channel through which high ethnic diversity negatively influences economic growth. Alesina and Drazen (1991) suggest that groups may attempt to shift the burden of economic stabilization and reform onto other groups when stabilization has significant distributional implications. Even though it is agreed that stabilization requires cuts in public expenditure to eliminate the budget deficit, the distribution of the allocation of the costs is not agreed upon. The process leading to

stabilization can therefore often be described as a war of attrition, which delays stabilization and only ends when certain groups allow the others to decide on the allocation of the burden of the fiscal adjustment. More politically polarized countries will experience longer periods of instability. In the case that different ethnic groups are also strongly politically polarized then the model also applies in the context of ethnic diversity. Similar arguments are made by Easterly and Levine (1997), who argue that high ethnic diversity leads to poor policy choices. Governments either find it difficult to agree on painful economic reforms, attempt to shift the burden to other groups, or simply try to enrich themselves as they fear that their tenure might be limited due to the strong resistance of other ethnic groups. Swenson (1998) develops a game-theoretic, rent-seeking model in which groups compete for common-pool resources. Even in a repeated interaction game co-operation might not be enforceable and the groups sustain their costly appropriation efforts.

In general, political regimes in ethnically diverse countries are often found to be more engaged in inefficient "identity politics" than in more efficient «performance politics». In the former situation, a political regime or party is supported not for its performance in terms of furthering prosperity, but for being led by people from the same group, while in the latter situation economic and political performance is rewarded. As most ethnically diverse countries are diverse at the national level and relatively homogeneous at the regional level, "identity politics" persist at the national level. With these politics people are reminded of differences and therefore an environment of low trust and cooperation is built and maintained. Collier (1998) argues that loyalty to ethnically-based parties is often maintained irrespective of economic performance and the government delivers patronage to the loyalists rather than services to the median voter. A further disadvantage of high ethnic diversity is that it is believed to reduce the provision of public goods. Alexia, Bauer and Easterly (1999) formulate a model which links the heterogeneity of preferences across ethnic groups in a city to the amount and type of public goods the city supplies. A jurisdiction with two or more polarized groups

(in the sense that these groups have preferences very far away from the median) would prefer to keep low and deduct resources from the public good to private consumption. This results in a suboptimal provision of the public good which is then to the detriment of all. These theories may all lead to vicious cycles of high ethnic diversity, poor economic performance, and greater ethnic identification as a result since marginalized groups will build up even stronger identities in the face of poor economic performance and their social exclusion (Akerlof and Kranton, 2000).

On the positive side, ethnic or linguistic diversity which is due to immigration may improve trade opportunities for a country. Immigrants form ethnic networks between their home and host country (Casella and Rauch, 1997). Girma and Yu (2000) provide evidence that the trade immigration linkage is driven by the new information brought by immigrants about their home country and not so much by existing business connections and personal contacts with their home country. This would mean that ethnic networks enhance trade between dissimilar countries. Gould (1994) describes the positive effect of co-ethnic networks as immigrants having links to their home country, which is like a human-capital externality that enhances trade opportunities (most likely between developed and developing countries). Trade is enhanced by a decrease in transaction costs to trade. Furthermore, bilateral trade flows are positively affected by the preference of immigrants for home country products. Gould (1994) finds that the trade enhancing effect is the strongest in the export sector and only a relatively small community of immigrants is needed to exhaust this effect. A relatively large community, however, is needed to exhaust the positive trade effect in the import sector.

Similarly, ethnic diversity of a country increases the attractiveness of that country to immigrants who often migrate to countries with existing networks of immigrants of the same origin. This increases the efficiency and adaptability of the labor market to economic change, and to the extent that the skills of the immigrants complement the home country population, is likely to improve the growth

performance of that country. Lastly, ethnic diversity might be seen as beneficial because it increases the variety of products on offer in a country. As much of trade between rich countries is driven by such a taste for variety, there would logically be considerable benefit if such variety could be provided within one's own borders.

This paper aims to investigate the respective merits of the two theories on ethnic diversity and co-ethnic networks in an empirical analysis to complete the picture. We will investigate whether ethnic diversity has a growth enhancing effect in "immigration countries" which works against the negative effect of high ethnic diversity due to battles over scarce resources.

1.4 Existing Empirical Investigations

The pioneering paper by Easterly and Levine (1997), as well as a follow-up study by Alesina et al. (2003), argue that ethnic conflicts in the political sphere reduce economic growth by leading governments to adopt inefficient economic policies and low public good provision. Using cross-country seemingly unrelated regressions the authors show that the negative impact of ethnic fractionalization operates via certain policy variables on growth. This link between ethnic diversity and the individual policy variable is further analyzed by separate regressions which link ethnic fractionalization significantly to the quality of policy and institutions. These identified channels have hurt Sub-Saharan Africa particularly, which had the highest measured fractionalization and in turn had the lowest economic growth in the period of 1960-1990. For instance, the negative co-efficient of the ethnic variable of -0.0193 implies that Uganda has 1.77 percentage points lower annual growth in per capita income in the base line specification than South Korea which is merely due to different degrees of ethnic fractionalization - 0.002 in South Korea versus 0.93 in Uganda.

As noted in the last section, other forms of social distance, especially income inequality could also lead to polarization of interests between groups and therefore have identical implications for the economic performance in a country. Indeed, Easterly (2001) shows that societies with a low class and income divide grow the

fastest and the channels through which high ethnic diversity and high inequality have an impact on growth happen to be the same. Moreover, extensions by Easterly (2001) show that the negative impact of high ethnic fractionalization can be mitigated by strong institutions which they measure using the data from the International Country Risk Guide. These indicators measure the strength of the rule of law, judicial independence, bureaucratic quality, and protection of property rights. In countries with such strong institutions, the negative effect of ethnic fractionalization on economic growth can be largely avoided (Easterly 2001).

No empirical study has considered the relationship between migration and ethnic fractionalization so far. Several empirical studies find that immigrant links play an important role in determining bilateral trade flows. Gould (1994) shows that immigrants' ties to their home country play a key role in explaining bilateral trade flows of the U.S. Girma and Yu (2000) investigate the link between immigration and trade using U.K. data. They find evidence that immigration from non-Commonwealth countries has a significant trade enhancing effect. Both studies find a pro-import, but most importantly pro-export effect. Frankel and Romer (1999) find that trade has a robust and quantitatively large impact on income when controlling for the direction of causality.

Using a gravity model, Tong (2005) finds that Chinese networks, measured as the number of Chinese people in the country, are important correlate of bilateral foreign direct investment. She further investigates the mechanisms through which this co-ethnic network has an effect on cross-border investment. She finds that community enforcement of sanctions is important in countries with low bureaucratic quality. Furthermore, Chinese networks provide assistance in overcoming informational barriers.

Since our first objective was to update and extend the analysis of Alesina et al. we used the same variables and extended the dataset where possible using the same data sources to include the 1990s. This was possible for all variables except telephones per 1000 workers instead of which we introduced the variable telephones per 1000 people. 4 We decided to put the focus of our research on the

ethnic fractionalization variable "ethnic" only, which was constructed by Alesina et al (2003). This is mainly due to the fact that we deemed it to be the most reasonable measure of ethnic fractionalization available to date.

The variable "ethnic" is measured by a one minus a Herfindahl concentration index where is the share of group i (i = l, ... , N) in country j. The index takes values from zero to one for each country. In practical terms, this index measures the probability that two randomly drawn individuals belong to a different ethnic group. The data to construct this index, i.e. the values for the group shares, are mainly taken from the Encyclopedia Britannica (2001). A separate ethnic group is defined if there exist distinguishing linguistic and/or ethnic characteristics. Note that Sub-Saharan Africa displays the highest average index for all measures of fractionalization. The index «ethnic» gives a more realistic picture of fractionalization in Latin America than the Ethno-Linguistic Measure (ELF) since this region is not primarily fractionalized linguistically but mostly due to ethnic groups. Thus, our dataset is structured as a four wave panel, which includes the time invariant ethnic fractionalization variable and past immigration dummy. In our empirical analysis we use the common methodology of Seemingly Unrelated Regressions (SUR), for two specific reasons. First of all, it allowed us to be comparable with existing findings such as Easterly and Levine (1997) and Arcsine et al. (2003). Secondly, and more importantly, a SUR displays a clear advantage over a OLS regression, including fixed and random effect panels, for this kind of growth regression analysis. In particular, this method allows for country random effects to be correlated across decades and thus yields more efficient estimators than the alternative methods mentioned above. In other words, the effects of the independent variables on growth are allowed to be correlated within a country specific framework over time, which is a clear advantage over standard OLS estimates, fixed or random panel. Furthermore, SUR seems clearly more favorable since it allows for a more detailed picture than a simple OLS where effects are averaged over a 30 or 40 year horizon. SUR instead assigns a regression to each of the four decades, analyzing the impact of a specific variable measured at the start

of each decade on growth whereby this impact may be specified to differ between the decades or not. Moreover, like OLS, SUR allows for a time invariant correlation between the independent variable and growth, but the estimates are derived by incorporating decade specific correlations.

The second aim of this paper was to combine the two existing strands of literature concerning the possibly counteracting impact of ethnic diversity on economic performance. Thus, we needed to define what constitutes an immigration country in order to single out the alleged positive impact of ethnic diversity due to immigration. There are many possible definitions of the variable "immigration country". However, we are interested in countries which are ethnically heterogeneous according to our measure and this to a large part due to migration. A country like Argentina, for example, has a population consisting up to 97 percent of Spanish and Italian descendants. We are not interested in the typical Western European immigration country as in those countries ethnic fractionalization is extremely low even though positive trade linkages through migration prevail. Our definition therefore classifies a country as an immigration country if it was cliaracterized by settlement from a non-neighboring country, forced or free, within the past 300 years and the descendants of foreign settlers constitute a significant part (at least 5 percent) of the population today. This variable is unsuspicious in regard to endogeneity. Data is taken from the CIA World Fact book, where the group share of ethnic groups and there origins are listed. Table C.3 in the Appendix C lists the countries included in this definition.

To get a first idea, the methodology we used to test for different effects of ethnic diversity in immigration and non-immigration countries is a simple interaction term between the immigration Dummy and the variable "ethnic". The hypothesis being that, if a country is classified as an immigration country, we would expect a distinct positive or at least compensating impact of ethnic diversity on growth. We analyze the underlying mechanism of the distinct positive effect of the interaction term using SUR also.

Before we start to analyze whether ethnic diversity has a distinct effect on growth in immigration countries, we want to confirm and update the baseline analysis by including the 1990s. The results are noteworthy by themselves as they lend support to the original argument, namely, that high ethnic fractionalization leads to an adverse policy environment, but also show some differences. Table 1 shows the results of the updated data analysis.

The adverse impact of ethnic fractionalization on growth via the policy environment is shown when comparing regressions {1} and {2} of Table 1, as the inclusion of variables measuring the quality of the policy environment and public good provision renders the negative impact of «ethnic» to insignificance and strongly reduces the size of the coefficient.

If we now include data up to 1999, the following changes can be observed. First of all, if we concentrate on specification, it confirms and strengthens the original findings that ethnic fractionalization has a negative impact on growth as the results remain almost unchanged in terms of magnitude and significance. However, the coefficient of the Dummy for Sub-Saharan Africa gains in magnitude and significance. This hints at the continuing diverging growth experience of this region and the problem observed first by Easterly and Levine that the model cannot fully explain this diverging growth trend, even though high ethnic diversity is one of the main characteristics of this region.

The significance and magnitude of the other coefficients show not much variation. It is interesting that schooling becomes insignificant once we include the 1990s and telephone per thousand people. One possible explanation is that the variation of schooling has strongly declined in the 1990s and that physical and human capital infrastructure is highly correlated for all decades, but particularly in the 1990s. We find that the difference between the minimum and maximum value of the "log of 1 + average years of school attainment" dropped from 2.29 in 1960 to 2.09 in 1990. In the 1960s the correlation co-efficient between the level of schooling and telephones per thousand people takes a value of 0.83, for the 1990s it has increased to 0.89. 7 However, the most important finding is, once we include

data for the 1990s, that we find a remaining effect of ethnic fractionalization on growth, even after the inclusion of the policy variables. The effect of ethnic fractionalization remains significant at the 1 percent level, if we do not restrict the co-efficient to be the same across decades.

This must be due to the fact that ethnic diversity has gained a bigger impact on growth in the 1990s. To further validate the finding, we ran a separate regression for each decade to assess whether the impact of our variable "ethnic" increased between the 1960s and the 1990s. The results indicate that this is indeed the case as the only decade in which «ethnic» has a negative significant impact, even after the inclusion of the policy variables, is the 1990s. For all other decades the impact of "ethnic" in the extended regression is not statistically different from zero. The findings are shown in Table 1.

Moreover, we ran a completely unrestricted version of our SUR model, which means that we loosened the restriction that co-efficient have to be the same across decades for all variables except the decade dummies. The results are shown in Table C.1 in Appendix C. According to the adjusted R-squared, this model can explain growth variations the best. The regression clearly shows that policy variables have very distinct effects in different decades, that conditional convergence can only be found in two decades, and that ethnic fractionalization has a sizeable impact on growth in the 1990s besides the policy variables. Therefore, we may well conclude that the model proposed by Alesina et al. (2003) is incomplete.

We tested several other models to explain the negative impact of ethnic fractionalization on growth in the 1990s. One hypothesis is that the 1990s witnessed an increased importance of good governance on growth. When including the Kaufman-Kraay-Zoido-Lobaton-Indicator in our regression the variable «ethnic» becomes insignificant (see Table C.2 in Appendix C). Ethnic fractionalization may lead to inefficient «identity» politics instead of efficient «performance» politics (Collier, 1998). The index measures governance in the dimensions graft, rule of law, voice and accountability, political instability and

violence, government effectiveness, and regulatory burden. Governance seems to have gained importance for growth in the 1990s. This may partly be explained by the withdrawal of influence by the two superpowers from many regions of the world with the end of the Cold War. This increased importance of governance on growth is confirmed in Table C.2 in Appendix C which shows that governance, as measured by KKZ, has only a significant influence on growth in the 1990s.

Table 1 – 1990s Effect.

	Growth rate 1960–1999
Variable	-0.077
Dummy for the 1960s	-0.070
Dummy for the1970s	-0.088
Dummy for the1980s	-0.079
Dummy for Sub–Saharan Africa	-0.014
Dummy for Latin America and Caribbean	-0.014
Log of initial income	-0.041
Log of initial income squared	-0.004
Log of schooling	-0.004
Assassinations	-2.204
Financial Depth	0.012
Ethnic 1980	-0.005
Ethnic 1990	-0.023

Furthermore, if the impact of ethnic fractionalization is differing in the four decades, it might also differ between regions. The sample is therefore divided into two subgroups. As we do not have sufficient numbers of observations to analyze the model for Sub-Saharan Africa and Latin America separately, we combined both to one group including 85 countries. We compare this with «the rest of the world» including 75 OECD, Asian and some Arabic countries. The results are shown in Table 3.5. Strikingly, the results differ very much between the two sub-groups. Considering Sub-Saharan Africa and Latin America,

the impact of the variable measuring ethnic fractionalization, however, remains significant only at the 10 percent level after the inclusion of the policy variables. Contrarily, in the "rest of the world" the hypothesis of Alesina et al. and Easterly and Levine seems to explain the growth differences between countries rather well. Inefficient policies and low public good provision explain the diverging growth trends due to ethnic fractionalization. In these regions it seems to be indeed the case that the transmission channel of high ethnic fractionalization and its negative impact on growth can be explained by an adverse policy environment alone. Thus, the obtained results show that the negative impact of ethnic fractionalization on growth above and beyond the policy control variables prevails only in the 1990s and in the regions of Sub-Saharan Africa and Latin America.

The above approach, however, faces the problem that few observations remain when restricting the sample to Sub-Saharan and Latin-American countries. In order to verify the findings we included an interaction term for ethnic fractionalization in Sub-Saharan Africa. The results clearly show that the remaining negative impact of ethnic fractionalization on economic growth is captured in the last interaction term for ethnic fractionalization in Sub-Saharan Africa in the regression presented in Table 3.6.9. The variable «ethnic» which captures the residual effect of ethnic fractionalization in general, is no longer statistically significant. The overall effect of the interaction term is on average 0.03210, which implies that the inclusion of the policy variables did not change the negative impact of ethnic fractionalization on growth for Sub-Saharan African countries. These results confirm the hypothesis that the remaining negative impact of ethnic fractionalization on growth, even after the inclusion of policy variables, is in particular a Sub-Saharan phenomenon.

Given the above results, we wanted to test for the hypothesis that violent civil conflicts could explain this decade and region specific effect of ethnic fractionalization as existing research found already robust evidence that ethnic polarization explains civil conflict (Montalvo and ReynalQuerol, 2005). This hypothesis is conceivable as conflict incidences increased substantially between

the 1960s and the 1990s and are concentrated in particular in countries of Sub-Saharan Africa and Latin America, as confirmed by the Pori Database of the International Peace Research Institute Oslo. However, our empirical results cannot support the hypothesis above because the influence of the violent conflict variables on growth is not significantly different from zero and the variable «ethnic» does not lose significance. Thus, at least the variable specifications we used for violent civil conflicts cannot explain the remaining sizable negative effect of the ethnic fractionalization variable on growth after the inclusion of policy variables in the 1990s or for Sub Saharan Africa and Latin America. Again the effect of ethnic fractionalization in Sub-Saharan Africa is mitigated by the inclusion of governance in the restricted SUR model. The results are shown in Table 1 below.

To sum up, we find a remaining direct negative effect of fractionalization on growth in the 1990s and in Sub-Saharan Africa. The specific 1990s and Sub-Saharan Africa effect of fractionalization can be explained by bad governance and the consequential growth-hampering effect.

The second aim of this paper is to reconcile the two theoretical arguments of the different effects of fractionalization and immigration on growth presented in the first part of this paper. So far we have argued empirically that fractionalization of groups is problematic as it leads to conflicts of a political nature, hampering growth. Now, we hypothesize that countries in which ethnic fractionalization partially emerged because of settlers should also experience positive effects due to diversity and not only negative effects. We do not argue that in immigration countries models which explain inefficient policies and low public good provision due to ethnic fractionalization are no longer valid. We rather investigate whether positive effects of immigration also prevail and which effect dominates in a cross-country setting. Before turning to our empirical analysis of this issue, we would like to highlight some of our constraints in testing the hypothesis. First of all, to draw a clear definition of what constitutes an «immigration country», is less straightforward for our purpose. Secondly, the theory of co-ethnic networks is only tested superficially in our setting. Usually, the theory on co-ethnic networks is

tested by analyzing the relationship between the inflow of migrants and trade, using panel data. Ethnic fractionalization, however, is time-invariable and the networks we look at have been in existence since a long time. Clearly, it would be interesting to have a measure of ethnic fractionalization which varies over time, however, to construct such a matter is beyond the scope of this paper.

Utilizing the new dataset, we tested whether there is a distinguished effect of ethnic fractionalization on economic performance in countries which are ethnically diverse partly due to foreign settlement. The argument being that those countries which display high ethnic diversity, partly due to foreign settlement, might be capable to reap the benefits of such an increased diversity via increased trade. Our results indicate that our hypothesis is validated to some extent. Countries created by foreign settlement 14 seem to exhibit positive effects of ethnic fractionalization on subsequent growth. The coefficient of the interaction-term implies that the negative effect of ethnic diversity on long-run growth is more than mitigated. There is small positive net-effect in countries whose inhabitants are to majority descendants of foreign settlers. If the policy variables which measure the quality of governmental policy are taken into account, the interaction-term and dummy become insignificant.

However, we caution against over-valuing this result. This is mainly due to the fact that only very few countries can be considered here and therefore the result depends much on the inclusion of particular countries. These results leave the question of the channels through which ethnic fractionalization in immigration countries has an influence on long-run growth. It might be that immigration countries are especially exposed to conflicts over scarce resources in the political sphere and therefore inefficient policies that subsequently affect long-run growth negatively. We ran simple regressions using all policy variables. Interestingly, the settler country dummy shows a different, in fact positive significant correlation, with the quality of policy as confirmed by other research and probably due to the fact that settlers transferred their institutions.

It is of interest to investigate further whether a growth-enhancing effect of high ethnic fractionalization via a trade channel prevails in immigration countries. Trade, that is exports and imports as a share of GDP, increased dramatically between the 1960s and 1990s in most countries. Furthermore, the variation of trade between countries changed. We find no evidence of a positive relationship between ethnic diversity and trade in our settler countries. Ethnic diversity in settler countries is no significant determinant of foreign direct investments or exports. To conclude this section, we find clear evidence that ethnic fractionalization in «immigration countries» has a positive growth enhancing effect, which counteracts the measured negative effect.

In the end, it seems clear that the negative impact of ethnic fractionalization on growth remains significant and robust for Sub-Saharan Africa if we include the 1990s in our empirical analysis following the Alesina et al model. Interestingly, the transmission channels which explained how ethnic fractionalization negatively affects growth, namely via the policy variables specified, is less prominent in the extended analysis, as ethnic fractionalization remains a significant negative explanatory power in the growth regression for Sub-Saharan African countries even after the inclusion of the policy variables. Thus, the negative impact of ethnic fractionalization on economic growth cannot fully be explained and there might be some other transmission channels which link high ethnic fractionalization to poor growth performance than the ones investigated and specified so far. In particular, the different results of the different regions in the world suggest that Sub-Saharan Africa does not only face an adverse policy environment, but that high ethnic fractionalization remains an obstacle to growth, especially in the 1990s. We tried two different channels to explain this increased negative impact of ethnic fractionalization on growth in the Sub-Saharan African setting of the 1990s, namely, a increased role of good governance as measured by the KKZ indicator and an increased number of violent conflicts. We managed to show that this increased negative impact of ethnic fractionalization in the 1990s in Sub-Saharan Africa can be explained by the KKZ index which is a different measure of

governance quality and confirms the hypothesis of growing importance of sound governance to facilitate growth. However, we could not confirm the hypothesis that an increasing number of incidences and severity of violent civil conflicts could explain the remaining negative impact of ethnic fractionalization above and beyond the policy control variables.

Moreover, as already mentioned above, there might be a further conceivable transmission channel of high ethnic fractionalization on growth, namely income inequality and especially segregation. Especially, if one considers a longer time span, very high income inequality, which might be a result of high ethnic fractionalization and segregation in connection with badly designed institutions, might lead to a reduction in growth via the suboptimal provision and accumulation of factors of production, such as physical and human capital. This explanation gains validity especially in countries with imperfect markets. Even more interesting would be a measure for income inequality between ethnic groups. A further inquiry into this matter seems very much worthwhile, but rather difficult to facilitate due to the limitation of useable data sources.

Concerning migration, ethnic fractionalization and growth, this paper suggests that there is a mitigating positive impact in countries which are characterized as settler countries. This gives some empirical validation to the co-ethnic network theory in a cross-country setting. Promising future research in this field should focus on the network enhancing trade effect of immigration in a country cross-section framework, in order to strengthen the argument above and confirm the case studies' findings on co-ethnic network theory in a wider setting. However, given the data availability it might be difficult to prove the point empirically.

In conclusion, this paper confirms and strengthens the initial assessment that ethnic fraction-allocation is one of the key proxies for a negative policy environment and subsequent poor growth performance. However, it also illustrates that our understanding of the impact of ethnic fractionalization on growth is far from complete, other dimensions and transmission channels of ethnic

fractionalization on growth, in particular in Sub-Saharan Africa, seem to be present, namely, bad governance. Moreover, in settler countries ethnic fractionalization is not necessarily a «problem», but possibly a growth enhancing situation via co-ethnic trade networks. Furthermore, we put emphasis on the findings by Easterly (2001) which show that democratic institutions and low inequality can resolve ethnic conflict in the political sphere. Thus, countries with high ethnic fractionalization and a strong income-divide between groups face the danger, but not necessarily the consequences of growth retardation. Hence, the challenge ahead, in particular in Sub-Saharan Africa, is the full participation of all ethnic groups in the economic development process and the blurring of ethnic ties, which might be a way to overcome this serious obstacle in many developing countries.

With the development community dedicated to meeting the Millennium Development Goals (MDGs), policy research has begun to focus on rigorous testing of models that explain MDG outcomes. Most basic, of course, is the goal to reduce poverty and hunger by half. Many "narrative" pathways out of poverty exist, but there are few quantitative models that have been tested over significant historical periods. One reason for this shortage of empirical results is a simple lack of data.

However, the number of panel data sets is growing and empirical pathways out of poverty are now being described. We contribute to this effort by empirically analyzing the pathways out of poverty in Indonesia during a period of economic and political turmoil. Since most poor people live in rural areas, special attention is devoted to rural pathways out of poverty. The generally positive results, even during this difficult period, hold broader promise for achievement of the MDGs.

Most of the world's poor live in rural areas and are primarily engaged in low productivity, mainly agricultural, activities. Thus, the main pathway out of poverty will be connected to increases in the productivity of the rural poor, whether these increases are realized in farming, rural non-farm enterprises, by rural-urban migration or a combination of all of the afore. One strand of recent and past

literature argues that from an empirical perspective growth originating in the agricultural sector has tended to be more "pro-poor" than growth originating in the industrial or service sectors (Mellor, 1976; Ravallion and Datt, 1996; Ravallion and Chen, 2004; Timmer, 2002). Indeed, agricultural growth has often been an important ingredient in the formula that connects economic growth to the poor (Ravallion and Huppi, 1991; Ravallion and Datt, 1996; Ravallion and Chen, 2004; Sumarto and Suryahadi, 2003; Fan, Zhang and Zhang, 2004; Fan, Thorat and Rao, 2004; Timmer, 1997, 2004) and separate reviews by Thirtle, et al. (2003) and by Majid (2004) confirm the strong empirical link between higher agricultural productivity and poverty reduction. Moreover, the current interest in this topic is well documented by the forthcoming World Development Report «Agriculture for Development» (2008).

However, an equally important and connected debate is concerned with the role of rural non-farm activities in rural income growth and rapid poverty alleviation. This is particularly true, as in most developing countries rural non-farm output is now accounting for roughly half of rural income. Non-farm activities can be most conducive towards poverty reduction, especially in the absence of physical infrastructure and human capital constraints (Datt and Ravallion, 1996, 1998a&b, 2002a). Moreover, rural non-farm enterprises are likely to be pro-poor, as they tend to use factors of production at their real opportunity costs to the economy, so that they are often labour-intensive in nature, reduce underemployment, help to smooth income seasonally and bid up local wages (Lanjouw and Lanjouw, 2001).

These papers on rural poverty reduction are part of a broader literature which attempts to understand the nature of pro-poor growth, which inevitably must encompass the rural poor and their potential pathways out of poverty (Ravallion 2004, World Bank, 2004a, 2006b). Thus, they try to identify whether agriculture productivity is the main driver behind rural poverty alleviation. Moreover, do non-farm enterprises encompass predominantly low productivity, supplementary and insurance activities or are they a potential source of dynamic growth and poverty alleviation in rural areas? Most of the above papers suggests that productivity gains

in both, agriculture and non-farm activities, matter. Furthermore, the rural non-farm activities seem to fulfill both important functions, namely, supplementary insurance activity and source of rural productivity growth.

However, whether the farm or the non-farm sector has been the most important pathway out of poverty is ultimately an empirical question, as is the relative importance of inter-sect oral transitions and rural-urban migration. The answer for any given country depends both on its factor endowments as well as on its policy and institutional history. We therefore explore the empirical evidence concerning the pathways out of poverty for Indonesia over the last decade.

Indonesia provides an interesting case study for several reasons. First, between the late 1960s and the mid-1990s it experienced high and sustained economic growth, pulling millions of people out of poverty, followed by a severely felt, but rather short, financial crisis in the late 1990s which hit Jakarta the most and was a period of economic hardship for many. Second, Indonesia is large enough to display spatial and sect oral diversity, as reflected in the large-scale household panel dataset - the Indonesia Family Life Survey (IFLS), which allows a detailed investigation of the characteristics of households that move in and out of poverty. This paper draws on this Indonesian experience by using the panel household survey data from IFLS to assess the importance of changes in sector and location in driving changes in individual incomes and household poverty over time. We find that urbanization has been rapid, but only a small part is due to actual physical migration of workers and households while most of it is due to local economic agglomeration and subsequent re-classification of former rural areas. In rural areas, a gradual diversification of economic activities is talking place, characterized by greater reliance on non-farm sources of income. This process of rural diversification reflects greater opportunities for growth in a dynamic non-farm economy than in agriculture per se, although increases in agricultural productivity have remained a very important path out of poverty for the poorest. Moreover, rural non-farm activities can be a stepping stone out of

poverty in rural areas and towards urban non-farm employment, which in turn, is the least vulnerable sector regarding poverty transition.

Concerning the determinants of income and poverty change our analysis yields broad support for the idea that movement to the non-farm sector increases income growth and makes an exit from poverty more likely. Understandably, less support is gathered for the importance of migration, although local level migration does appear to boost income growth, particularly for the poorest, while longer range district and provincial movements are associated with an increased chance of exiting poverty. Furthermore, age, sex and education all have a strong positive influence on income growth, whereas certain elements of the demographic composition of the household, most notably the household size and the number of young children have a negative effect. Poor schooling and large household size are also key barriers to exiting poverty, additionally a broader range of individual and demographic characteristics contribute towards income vulnerability. Moreover, geographic aspects matter. The crisis hit people in urban areas harder than those in rural areas. As a result, our analysis shows that being in an urban area substantially reduces the probability of exiting poverty once controlling for other factors.

The paper is structured as follows: Section 4.2 describes the conceptual framework, the data and the poverty line; in addition, it reports the descriptive IFLS statistics. Moreover, Section 4.3 provides a decomposition of income growth and poverty transition according to sector and location utilizing transition matrices. Furthermore, Section 4.4 analyses the micro-determinants of income and poverty changes using the IFLS panel data and estimates our «naive» pathways out of poverty model, before we conclude with implications for policy in the final section.

To explore the microeconomic determinants of exiting poverty requires a panel data set over a reasonable length of time. There are two large national household surveys in Indonesia SUSEN AS and IFLS. The SUSENAS data set is the official national representative Indonesian socioeconomic household dataset, which has a slightly better coverage, but lacks panel data structure. Hence, we

decided to use the Indonesia Family Life Survey (IFLS), which has a panel data structure and was first conducted in 1993 (IFLSl) and then again in 1997 (IFLS2), 1998 (IFLS2+) and finally in 2000 (IFLS3). For IFLSl, 7,224 households were interviewed with data collected on 22,000 individuals in those households. This sample is representative of about 83 percent of the Indonesian population in 13 provinces. In 1993, IFLS did a face-to-face interview with the household head, the spouse, a sample of their children and a sample of other household members. In 1997, 94 percent of IFLSl households were re-interviewed consisting of all 1993 «main» respondents and all 1993 household members born before 1967.3 In 2000, IFLS managed to re-contact 95.3 percent of IFLSl households interviewed: all 1993 «main» respondents, all 1993 household members born before 1967 and a sample of other 1993 household members. The sample size in 2000 was 10,400 households and 39,000 individuals.

Our main aim is to understand to what extent sect oral and lavational shifts determine productivity /income change and thus movements out of poverty. For this reason, we restrict the panel used for our analysis to the individuals who were between the ages of 15 and 55 in 1993 and were working in both years. For these individuals we have an estimate of their income and household expenditure, individual, household and community characteristics, as well as whether they shifted the sector of employment and if they moved location. Hence, we have a highly detailed panel dataset with the required information for a representative sample of the working population in 1993.

There are two main caveats associated with our choice of sample. First, the sample used for the analysis does not account for the unemployed or for newcomers to the labor market after 1993. Thus, if a key pathway out of poverty is the entrance into the labor force of people who were out of the labor force in 1993, we will not capture this effect. Similarly, if individuals fall into poverty as a result of leaving the labor force (for example through death, illness or old age) this will not be observed. If the aim of our study had been to capture all poverty dynamics, these would have been serious omissions. However, our aim is to understand the

extent to which changes in sector and location of existing workers drives poverty entrances and exits. Moreover, evidence from other developing countries suggests that, although entrances and exits from the labor force can be important, it is usually the changes in income status of existing working household members that drives most poverty entrance or exit (McCulloch and Cao, 2007).

Second, we focus on the individual earnings of main household members. However, poverty is clearly a phenomenon that is experienced at the household level since, in most households, there is some pooling of resources. Thus, individuals were classified as poor or non-poor based on the per capita household expenditure of their households in the respective years. Hence, it is possible that the poverty transitions we observe may be due to changes in the incomes of household members that are not in our (or the IFLS) sample or simply change in household composition. However, although the IFLS sample did not interview every member of the household, the method used means that it is likely to have captured almost all the significant sources of income in the household. Moreover, the vast majority of individuals in our sample are the sole or main income earner of their household, so changes in their earnings are likely to have a much larger impact on poverty transitions than changes in the earnings of other household members. In fact, the individual earnings used for the analysis account on average for 70 and 67 percent of their actual specific total household income in 1993 and 2000 respectively. The corresponding median is even higher at 74 and 77 percent. Thus, the individual earnings in our sample account on average for 70 percent of household income. With these caveats in mind, our sample seems adequate for exploring the questions asked.

The poverty line used for all the analysis below is derived from the 2000 BPS poverty line.6 For 1993 BPS also calculated a poverty line, but implemented a methodology which is rather different than that used for the calculation of the 2000 poverty line. To ensure that the poverty line in 1993 represents the same purchasing power as that in 2000, the easiest approach would be to take the 2000 poverty line and deflate it using the provincial consumer price index (CPI)

published by BPS. However, the published CPI uses a set of weights for its sub-indices which are heavily weighted in favor of wealthy consumers in urban areas. This bias in the CPI is particularly inappropriate for our analysis. In particular, since food prices rose more quickly than other prices over the period and the poor have a much higher share of their expenditure on food than the better off, the published CPI understates the inflation experienced by the poor over this period. When this downward-biased CPI is used as a deflator, it produces a poverty line that is too high in 1993 and implausibly high measured levels of poverty. For this reason we re-weighted the individual commodity group indices from the CPI published for each province using the expenditure shares for each commodity group of the bottom quintile in 1996. All subsequently reported real figures are deflated utilizing the method described above. This poverty line is applied to real per capita household expenditure in order to classify a household or the individual income earner as poor or non poor for both years respectively.

Table 4.1 shows some of the key variables from the panel for 1993 and 2000. For the individual variables, the average age of the panel obviously rose as did the years of schooling, indicating that some panel participants completed further schooling in the intervening years. Interestingly, 62 percent of individuals worked in the non-farm sector, and this share did not change over the period. The mean real individual income in the sample rose between 1993 and 2000 by 15.2 percent. However, as is often the case with income data, the mean is distorted by high outliers the median income is a little more than half mean income in both years-but it also grew by a similar amount, 16.4 percent, over the 7 year period. Working hours remained roughly constant, while there was a small decline in the share of individuals who were employees. It is important to remember that this 7 year period experienced considerable economic and political turmoil, and the economy had not recovered fully from the 1998 crisis when the 2000 interviews were held.

Concerning the household variables, a substantial increase of 8 percent occurred in the share of households classified as living in urban areas between the

two years. In 1993, 32 percent of respondents lived in urban areas. In 2000, 40 percent lived in urban areas. However, this large change in only 7 years is partly misleading and can hardly be reconciled with the also occurring «reverse migration» of several million urban workers to rural areas during the economic crisis in 1998 and thus overestimates "true" rural-urban migration. One explanation for this large increase in the percentage of people in urban areas is the reclassification of rural villages as urban over the observation period, as at least 3.26 percent of individuals had been reclassified as urban by 2000 without moving location.10 Thus, we used the rural/urban classification in 1993 to determine rural/urban status throughout our analysis in order to avoid the confusion between re-classification (possibly even due to successful non-farm development) and true rural-urban migration.

Table 2 – Descriptive Statistics for IFLS 1993 and 2000

Variable N = 4797	Mean in 1993	Media in 1993	Mean in 2000	Media in 2000
Individual Variables	–	–	–	–
Age	37.3	37	45.2	45
Years of Schooling	5.7	6	6.2	6
Non – farm	0.62	1	0.62	1
Real individual income	179.746	93.145	207.021	108.453
Working hours per month	213.5	207.8	211.7	207.8
Employee	0.47	0	0.44	0

Demographic changes are also clearly illustrated: the average household size increases by one over the period of the panel with a shift towards more adults in the typical household as the children grow up. Households remain overwhelmingly

male-headed in both periods. The growth in individual incomes of the panel members is not reflected in similarly high growth in the per capita expenditures of the households from which they come, which is most likely due to increased household size. Mean real expenditure barely rose over the period, but what growth there was took place at the bottom end of the distribution, with the median per capita expenditure rising by 10.7 percent. This most likely implies that wealthier households were more willing and/or capable to incorporate another household member during times of crisis. However, as a result of the steepness of the distribution near the poverty line this relatively modest increase in the per capita expenditure of the bottom percentiles resulted in a significant fall in poverty from 27.7 percent to 23.6 percent.

2.1 Vocabulary Notes

Adjustment mechanism – регулировочное устройство.

Balance of payments surplus – положительное / активное сальдо платежного баланса.

Bretton Woods Agreement – Бреттон-Вудское соглашение.

Contractionary bias – ограничительная тенденция.

Current account deficit – дефицит текущего баланса.

Fallacy of composition – ошибочная композиция.

Financial flows – движение финансовых потоков.

Flexible exchange rates – гибкий / плавающий валютный курс.

Foreign exchange reserve – валютный резерв.

Global imbalance – глобальный дисбаланс.

Global lender – мировой кредитор.

Global monetary system – глобальная валютная система.

Gold–dollar exchange standard – золотовалютный стандарт.

Inherent instability – собственная неустойчивость.

Lender of last resort – кредитор последней инстанции.

Net asset position – стоимость чистых активов.

Net surplus – накопленная / нераспределенная прибыль.

Pro-cyclical swings – проциклические колебания.

Renminbi – юань.

Re-regulate finance – перерегулирование финансов.

Secure stores of value – средство сбережения.

Special drawing rights – специальные права заимствования.

Specific asset – специфические активы.

The dual gold-dollar exchange standard – стандарт золотодолларового обмена.

The monetary system – денежно-кредитная система.

Volatility of finance – финансовая неустойчивость.

2.2 Introduction (p.45-46)

Since the collapse in the early 1970s of the dual gold–dollar exchange standard established under the 1944 Bretton Woods Agreement, the global monetary system has been primarily based on the use of fiduciary US dollars as means of payment and assets denominated in dollars as the major form of foreign exchange reserves. Although other characterizations are possible, this system can best be termed a 'fiduciary dollar standard'. Since other national and regional currencies (the euro, in particular) compete with the dollar for this international role, the system can also be described, but only secondarily, as one in which alternative fiduciary currencies from a few powerful economies compete with one another as reserve assets (secure stores of value) and international means of payment. Most of these currencies are from developed countries, with the exception of a recent entrant into that club, the renminbi. Flexible exchange rates among competing reserve currencies is another feature of the system—with the renminbi being the least flexible among them.

The reconstruction of global financial markets after their collapse during the Great Depression, which took off with the development of the Eurodollar market in the 1960s, added an additional feature, which is more the result of the functioning of global financial markets, but has profound implications for the monetary system: the strong pro-cyclical swings and outright volatility of finance, and particularly of financial flows across countries. This feature has had strong effects on emerging and developing countries (referred to simply as developing countries henceforth), which are subject to particularly sharp procyclical swings in financing and associated macroeconomic risks. This has also been true of peripheral Europe in recent years.

This is combined with the additional risks associated with the fluctuations of international trade. Some pro-cyclical features of international trade, particularly commodity price fluctuations, have old roots, but may have been accentuated in recent years by the financialization of commodity futures markets. In the absence

of a global lender of last resort, the risks generated by pro-cyclical finance and trade created a defensive or precautionary demand for foreign exchange reserves by developing countries: the mechanism that has come to be called self-insurance, which also has important implications for the global monetary system.

As argued in this chapter, the current global reserve system is both unstable and inequitable. Like all preceding systems, it lacks mechanisms to mutually offset the balance-of-payments surpluses and deficits of different economies (i.e. global imbalances) without adversely affecting world economic activity. Although most of these macroeconomic effects are contractionary, particularly during crises, the fiduciary dollar standard can also generate expansionary effects during global business upswings. Conventional terminology refers to these effects as the global deflationary and inflationary biases of the system, but since their stronger effects are on world economic activity (i.e. on the intensity of the world business cycle) rather than on prices, I refer to them here as contractionary and expansionary biases, respectively.

The deficiencies of the global monetary system were at the centre of reform proposals formulated after the outbreak of the 2007–9 North Atlantic financial crisis. They included the proposal by the governor of the central bank of China to gradually eliminate the role that the dollar plays at the centre of the system (Zhou 2009). In turn, the 2008 Stiglitz Commission, convened by the president of the UN General Assembly, proposed that reforms of the global reserve system should be at the centre of the global reform agenda (United Nations 2009). The 2010 Palais Royal Initiative, convened by Michel Camdessus, Alexandre Lamfalussy, and Tommasso Padoa-Schioppa, also presented a series of reform proposals (Boorman and Icard 2011). However, in open contrast to the efforts to re-regulate finance, actions in this field remained limited and the reforms of the international monetary system did not fully enter into the Group of 20 (G20) or International Monetary Fund (IMF) agendas.

This chapter examines the major problems of the reserve system and analyses the particular role of special drawing rights (SDRs), the only global currency that has been created. It then explores alternatives to reform the system.

2.3 Major Problems of the Current System (p. 47-59)

The current reserve system has three fundamental flaws. The first is that it suffers from the contractionary bias characteristic of any system in which the burden of macroeconomic adjustment falls on deficit countries. This is the issue emphasized by Keynes (1942–3) in the debates that preceded the creation of the Bretton Woods institutions. I will refer to this flaw as the asymmetric-adjustment problem.

The second relates to the instabilities associated with the use of a national currency as an international currency. As this was underscored by Robert Triffin in the debates of the 1960s, it came to be called the Triffin dilemma. As we shall see, however, the nature of this problem was significantly transformed by the transition from the gold–dollar exchange standard to the fiduciary dollar standard.

As the accumulation of foreign exchange reserves by developing countries as self-insurance basically involves foreign exchange reserves, the system forces a net transfer of resources from those countries to the major developed economies that issue the global reserve currencies. This highlights the third flaw of the system: the inequity bias which, as pointed out by the 2001 Zedillo Commission, created as part of the preparations for the 2002 Monterrey Conference on Financing for Development, is a form of reverse aid (United Nations 2001).

Furthermore, the inequities of the system have increased with the huge accumulation of foreign exchange reserves in the developing world over the past two decades as a result of the need for self-insurance generated by procyclical capital flows to developing countries and the lack of adequate collective insurance to manage balance-of-payments crises. However, although such reserve accumulation may be a rational response of each developing country to the problems posed by the global system, it generates 'fallacy of composition' effects

that contribute to global imbalances, and thus to the potential instability of the system [95]. As the three flaws follow a historical sequence, it is appropriate to discuss them in terms of the historical debates on the design of the international monetary system.

2.3.1 The Asymmetric-Adjustment Problem

As already noted, the first of these problems was highlighted by Keynes during the debates that surrounded the creation of the IMF. The fundamental problem is that the current system—and indeed, according to Keynes, all international monetary systems—places the burden of macroeconomic adjustment on countries running balance-of-payments deficits. These countries have to adjust either because they lack adequate external financing or because they regard as unsustainable or undesirable the associated increase of their debt ratios or, more generally, their net liability position vis-à-vis the rest of the world. Surplus countries may also face pressures to adjust, particularly those associated with the domestic expansionary effects that balance-of-payments surpluses generate. But the external pressures to adjust that they face are weaker or even non-existent. This asymmetric burden of adjustment generates, in turn, a global contractionary bias. This bias is particularly strong during global crises, when the lack of adequate financing forces deficit countries to adjust.

One of the best historical examples of asymmetric adjustment is that experienced by the eurozone in the years following the outbreak of the North Atlantic financial crisis.

Since Keynes' (1942–3) proposal to create a more symmetric system by establishing an International Clearing Union was not accepted, the Bretton Woods system was born with this inherent flaw. But even a system in which all deficit countries can automatically finance their deficits may still face a contractionary bias insofar as macroeconomic policy authorities respond asymmetrically to the building up of net external liability compared to net external asset positions.

2.3.2 The Triffin Dilemma

Keynes' analysis implied that the most fundamental problem of any international monetary arrangement is the operation of the adjustment mechanism in the face of global imbalances, rather than the specific asset that serves as the international currency (Kregel 2009). Nonetheless, the role of the dollar at the centre of the system also generated problems, which were extensively debated in the 1960s and came to be known as the Triffin dilemma. The essential issue, as Triffin emphasized, is that the use of a national currency as the key international reserve currency generates an inherent instability in the system. Given the importance that it has assumed in recent discussions, it is worth quoting the original formulation at length:

[...] reactions of the outer countries [tend to generate] generalized waves of confidence or diffidence in the future convertibility and stability of the dollar. This makes the position of the center country highly precarious in the long run. It can, in the early phases of the popularity of its currency as a reserve instrument, finance much larger and more persistent deficits than it would be able to incur otherwise. If, however, the center country uses its leeway in this manner, the time is bound to come when other countries will shift from dollar hoarding to dollar dishoarding [...].

On the other hand, if the United States restores full balance in its external transactions, it will cease to feed a world reserve pool [...].

In either case, the use of a national currency as a prime feeder of reserve assets for the rest of the world is bound to introduce a highly erratic and unpredictable factor both in the much vaunted mechanism of balance-of-payments adjustment and in the actual pace of growth—or contraction—of the world reserve pool.

The discussions of the 1960s focused on ways to create, in amore orderly (or, to use the preferred termat that time, less 'capricious')manner, an adequate supply of world liquidity free from the instabilities generated by the Triffin dilemma. The main reform was the creation of a global fiduciary asset—the SDRs—which was expected to become themain global reserve asset, an objective

that did notmaterialize, and the worldmade a de facto transition to the fiduciary dollar standard.

The joint evolution of the US current account deficit and the real exchange rate of the major reserve currency has been reflected in three dominant patterns since the mid-1970s: (1) a long-term tendency towards a deterioration of the current account balance; (2) strong cycles of both the current account and the real dollar exchange rate; and (3) although exchange rate fluctuations have played an important role in determination of the US current account, major corrections of US deficits—around 1980 and 1990, and in 2008—have been associated with US slowdowns or recessions which, in turn, had major contractionary effects on the world economy.

What this implies is that the fiduciary dollar standard did not eliminate the Triffin dilemma but rather changed its features. The United States is now able to run 'much larger and more persistent deficits than it would be able to incur otherwise' [95], without facing the constraints that the convertibility of dollars for gold posed until August 1971. Indeed, US current account deficits became the rule rather than the exception, a fact that was soon reflected in that country's transition, in the late 1980s, from a net asset to a net liability position vis-à-vis the rest of the world. The implicit assumption of the new system was, of course, that flexible exchange rates would take care of adjusting the supply and demand for dollars. To the extent that the United States did not come to regard the actual or probable weakening of its currency as a problem to be corrected, this made US monetary policy even more independent than during the era of the gold–dollar exchange standard. This also implied that other countries came to be even more dependent on the effects of the monetary policy of the main reserveissuing country, which has generally been managed with no regard to its spillovers on the rest of the world.

Interestingly, and contrary to Keynes' views, the transition also implied that, given the reduced constraints on US balance-of-payments deficits, the fiduciary dollar standard could actually have an expansionary rather than a contractionary bias, particularly during upswings in the business cycle. More generally, it has

generated unprecedented—and, indeed, increasing— volatility in both the US current account and the real dollar exchange rate. As a result, the dollar has increasingly lost what, in fact, is the essence of a good international reserve asset: a stable value. A major implication of the strong fluctuations in the US deficit is, of course, that the generation of global liquidity has become even more erratic (or 'capricious') than under the original Bretton Woods system.

It should be emphasized, in any case, that the length and intensity of the most recent and longest phase of US current account deterioration, which took place during the 1990s and the first half of the 2000s, had determinants that go beyond the US economy. In particular, although the appreciation of the dollar in the second half of the 1990s helps explain the renewed deterioration in the current account, the magnitude of this deterioration was undoubtedly associated with the role of the US as the 'consumer of last resort' during the major crisis in emerging markets that started in East Asia in 1997. In this global context, the 2001 US recession only had minor effects on its current account. Furthermore, the deterioration of this deficit up to 2006, despite the gradual but strong depreciation of the dollar that started in 2003, can at least partly be explained by the fallacy of composition effects of self-insurance in the developing world.

The transition of the United States from a net investment position into a net liability position was, of course, an unprecedented feature for the country at the centre of the global reserve system, and is in sharp contrast to the conditions that characterized the United Kingdom when it was the centre of the system prior to the First World War. For many years, this has generated fears that official and private agents may be unwilling to continue to accumulate dollar assets. In the words of Mateos y Lagos, Duttagupta, and Goyal, 'growing demand for safe (Treasury) assets would lead to indebtedness, which in time could undermine the confidence that is the basis for its reserve asset status'. These risks were also at the centre of the views expressed by the governor of the central bank of China in 2009. In contrast to this perception, the 'Second Bretton Woods' literature argued that growing US deficits were matched by a growing demand for dollar reserves by

mercantilist developing countries, a fact that made the system stable. The North Atlantic financial crisis showed that dollar assets continue to be perceived as the safest assets. However, this has nothing to do with the Second Bretton Woods literature, but with the fact that the dollar and, particularly, US Treasury securities continue to be the most liquid assets in the world. This was reflected at the beginning of the North Atlantic crisis in the appreciation of the US dollar.

From the point of view of the United States, its position at the centre of the current global reserve system has had both positive and negative implications. On the positive side, the most important advantage is that it does not face the constraint of dollar–gold convertibility, and thus enjoys greater monetary independence. As it has accumulated important net liabilities with the rest of the world, another interesting advantage is that dollar depreciation generates a positive wealth (real balance) effect, as such a change increases the value of foreign assets owned by US residents, while their liabilities remain unchanged. This also implies, however, that depreciation of the US dollar has a weaker effect in correcting its current account deficit, as the wealth and relative price effects of such depreciation run in opposite directions. On the negative side, the fact that US current account deficits are necessary to provide a net supply of dollar assets to the rest of the world implies that it does not entirely capture the benefits of its expansionary monetary and fiscal policies.

The Triffin dilemma thus assumed new forms but did not disappear. In the words of Padoa-Schioppa , 'the stability requirements of the system as a whole are inconsistent with the pursuit of economic and monetary policy forged solely on the basis of domestic rationales in all monetary regimes devoid of some form of supranationality'. Expressed in different terms, the world economy is hostage to the monetary policy and the balance-ofpayments cycles of the major reserve-issuing country.

2.3.3 Growing Inequities of the System and their Instability Effects

The accumulation of foreign exchange reserves generates a transfer of resources from developing countries to the United States and other reserveissuing

countries. This feature, which is the essence of the inequity bias of the system, was built into its initial post-war design. However, these transfers remained limited as long as developing countries' foreign exchange reserves were not sizable. This was true up to the 1980s, when the foreign exchange reserves of low-income and middle-income countries (i.e. developing countries) were only slightly larger as a proportion of their gross domestic product (GDP) than those of high-income countries.8 The major exceptions at the time were the (Persian) Gulf countries and other high-income non-OECD (Organization for Economic Co-operation and Development) countries, a group dominated by Hong Kong and Singapore.

In contrast, over the past quarter century, foreign exchange reserves of developing countries have boomed and diverged from those of industrial countries. China has been the most aggressive and by 2002 it already held reserves equivalent to 20 per cent of its GDP, which increased to over 40 per cent by 2007; this country's reserves peaked at 48 per cent of GDP in 2009 before falling in recent years, to 31 per cent in 2015. By 2007, middle-income and low-income countries, excluding China, also held reserves equivalent to between 19 and 27 per cent of their GDP, depending on the specific category of countries studied; although they have fallen in recent years, particularly for low middle-income and low-income countries, they remain at levels significantly above those that were typical until the late 1990s. Reserve accumulation did pay off, as reflected in particular in the reduced vulnerability of most parts of the developing world during the North Atlantic financial crisis. In contrast, the trend for high-income core OECD countries remained fairly constant at around 2 to 3 per cent of their GDP, with the major exceptions of Japan and high-income non-OECD countries. After the North Atlantic crisis, the gap between developing countries and OECD countries narrowed somewhat, because of some reserve accumulation in developed countries and a reduction in the reserves as a proportion of GDP held by China and some categories of developing countries. Also, with the strong reduction of Chinese reserves since mid-2014, its reserves relative to GDP have been approaching those of other middle-income countries.

The major waves of foreign exchange reserve accumulation thus followed the two major financial crises experienced by the developing world in the post-Second World War period: the mainly Latin American debt crisis of the 1980s and, even more strongly, the broad-based crisis of emerging market countries that started in East Asia in 1997 and then spread to Russia, Latin America, and Turkey. In this sense, reserve accumulation can be seen as a response by developing countries to the risks generated by increased openness—opening up of trade, domestic financial liberalization, and capital account liberalization—and particularly, as a way of protecting themselves against global financial instability. It also reflected the lack of appropriate global institutions tomanage crises in developing countries and the particular deficiencies associated with the only form of collective insurance available: conditional IMF lending.

There are three competing explanations for this increase in the demand for reserves by developing countries. The first, which is the most compelling, is that reserve accumulation is the result of self-insurance in a broad sense, which includes what I will call the 'counter-cyclical motive'. This interpretation receives its most important support from the fact that the major waves of reserve accumulation have followed the two most important financial crises in the developing world.

A second explanation is provided by the aforementioned Second Bretton Woods literature. According to this school of thought, the basic explanation for reserve accumulation is mercantilism, particularly by East Asian countries that undervalue their exchange rates as part of their export-led strategies. A reinforcing factor may be the lack of appropriate mechanisms for exchange rate coordination in export-led economies, which generates incentives to keep exchange rates competitive—a point made by Sakakibara (2003) in calling for increasing macroeconomic policy coordination in East Asia. One implication of this view is that, for these countries, the benefits of stable and competitive exchange rates exceed the costs of reserve accumulation. An implication at the global level is that,

for the same reason, these countries are willing to continue financing the US current account deficit.

The idea that competitive exchange rates and strong current account balances tend to accelerate economic growth in developing countries has a respectable tradition in the development literature. However, this interpretation misses one important empirical fact: that reserve accumulation in the developing world is closely associated with fluctuations in capital flows; that is, it tends to smooth out the pro-cyclical pattern of capital flows that affect developing countries (Ocampo 2010a, 2010b). Indeed, one basic explanation provided in the literature for the strong association between a strong current account and economic growth is that it reduces dependence on volatile capital flows.

A third explanation for reserve accumulation is the 'financial stability' motive. The basic argument is that international reserves are necessary for financially open economies to counter the incentives to eventually transform money balances into foreign exchange (i.e. capital flight). However, the fact that reserve fluctuations are closely associated with capital account cycles means that it is difficult to distinguish this motive from that of self-insurance.

The self-insurance motive can therefore be understood, in a broad sense, as the attempt by developing countries to manage the strong pro-cyclical shocks they face in a globalized economy. These shocks originate in the pro-cyclical patterns of the capital flows to these countries, but also in the procyclical patterns of commodity prices and, to a lesser extent, in the volume of international trade. In this sense, the demand for reserves is the result of the application of a broad precautionary principle learnt from financial crises. In particular, experience indicates that allowing the real exchange rate to appreciate and the current account to deteriorate sharply during foreign exchange booms almost inevitably leads to balance-of-payments crises—and, very commonly, to twin balance-of-payments and domestic financial crises—once the temporary condition of foreign exchange availability comes to an end. It makes sense, therefore, to respond to cyclical

swings in export revenues by accumulating foreign exchange during booms to be used during subsequent crises.

Insofar as cyclical shocks from the capital or trade accounts tend to generate pro-cyclical macroeconomic policy responses, active foreign exchange management can be seen as an attempt to increase the room for manoeuvre to adopt counter-cyclical macroeconomic policies. In this sense, in a broader sense, the self-insurance motive can be called the counter-cyclical motive. It is also important to emphasize that it is generally associated with intermediate foreign exchange regimes. Smoothing out the effects of external shocks on the exchange rate is, thus, an essential feature of self-insurance or counter-cyclical foreign exchange management.

Interestingly, in the case of capital account fluctuations, it is now broadly agreed that the self-insurance motive goes beyond the so-called Guidotti–Greenspan rule, according to which countries should keep foreign exchange reserves at least equivalent to short-termexternal liabilities. Indeed, to the extent that capital account fluctuations involvemedium-term cycles, the demand for precautionary international reserves should be proportional to total external liabilities, with the proportion larger for economies that have liberalized their capital accounts.

Foreign exchange reserve accumulation is obviously costly, both because foreign exchange reserves have low yields and because there are costs associated with sterilizing its domestic monetary effects. Some alternative strategies should be considered. Saving exceptional export receipts and associated fiscal revenues from natural resource-intensive activities has long been accepted as good practice, with its counterpart in reserve accumulation. In contrast, exchange rate flexibility to increase the room for manoeuvre of counter-cyclical monetary policy has been the instrument preferred by defenders of orthodox inflation targeting. But this is not a good substitute, as it merely transfers the pro-cyclicality of foreign exchange availability to the exchange rate and is likely to reproduce the risks that self-

insurance is trying to avoid, particularly the generation of unsustainable current account deficits during booms.

In this regard, one paradox of macroeconomic policy management that has characterized developing countries in recent decades is that exchange rate flexibility has been generally complemented by active interventions in foreign exchange markets and a rising demand for reserves. This has made flexible but highly interventionist exchange rate regimes—i.e. intermediate regimes— quite common in the developing world. This is not so much a reflection of 'fear of floating' but rather a recognition that, as much as fixed exchange rates clean, floats generate pro-cyclical effects on the economy, albeit of a different nature.

In this sense, and when the source is pro-cyclical capital flows, a better strategy is to regulate capital flows or adopt any other form of macro-prudential regulation that reduces the vulnerability to financial shocks.10 In particular, to the extent that regulations on capital inflows during booms are able to reduce the magnitude of reserve accumulation, they reduce the cost of foreign exchange management. In fact, the need to accumulate reserves when capital inflows are excessive destroys the rationale for capital inflows in the first place, as it does not generate any real transfer of resources towards the recipient country. It also undermines the other rationale for capital account liberalization: to diversify risks, as countries feel they need larger foreign exchange reserves to protect themselves against capital account reversals.

Obviously, the choice of self-insurance is associated with the fact that the globalized economy we live in lacks adequate collective insurance. Furthermore, available IMF crisis lending is deemed unacceptable by many countries because of the conditionalities typically attached to it. In the past, these have included adoption of pro-cyclical macroeconomic policies during crises, which self-insurance seeks to avoid or at least mitigate. Therefore, the selfinsurance or counter-cyclical motive behind developing countries' high demand for foreign exchange reserves is associated with both the pro-cyclical capital account and trade shocks that they face, and the perception of inadequate mechanisms at the global

level to provide liquidity to developing countries during balance-of-payments crises.

What matters from the point of view of the global reserve system is the recognition that self-insurance, though rational from the point of view of an individual country, generates fallacy of composition effects that tend to worsen global imbalances and can generate a global contractionary bias. Indeed, if large groups of developing countries follow this route, they generate a mix of stronger current accounts and an additional demand for safe assets that can be used as reserves. If the first is dominant, contractionary effects on the world economy will be generated unless matched by current account deficits in other (mainly developed) countries. If the second prevails, then they must be matched by the supply of such assets by developed countries to avoid having contractionary effects. In any case, they could reduce interest rates for safe assets, a factor that some have identified as one of the elements behind the asset bubble in advanced countries prior to the 2007–9 North Atlantic financial crisis. Through either of the two channels, the inequities of the system contribute to global imbalances.

Therefore, self-insurance is not only costly for individual countries, but also a source of global instability. However, the problem cannot be solved simply by asking developing countries to appreciate their currencies and to generate current account deficits during the good times, as this has proved to be a risky combination in the past. This was revealed again during the North Atlantic crisis in the collapse of several Central and Eastern European economies that pursued this strategy, as well as several on the periphery of the eurozone, although in that case without the ingredient of exchange rate appreciation. We must start by addressing the reason for the desire for self-insurance, namely the strongly pro-cyclical capital and trade flows and the inadequacy of collective insurance for balance-of-payments crises, the issues that will be dealt with in chapters 4 and 5 of this volume.

2.4 Special Drawing Rights (p. 59-64)

SDRs are defined by the IMF as an international reserve asset. However, although countries receive interest on holdings of SDRs, they also have to pay interest on the allocations they receive. In this sense, SDRs are peculiarly both an asset and a liability, and perhaps should be best considered as a credit line which can be used unconditionally by the holder—that is, an unconditional overdraft facility. This is, of course, a legacy of the debates of the 1960s, when France, against the view of most countries (including the United States), opposed the idea of creating a pure reserve asset and preferred to create a 'drawing' facility similar to the tradition of IMF credit lines.

According to existing rules, the IMF makes general allocations of SDRs following three criteria: a long-term need, of a global character, and with the purpose of supplementing existing reserve assets. Five-year-period reviews are undertaken to decide whether such a need exists. So far, three general SDR allocations have been made. The first was in 1970–2 for a total amount of 9.3 billion SDRs, and the second in 1979–81 for 12.1 billion SDRs. The last took place in 2009 and included two different decisions: (1) an allocation for 21.4 billion SDRs had been approved by the Board of Governors of the IMF in 1997, which was meant to equalize the benefits of new (those that joined after the previous SDR allocations) and old fund members, but only became effective when the related changes in the IMF Articles of Agreement were approved by the US Congress in June 2009; and (2) in response to the North Atlantic financial crisis, the G20 agreed to boost liquidity through new SDR allocations, which involved the issuance of 161.2 billion SDRs, equivalent to US$250 billion and was approved by the IMF Board in July 2009. Interestingly, although allocations are made according to long-term needs, the 2009 allocations were clearly argued on counter-cyclical grounds (IMF 2009d). The previous allocations in 1979–81 and the delayed one in 1997 also coincided with crises in the world economy.

As the SDR allocations are made according to IMF quotas, they are much larger for high-income countries. During the first set of allocations in 1970–2, high-income countries received 74 per cent of total allocations, whereas middle-income countries received 16 per cent and lowincome countries only about 10 per cent (using World Bank classifications by levels of development in 2000). The distribution improved slightly over time. During the second round of allocations in 1979–81, the share of high-income countries declined to 67 per cent, whereas that of middle-income countries increased to 23 per cent and that of low-income countries rose marginally. In 2009, the share of middle-income countries continued to rise to close to 30 per cent, but that of low-income countries fell to slightly below 9 per cent. The decline in the share of high-income countries to 62 per cent implied, as in the previous period, a falling share of OECD countries partly compensated by the rising share of high-income non-OECD countries.

SDRs are 'central bank money', since essentially only central banks accept them as means of payment and private parties are not allowed to hold them under current rules. In addition, SDRs can be used to pay IMF obligations, and they can be held by a few other international organizations such as the multilateral development banks and the Bank for International Settlement. A core difference between SDRs and other reserve assets is, however, that they cannot be directly used to intervene in the foreign exchange market. They have to be converted into the currency needed to undertake those interventions.

SDRs can be transacted in two ways: (1) transactions by bilateral agreement between participant countries, after which the IMF typically mediates the transaction; and (2) transactions by designation whereby if a member country has balance-of-payments needs and there is no country willing to buy its SDRs, the IMF has the legal right to designate members with strong external positions to exchange SDRs for freely usable currencies, up to the point where the holdings of the buying country above allocation (i.e. excess holdings) are equal to twice their allocations. This designation mechanism is essential to maintain the liquidity of the SDRs, but it has not been used for over two decades, as voluntary arrangements

have worked well. This has been facilitated by the fact that some central banks actively manage their SDR holdings as part of their reserve portfolio strategy, and operate in a sense as 'market makers'. This group of countries includes Austria, Belgium, Denmark, Finland, France, Germany, Japan, Netherlands, Norway, Sweden, Switzerland, United Kingdom, and Venezuela. The ECB operates as an additional market maker. All of these participants have two-way arrangements for buying and selling SDRs, except Germany, which has only a one-way arrangement to sell SDRs (IMF 2009d).

A review of history indicates certain trends in the SDR market that are important for understanding how the market has functioned so far. The first important fact of note is that there is a growing amount of SDR transactions. Figure 2.4 shows net SDR drawings by IMF members, estimated as the sum of the difference between allocations and holdings by individual countries. It indicates that the use of SDRs has grown over time, with accelerations coinciding with periods of global financial stress. These include the depreciation of the US dollar in the late 1970s, which even led the United States to use part of its SDRs; the 1980–4 Latin American debt crisis; the crisis of the European exchange rate mechanism in the early 1990s; the series of crises in emerging economies in the late 1990s and early 2000s; the North Atlantic financial crisis; and the 2014–16 period of collapse of commodity markets and falling capital flows towards emerging markets. Over the long-term, the trend in the use of SDRs has been clearly positive. Since the early 1980s SDR drawings fluctuated between 30 and 50 per cent of total allocations. As a proportion of allocations, the market fell substantially with the large 2009 issue of SDRs, but has since then renewed its upward trend.

Several interesting patterns emerge. Interestingly, high-income OECD countries, excluding Japan, have been net users of SDR allocations. Japan has been mostly a buyer, accumulating SDRs above its allocations. The United States drew almost 2 billion SDRs in 1980 and was a still a net seller in 1983, but has been a net buyer thereafter. In turn, high-income non-OECD countries have overall been

net buyers of SDRs, except in 1999 for the Gulf countries and in recent years for both categories of countries included in this group. All of this indicates that SDRs are effective reserve assets even for the richest countries of the world.

In any case, developing countries tend to use their SDR holdings more frequently and in larger magnitudes. Middle-income countries have had net drawings in all peak years. China has been an exception, drawing its SDR allocations only in 1980 and being a net buyer since then. As a share of allocations to the group, middle-income countries, excluding China, drew much larger shares than high-income countries, ranging from 32 to 54 per cent of their allocations prior to 2009. In turn, the use of SDR allocations is highest for low-income countries. Before the 2009 allocation, they drew over 80 per cent of the SDRs they were allocated. After the most recent allocation, middle-income and low-income countries have renewed their active use of SDRs, drawing a peak 23 and 43 per cent respectively of their allocations by 2016 (excluding China from the first group).

An analysis of net drawings and net purchases by individual countries indicates that predominantly the high-income countries and oil-rich middle-income countries sold and bought large amounts of SDRs during peak years. Among these, the United States was the largest drawer of SDRs in 1980, followed by the United Kingdom, Australia, and Canada. The highest net holder was Japan, followed by Germany, Belgium, Saudi Arabia, and Iran. Saudi Arabia remained among the top five net buyers of SDRs. China joined the net buyers in 1999, and became the third largest buyer in 2008, followed by the United States and Japan. The United Kingdom, interestingly, remained the largest seller until 2010, when Ukraine displaced it from that position. Several Gulf and European countries have also actively used their SDR holdings in recent years.

Three major conclusions can thus be derived from studying the market for SDRs. First, despite their low share in allocations, developing countries tend to use their holdings more frequently for their balance-of-payments needs. Allocations of SDRs and, particularly, asymmetric allocations would thus have positive

development implications. Second, SDRs are, in any case, an important reserve asset for developed countries, as reflected in their dominant role both on the buyer and seller side. Third, the market is, however, very small, as at their peak in 2016 net drawings have only reached 34 billion SDRs, a minute proportion of global reserves.

2.5 Reforming the System (p. 65-74)

2.5.1 Alternative Reform Routes

Despite the fact that the United States was at the centre of the financial meltdown generated by the bankruptcy of Lehman Brothers in September 2008, the dollar strengthened during the peak months of turmoil, and has continued to be the undisputed major reserve currency. This was the result of two factors. The first was the demand for dollars to finance withdrawals from non-banking financial institutions in the US—an important part of the strong deleveraging process unleashed by the crisis. The second was the 'flight to safety' in the context of a limited supply of alternative safe assets. In particular, the absence of a unified European bond market and the perception by many agents that the euro is backed by a heterogeneous group of countries of unequal strength meant that the assets of only a few European countries are considered comparable with those of the United States as safe assets, but their supply is limited. The recent crisis has thus clearly shown that the 'network externalities' in the use of money continue to favour the US dollar, and that in today's world there is no alternative for the market for US Treasury securities in terms of liquidity and depth.

Despite the undisputed leadership of the dollar as the major global reserve currency, the three major problems of the system are still present: (1) the asymmetric-adjustment problem and the contractionary effects it generates on the world economy; (2) the dependence of the world economy on the main reserve-issuing country, whose monetary policy is managed with no regard to its spillovers on the rest of the world, and which faces a strong deterioration in its net liability position (see Chapter 1 in this regard); and (3) the large demand for self-insurance

by developing countries, which may also have contractionary effects on the world economy, and the scarcity of safe assets to satisfy the growing demand for reserves.

One way the system could evolve is by becoming a fully-fledged multicurrency reserve system—a characteristic that, as has been pointed out, is only its secondary feature. Indeed, the system continues to be essentially a fiduciary dollar standard. The US dollar has represented over three-fifths of global allocated foreign exchange reserves since 2002. In terms of foreign exchange transactions, the US dollar is also the indisputable leader, as it is involved in between 85 and 90 per cent of all bilateral deals.

In both roles, the US dollar is followed by the euro, which increased its share in global reserves to about a quarter of allocated reserves in the years after its launch in 1999. Interestingly, that share was very resilient during the North Atlantic financial crisis and even during the peak of the eurozone crisis in 2011–12, but has fallen to about a fifth in recent years. A major factor behind the relative shares of the US dollar and the euro is their bilateral exchange rate: an appreciation of the dollar tends to increase its share in world foreign exchange reserves, and a depreciation has the opposite effect.

During the first decade of the twenty-first century, other currencies represented about a tenth of such reserves, with the yen experiencing a downward and the British pound a rising trend. However, after the North Atlantic financial crisis there has been a diversification towards other currencies, particularly the Australian and Canadian dollars and the renminbi, with the Swiss franc maintaining a small share; the share of these other currencies has increased from around 2 per cent to over 7 per cent since then.

The rise of the renminbi implies that, for the first time in history, a currency from a developing country is playing the role of a reserve currency. This reflects, of course, the explicit Chinese policy to internationalize its currency, which includes the creation of swap arrangements with several central banks, allowing some payments of Chinese exports to be made in its currency, and using Hong

Kong and London as major centres for renminbi transactions. The recent inclusion of the Chinese currency in the SDR basket is a recognition of its emerging role as a reserve currency [95], but the possibility of a larger role for the renminbi depends on several conditions that can only materialize in the long term: deep and liquid domestic financial markets, and a liberalization of financial and foreign exchange markets that Chinese authorities have adopted in a gradual way, as they generate major macroeconomic policy challenges. In fact, the problems that Chinese foreign exchange markets have experienced in recent years in the face of large capital outflows from the country may lead to a temporary reversal in its rise as a global reserve currency.

The major advantage of a multi-reserve currency arrangement is that it would provide all—especially developing—countries the benefit of diversifying their foreign exchange reserve assets. However, none of the other deficiencies of the system would be addressed. In particular, it would continue to be inequitable, as the benefits from the reserve currency status would still be captured by developed countries (with China partly benefiting from reserve diversification). Also, this reform would neither eliminate the contractionary bias of the system during crises nor reduce developing countries' demand for reserves for self-insurance purposes.

The exchange rate flexibility among major currencies is, paradoxically, both an advantage and a potential cost of amulti-currency system. The benefitwould be derived from the absence of a major problem that two previous systems faced: namely, the eventual unsustainability of fixed rate parities. This was, indeed, a major explanation for the collapse of bimetallism in the nineteenth century and of the Bretton Woods fixed gold–dollar parity in 1971. However, although substitution among currencies facilitates diversification, it could also enhance exchange rate volatility among the major reserve currencies. Given their high demand for foreign exchange reserves, developing countries would suffer disproportionately from the instability of reserve currencies' exchange rates.

Furthermore, all individual currencies would continue to lack the basic advantage that a global reserve system should have: a stable value.

The alternative reform route would be to design an architecture based on a truly global reserve asset, which could also have broader uses in the global monetary system. This would fulfil the objective included in the IMF Articles of Agreement of 'making the special drawing right the principal reserve asset in the international monetary system'. As Triffin (1968) envisioned, this would complete the transition apparent since the nineteenth century of putting fiduciary currencies (or fiat money) at the centre of modern monetary systems.

This reform would certainly meet the objectives outlined by the governor of the central bank of China: 'An international reserve currency should first be anchored to a stable benchmark and issued according to a clear set of rules, therefore to ensure orderly supply; second, its supply should be flexible enough to allow timely adjustment according to the changing demand; third, such adjustments should be disconnected from economic conditions and sovereign interests of any single country'. But, in addition to providing a more orderly international monetary system rid of the Triffin dilemma, which is what these objectives imply, desirable reform should also correct, at least partially, two other problems of the system: the lack of pressure on surplus countries to adjust, and the specific asymmetries that developing countries face due to pro-cyclical capital flows and the absence of adequate collective insurance.

These two alternative routes could be mixed in a number of ways, and in fact their complementary use may be the only possible way forward. In such a mixed system, the SDRs would continue to be purely central bank money, letting other currencies continue to play the role of means of payment and part of the function of stores of value. SDRs would help to supplement the growing demand for 'safe assets', the role that has largely been played by the dollar, but which could come under threat at some point due to the strong deterioration in the US net liability position over the past decades and particularly since the outbreak of the North Atlantic financial crisis. In turn, to manage the instabilities of a multi-currency

system, a substitution account should be created in the IMF to allow central banks to change their reserve composition without affecting markets. This proposal has been on the table since the 1970s, to manage periods in which countries have reduced their demand for dollar reserves.

There are, of course, other reform routes. One would be to return to Keynes' proposal for an International Clearing Union or a similar solution, or to create a new institution, a Global Reserve Bank. Independently of their virtues, such proposals do not seem viable in a world unwilling to adopt major reforms.

There have also been proposals to restore a greater role to gold. However, such a return to what Keynes called a 'barbarous relic' would be a non-starter. In particular, it would be inconsistent with the 'embedded liberalism' of earlier post-war arrangements—that the commitment to free markets is tempered by a broader commitment to social welfare and full employment.

2.5.2 An SDR-Based Global Reserve System

The nature of the expectations on SDRs that a reformed system must meet would be different today from what they were when this instrument of international monetary cooperation was created.13 The issue of inadequate provision of international liquidity, which was at the centre of early post-war debates and the discussions that led to the creation of the SDRs in the 1960s, is not important now, except during crises with global repercussions, such as the North Atlantic financial crisis. If anything, the fiduciary dollar standard has actually exhibited an expansionary bias for long periods of time. However, this underscores the fact that the world still needs a less 'erratic and unpredictable' system for providing global liquidity, to use Triffin's characterization, or a system that ensures an 'orderly supply' of the international reserve currency, if we prefer the formulation of the governor of the central bank of China. However, other problems that also received attention in the 1960s continue to be significant or even more important today, particularly the need for a more symmetric system, developing countries' access to liquidity, and associated equity issues.

The initial allocations of SDRs in 1970–2 were equivalent to 8.4 per cent of the world's non-gold reserves. But despite the new allocations made in 1979–81, which brought accumulated allocations to 21.4 billion SDRs (slightly over US$33 billion), the total accounted for an insignificant 0.4 per cent of world non-gold reserves prior to the 2009 allocations. These allocations brought the stock of SDRs to 3.7 per cent of global non-dollar reserves in 2009, still a very modest amount. It has been falling again since then.

An ambitious reform to address the problems of the current reserve system and the shortfall of safe assets would thus be to design an SDR-based global reserve system, or at least to move towards a fully SDR-funded IMF. The major advantages of the IMF acting as a quasi-world central bank are threefold: (1) sharing seigniorage (e.g. the seigniorage would accrue to the IMF member states according to their quota distributions or alternative SDR allocation formula, instead of the reserve-issuing countries); (2) delinking the creation of international reserve assets from any particular national or regional currency, thus helping to overcome the Triffin dilemma; and (3) controlling liquidity in a counter-cyclical way.

Proposals for SDR allocations in recent years have followed two different approaches. The first is issuing SDRs in a counter-cyclical fashion, thus avoiding doing so during booms(or evendestroying during these periods those previously made), when they could feed into world inflationary pressures, and concentrating their issuance during periods ofworld financial stress,when theywould have counter-cyclical effects. The second approach proposes regular allocations of SDRs reflecting additional world demand for reserves. The two approaches can be combined, as it can be agreed to make regular allocations—say every five years, following IMF practices—that are nonetheless made contingent on global monetary conditions, with the IMF Board deciding when they are made effective.

Proposals for the size of new allocations vary on the basis of the criteria used to estimate them. The most recent IMF report uses three conventional criteria: reserve coverage of imports (which is not important today), coverage of short-term

debt, and broad money. Their estimates suggest a considerable rise in the projected demand for reserve assets. While the five-year estimates in 2009 (IMF 2009d) were around US $700–900 billion, the projection for the same period rose to US$800–1600 billion in 2011. On an annual basis, the IMF recommends SDR allocations of US$350–400 billion to maintain a stable level of supply for global reserve assets. Other proposals have been in the range of around US$200–300 billion annually. The Stiglitz Commission, for example, made the case for regular allocations in the range of US$150–300 billion a year. A later ommendation by a group of experts was larger: US$240–400 billion. Although these allocations would contribute to the diversification of reserves, SDRs would still represent a small share of reserve holdings. For example, the IMF (2011a) estimated that an annual allocation of US$200 billion would increase the share of SDRs in total reserves to about 13 per cent by the 2020s.

The most important element of the reform would involve moving to a fully SDR-based IMF with clear counter-cyclical objectives. This would involve counter-cyclical allocations of SDRs, which would generate unconditional liquidity, together with counter-cyclical IMF financing, made entirely in SDRs, to provide conditional liquidity to countries facing balance-of-payments crises.

A crucial advantage of these proposals is that they would solve the recurrent problem of making more resources available to the IMF during crises. Note, in this regard, that the traditional solution has been to allow the IMF to borrow from member states under different modalities. But this mechanism is problematic, as it is not truly multilateral and, as Kenen (2001) has pointed out, gives excessive power to the countries providing the financing. This mechanism is thus sub-optimal to quota increases and both are, in turn, sub-optimal relative to a fully SDR-based IMF along the lines outlined.

This reform, however, requires a change in the IMF Articles of Agreement. Crucial in this regard is the elimination of the division between general resources and SDR accounts of the IMF, which severely limits the use of SDR allocations by countries and makes it impossible to finance IMF lending by using SDR

allocations. Furthermore, another advantage of an SDR-based IMF is that it would eliminate the need for the IMF to manage a multiplicity of currencies, only a fraction of which can be used for IMF lending.

This solution would also make clear what 'backing' for SDRs involves. Strictly speaking, as with national currencies, the essential issue is not backing, but the willingness of parties to unconditionally accept fiat money when paid by another party. Backing would be provided by lending and investments made with SDR deposits. During booms, the normal instrument could be bonds from member countries that have a high level of liquidity and can be redeemed in convertible currencies. During crises, part of such bond holdings would be redeemed to generate funds to lend to countries facing balance-of-payments crises. Both aspects would again mimic the way central banks operate.

2.5.3 Complementary Reforms

These proposals must be complemented by reforms in other areas. Those that specifically relate to the role of SDRs deserve a mention here.

First, it should be emphasized that an SDR-based IMF would facilitate the task of increasing the size of the IMF, which has significantly lagged behind that of the world economy since the 1970s, particularly in relation to capital flows. This would, in turn, reinforce the provision of collective insurance. Of course, in a fully SDR-based IMF, quotas would have entirely different implications to what they have today. In particular, they would not involve actual contribution of resources to the institution, but would still determine the shares of countries in SDR allocations, their borrowing limits, and, together with assigned basic votes, their voting power.

Second, mechanisms could be built in the design of the system to help improve adjustments to global imbalances. In particular, global macroeconomic policy cooperation should aim at avoiding the asymmetric-adjustment problem and the contractionary bias it generates. The crucial element would, of course, be larger collective insurance. This could be mixed with a rule that penalizes countries with large surpluses and/or excessive reserves, relative to the size or their economies, by

suspending their right to receive SDR allocations. Of course, the definition of excessive reserves would have to take into account the exceptional demand for reserves by developing countries.

Third, and crucial from the point of view of developing countries, the solution adopted must reduce the special asymmetries that these countries face, reflected in the huge disparities in demand for reserves between developing and developed economies, which are at the centre of both the inequities of the current reserve system and the contractionary bias that large reserve accumulation by developing countries can potentially generate. This could be done through a mix of two types of reforms: (1) asymmetric issues of SDRs, giving larger allocations to countries with the highest demand for reserves, mainly developing countries; Williamson (2009, 2010) has proposed that these countries would receive 80 per cent of SDR allocations and the remaining 20 per cent would be allocated to industrial countries; an alternative would be to explicitly introduce the demand for reserves as one of the criteria for SDR allocations; and (2) the creation of a 'development link' in SDR allocations, as proposed by the Group of Experts convened by the United Nations Conference on Trade and Development (UNCTAD) in the 1960s; one possible mechanism would be allowing the IMF to buy bonds from multilateral development banks with the SDRs not utilized by member states, which would then finance the investment demands of developing countries.

Another potential development link that has been proposed by several authors is to use SDR allocations to developed countries to finance additional aid for the poorest countries and the provision of global public goods, such as combating climate change. This proposal has many virtues, but poses the problem that such transfers are fiscal in character, and may thus require the approval of national parliaments on every occasion. Donating SDRs for development or combating climate change is also costly for countries, since they would still have to pay interest on the donated SDRs to the IMF. As an alternative, Bredenkamp and Pattillo (2010), among others, have suggested managing both problems by

implementing the proposal of former IMF Managing Director Dominique Strauss-Kahn to use SDRs to support efforts to control climate change. According to this proposal, donating countries would place unutilized SDRs as equity in trust funds, which can be the capital of a Green Fund but could also be a development fund with other objectives such as infrastructure. The return on these equity investments would then be used to service the interest payments on used SDRs. A certain oversubscription of the equity of the said fund would, in turn, guarantee the liquidity of the SDRs for each individual country.

Fourth, as envisioned in the debates of the late 1970s, and pointed out more recently by Bergsten and Kenen, among others, it would be useful to create an IMF substitution account that would allow countries to transform their dollar reserves into SDR-based assets issued by the IMF to provide stability to the current system. Furthermore, this may be an essential complement between SDR reform and a multi-currency system. In a transition similar to the three-stage one envisioned by Kenen, one could think of three periods in which the functions of the substitution account would change until the SDR becomes a fully developed reserve asset. In an early period, countries could exchange the reserve assets they have for SDRs issued for that purpose by the substitution account. The June 2009 IMF decision to issue SDR-denominated bonds to some emerging economies could be considered a step in that direction. In a subsequent period, each county that has a need to intervene in the foreign exchange market would be able to freely transfer some of its SDR claims for the currency of intervention in the hands of the substitution account, or by selling its normal SDR allocations to the country issuing the currency that it needs to access. In a final phase, the substitution account would be consolidated with the general accounts of the IMF and any distinction between the SDRs created through substitution and those created by periodic allocations would disappear. A substitution account could still be kept to help the IMF regulate changes in the demand by central banks for other reserve assets.

A major issue is how the potential losses of a substitution account would be distributed among IMF members, a basic reason why initiatives in that direction

have not been approved in the past. It is probably inevitable that the potential costs should be shared between the reserve-issuers (the United States and the eurozone countries) and the reserve-holders (the majority being developing countries). The primary reason why the latter should share in the costs is that they benefit from the stability in the value of the reserves that the account would offer. That said, it would be essential to negotiate how to distribute the potential costs of this mechanism. There are conflicting estimates of what would have been the potential costs had the substitution account been adopted in the past, with Kenen providing a positive, and McCauley and Schenk a negative view.

It could be added that reforms could either limit SDRs to their role as a reserve asset and means of payment among central banks (as it is now, and proposed above for a mixed system) or allow its broader use, as proposed in the past by several authors. However, aside from this imposing additional demands on the reform of the system, the private use of SDRs could not only generate problems of its own—particularly speculative changes in the demand for this global reserve asset. It could also face strong opposition to a reform of the system by the United States. For this reason, it may be better to let national or regional currencies continue to play the major role in private transactions. This would imply that, although the role of the dollar as the major reserve asset would be partly eroded, it would still keep its role as the major international means of payment, also creating demands for associated services of the US financial system. As long as central banks agree to accept SDRs from one another in exchange for convertible currencies, SDRs can perform the function of store of value (reserve asset) as well as medium of exchange in inter-central bank transactions.

Finally, the reform of the system should include regional monetary arrangements. Indeed, as I have argued in the past, the IMF of the future should be conceived as the apex of a network of regional reserve funds—that is, a system closer in design to the European Central Bank or the Federal Reserve System rather than the unique global institution it currently is.

Список литературы

1. Acemoglu D. B., et al. (2020) The Colonial Origins of Comparative Development. The American Economic Review, Vol. 91, 1369-1401.

2. Aghion, P. et al. (2019) Endogenous Political Institutions. The Quarterly Journal of Economics, Vol. 119, Issue 2, 565-612.

3. Akaike, H. (1973) Information theory and an extension of the maximum likelihood principle. In: B. N. Petrov 6 F. Csaki (eds.), Second international symposium on information theory, pp. 267-281.

4. Барзаева М. А. Экономическое развитие и рост / М.А. Барзаева // Экономика, управление, финансы: материалы IV Междунар. науч. конф. (г. Пермь, апрель 2015 г.). — Пермь: Зебра, 2015. — С. 16-19.

5. Березнев С.В. Теории экономического роста и развития: зарубежный опыт и отечественная практика / С.В. Березнев // Экономика и управление инновациями. — 2018. — № 2. — С. 4-11.

6. Восточные славяне: Антропология и этническая история. – М.: Науч. мир, 2019. – 336 с.

7. World Bank (2004b) Promoting the Rural Non-Farm Sector in Bangladesh. Rural Development Unit, South Asia Region, Team led by Forhad Shilpi, (August), processed in two volumes.

8. Гумилев Л.Н. От Руси до России: Очерки этнической истории / Послесл. С.Б. Лаврова. – М.: Рольф, 2020. – 320 с.

9. Zak P. J. and Knack S.(2001) Trust and Growth. The Economic Journal, No. lll, pages 295-32.