

A Service of



Leibniz-Informationszentrum Wirtschaft Leibniz Information Centre

Stark, Oded; Fan, C. Simon

Working Paper
A reluctance to assimilate

ZEF Discussion Papers on Development Policy, No. 111

#### **Provided in Cooperation with:**

Zentrum für Entwicklungsforschung / Center for Development Research (ZEF), University of Bonn

Suggested Citation: Stark, Oded; Fan, C. Simon (2006): A reluctance to assimilate, ZEF Discussion Papers on Development Policy, No. 111, University of Bonn, Center for Development Research (ZEF), Bonn

This Version is available at: https://hdl.handle.net/10419/32279

#### Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

#### Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.





Oded Stark, C. Simon Fan

 $\begin{array}{c} \text{Number} \\ 111 \end{array}$ 

A Reluctance to Assimilate

ZEF – Discussion Papers on Development Policy Bonn, October 2006 The Center for Development Research (ZEF) was established in 1995 as an international, interdisciplinary research institute at the University of Bonn. Research and teaching at ZEF aims to contribute to resolving political, economic and ecological development problems. ZEF closely cooperates with national and international partners in research and development organizations. For information, see: http://www.zef.de.

ZEF — DISCUSSION PAPERS ON DEVELOPMENT POLICY are intended to stimulate discussion among researchers, practitioners and policy makers on current and emerging development issues. Each paper has been exposed to an internal discussion within the Center for Development Research (ZEF) and an external review. The papers mostly reflect work in progress.

Oded Stark, C. Simon Fan: A Reluctance to Assimilate, ZEF – Discussion Papers on Development Policy No. 111, Center for Development Research, Bonn, October 2006, pp. 12.

ISSN: 1436-9931

#### Published by:

Zentrum für Entwicklungsforschung (ZEF) Center for Development Research Walter-Flex-Strasse 3 D – 53113 Bonn Germany

Phone: +49-228-73-1861 Fax: +49-228-73-1869 E-Mail: zef@uni-bonn.de

http://www.zef.de

#### The authors:

**Oded Stark,** Center for Development Research (ZEF), University of Bonn, Bonn, Germany (contact: ostark@uni-bonn.de).

C. Simon Fan, Lingnan University, Tuen Mun, Hong Kong

(contact: fansimon@ln.edu.hk).

### A Reluctance to Assimilate

## Contents

Acknowledg	iements
/ toltiloviloud	

Abst	stract	1
Kurz	rzfassung	2
1	Introduction	3
2	Analysis	5
3	Conclusion	10
Refe	ferences	11

# Acknowledgements

We are indebted to Donald Cox, Ewa Kepinska, Maja Micevska, and Anna Zylicz for enlightening comments.

### **Abstract**

Quite often, migrants appear to exert little effort to absorb the mainstream culture and to learn the language of their host society, even though the economic returns (increased productivity and enhanced earnings) to assimilation are high. We show that when interpersonal comparisons affect individuals' wellbeing and when a more intensive assimilation results in migrants' comparing themselves more with the richer natives and less with fellow migrants, then the effort extended to assimilate will be muted.

### Kurzfassung

Migranten scheinen recht häufig nur geringe Anstrengungen zu unternehmen, die Kultur und die Sprache ihres Gastlandes anzunehmen bzw. zu erlernen, obwohl die ökonomischen Gewinne der Assimilation (gesteigerte Produktivität und höhere Einkommen) hoch sind. Wir zeigen, dass die erhöhte Anstrengung sich zu assimilieren, dadurch gedämpft wird, dass Migranten es im Hinblick auf zwischenmenschliche Vergleiche, die das Wohlergehen von Individuen beeinflussen, vorziehen, sich stärker mit den anderen Migranten und weniger mit den wohlhabeneren Einheimischen zu vergleichen.

### 1 Introduction

Common culture and common language facilitate communication and interaction between individuals. Consequently, migrants' assimilation into the mainstream culture of their host country is likely to increase their productivity and earnings. There is considerable empirical research on the relationship between migrants' assimilation and their earnings, and this literature often finds that migrants exert little effort to absorb the mainstream culture and language, even though the economic returns to assimilation are high. For example, Lazear (1999, p. S96) concludes: "Multiculturalism .... seems to be on the rise in the United States..... In 1900, 85 percent of immigrants were fluent in English. Surprisingly, in 1990 the fluency rate among immigrants was only 68 percent, despite dramatic improvements in communication during the century." This is puzzling. In a recent compilation (Friedman and Randeria, 2004) the failure of migrants to integrate, conform, and assimilate is portrayed quite extensively. The contributors to the compilation express concern and explore possible means of transforming migrants into "ethnics" and "nationals." However, the proposed policies do not allow that migrants could optimally elect *not* to assimilate.

In the received literature, rigorous theoretical analyses of assimilation are rare, which contrasts with the related empirical literature.<sup>2</sup> A notable exception is Lazear, who argues that assimilation may not occur when the migrants' own community is large and when it is costly for them to learn the host country's culture and language. In this paper we present a new model of assimilation that draws on the literature of relative deprivation and interpersonal comparisons.

Our model assumes that, to an extent, the reference groups of an individual are chosen endogenously.<sup>3</sup> This assumption is in line with the recent literature that explores the social and psychological repercussions of individual behavior, cf. Akerlof's (1997) concept of "social distance," Agarwal and Vercelli (2005), Austen-Smith and Fryer (2005) and the research reviewed therein. For example, Akerlof (p. 1010) writes: "I shall let individuals occupy different locations in social space. Social interaction ... will increase with proximity in this space. Current social location is acquired and dependent on the [individual's] decision ... ." Drawing on this literature, we posit that the more effort a migrant exerts in assimilating into the mainstream culture, the closer he will be in social space to the natives and the farther away he will be from

<sup>&</sup>lt;sup>1</sup> See, for example, Borjas (1995), Chiswick (2005), and Cutler, Glaeser, and Vigdor (2005). Borjas, Bronars, and Trejo (1992) provide estimates of the average hourly earnings of young international migrants in the United States. Looking at a cross-section of individuals between the ages of 21 and 29 from the 1980 U.S. Census, they find sizable returns to speaking English.

<sup>&</sup>lt;sup>2</sup> While occasionally the substantial empirical studies point to interesting theoretical arguments and explanations (cf. Chiswick, 2005), these arguments and explanations are mostly not formalized rigorously.

<sup>&</sup>lt;sup>3</sup> To the best of our knowledge, the current paper provides a rare model of the endogenous formation of reference groups. Hence, the paper adds to the literature on relative deprivation.

his fellow migrants. We show that when interpersonal comparisons affect individuals' wellbeing and when a more intensive assimilation results in migrants' comparing themselves more with the richer natives and less with their fellow migrants, then the effort extended to assimilate is muted. Regarding the empirical content of our model we predict, inter alia, that the larger the income gap between the natives and the migrants, the weaker the effort to assimilate.

### 2 Analysis

Consider a set of migrants who originate from a poor country and who are in a rich country. To focus on essentials, we assume that in all relevant respects the migrants are identical.<sup>4</sup> Each migrant decides how much effort to exert in order to assimilate himself into the mainstream culture of the host country. If a migrant is better assimilated into the mainstream culture, he will earn a higher income. However, upon assimilating more, he will become closer to the (rich) natives when making interpersonal comparisons. Formally, let a migrant's utility function be

$$u = Y(x) - RD - C(x)$$

$$Y'(x) > 0, Y''(x) < 0; \quad C'(x) > 0, C''(x) > 0$$

$$(1)$$

where "Y" denotes the migrant's income, "RD" denotes the relative deprivation of the migrant which arises from interpersonal comparisons, "x" denotes the migrant's effort to assimilate, and "C" is the cost of extending this effort. We assume that  $\lim_{x\to 0} Y'(x) = \infty$ , namely that the Inada condition holds, thereby ensuring that in the analysis that follows the solutions of x are interior.

The relative deprivation of an individual is defined as follows

$$F(I,R) = \frac{\partial F}{\partial I} < 0, \frac{\partial F}{\partial R} > 0$$
(2)

where "I" is the individual's own income, and "R" is the average income of his reference group. We assume that a migrant's set of reference groups consists of the natives and of his fellow migrants. The average income of the natives is denoted by "Z" and is assumed to be higher than the migrant's earnings no matter how hard the migrant tries to assimilate into the mainstream

<sup>&</sup>lt;sup>4</sup> However, even if there is some heterogeneity within the group of migrants, the results that follow will go through. What is critical for our argument is the persistent prevalence of an earnings gap between the natives and the migrants, not the homogeneity of the group of migrants.

<sup>&</sup>lt;sup>5</sup> We can also interpret *Y* more generally to encompass the utility from "consuming" the mainstream culture of the host country.

<sup>&</sup>lt;sup>6</sup> The idea that relative income impinges on welfare dates back at least to Veblen (1924). For pioneering and recent writings on the analytics of relative deprivation see, respectively, Yitzhaki (1979), and Walker and Smith (2002). For writings on relative deprivation and migration see Stark (1993), and Stark and Wang (2005). For recent empirical studies that demonstrate the importance of relative deprivation see, for example, Eibner and Evans (2005) and Luttmer (2005).

culture; the average income of the other migrants is denoted by  $\overline{Y}$  which, in turn, is determined by other migrants' average effort to assimilate into the mainstream culture,  $\overline{x}$ .

We assume that the more a migrant assimilates into the mainstream culture, the more he will compare himself with the natives and the less he will compare himself with his fellow migrants. The relative weight of his being affiliated with the natives and thereby comparing himself with them is p ( $0 \le p \le 1$ ), and the corresponding weight pertaining to the migrant's fellow migrants is 1-p. Formally, we define

$$p = p(x)$$

$$p'(x) > 0$$
(3)

Then, we can express the migrant's relative deprivation, "RD", as a weighted sum

$$RD = p(x)F[Y(x), Z] + [1 - p(x)]F[Y(x), \overline{Y}]$$

$$\tag{4}$$

Inserting (4) into (1), we get

$$u = Y(x) - p(x)F[Y(x), Z] - [1 - p(x)]F[Y(x), \overline{Y}] - C(x)$$
(5)

Note that a standard utility formulation captures the tension between the unpleasant exertion of effort aimed at acquiring productive "tools," and the consequent pleasing derivation of income (the last and first terms on the right hand-side of (5), respectively). The added RD terms (the middle terms on the right hand-side of (5)) introduce an additional dimension of tension: the effort to acquire productive "tools" results in a reduction in the displeasure that arises from a relatively low income within both reference groups, yet it increases the weight that is accorded to the natives as a reference group within which comparisons result in substantial discontent.<sup>7, 8</sup>

In writing p as p(x), we are making two important assumptions: first, that the set of reference groups is determined endogenously (by x) and that it is not predetermined on the basis of ethnicity, origin, and so on. And second, that the exertion of the assimilation effort and the proximity to the natives are intertwined. Hence, for example, it is not possible to choose to exert a high level of assimilation effort while at the same time to exclude the natives as a reference group.

4

<sup>&</sup>lt;sup>7</sup> Recall the assumption that even if a migrant tries very hard to assimilate into the mainstream culture, he will still earn an income that is lower than that of the natives.

<sup>&</sup>lt;sup>8</sup> For simplicity's sake, we assume away possible repercussions of the selection of the assimilation effort by the migrants upon the relative deprivation of the natives. However, even if such repercussions were to be considered then, if the relative deprivation of the natives is defined in a manner akin to that of the migrants, and if the income gap between the natives and the migrants remains large - the assimilation effort of the migrants notwithstanding,, the relative deprivation of the natives will not be affected by the migrants' choice of the assimilation effort.

#### A Reluctance to Assimilate

The migrant's optimization problem is to choose x such as to bring his utility in (5) to a maximum (given his belief about the value of  $\overline{x}$  and hence about the value of  $\overline{Y}$ ). The first-order condition for a maximum of (5) is

$$Y'(x) - p'(x)F[Y(x), Z] - p(x)Y'(x)F_1[Y(x), Z] + p'(x)F[Y(x), \overline{Y}] - [1 - p(x)]Y'(x)F_1[Y(x), \overline{Y}] - C'(x) = 0$$
(6)

Since all migrants are identical, in equilibrium we must have that  $x = \overline{x}$  and hence

$$Y(x) = \overline{Y} \tag{7}$$

Naturally, we assume that

$$F[Y(x), Y(x)] = 0 \tag{8}$$

When migrants are identical and each migrant extends the same level of effort as any other migrant, then there is no difference in incomes within the group of migrants and hence no relative deprivation arises from intra-group comparisons.

Inserting (7) and (8) into (6), we get

$$Y'(x) - p'(x)F[Y(x), Z] - p(x)Y'(x)F_1[Y(x), Z] - [1 - p(x)]Y'(x)F_1[Y(x), Y(x)] - C'(x) = 0$$
(9)

Clearly, if the solution to (9) is unique, then there exists a unique Nash equilibrium for the level of effort that a migrant exerts in assimilating into the mainstream culture. If the solution to (9) is not unique, then there exist multiple Nash equilibria.

The analysis yields an interesting implication. Suppose that the solution to (9) is not unique, so that there exist multiple Nash equilibria. Then, for two similar (in all relevant respects) groups of migrants in a host country with a given mainstream culture, members of one group may exert more effort to assimilate to the mainstream culture than members of the other group.

7

<sup>&</sup>lt;sup>9</sup> A sufficient condition for the existence of a unique Nash equilibrium is that the derivative of the left hand-side of (9) with respect to *x* is negative.

Had interpersonal comparisons not been considered - a special case of (1) - the migrant's utility function would have become

$$u = Y(x) - C(x) \tag{10}$$

The first-order condition for a maximum of (10) is

$$Y'(x) - C'(x) = 0 (11)$$

We denote the solution to (11) by  $x_1^*$ .

We now denote the (largest) solution to (9) by  $x_2^*$ . Then, from comparing (11) with (9), we derive the following proposition which provides a condition under which the concern for interpersonal comparisons mutes the optimal assimilation effort.

**Proposition 1**:  $x_2^* < x_1^*$  if

$$p'(x_{2}^{*})F[Y(x_{2}^{*}),Z] + p(x_{2}^{*})Y'(x_{2}^{*})F_{1}[Y(x_{2}^{*}),Z] + [1 - p(x_{2}^{*})]Y'(x_{2}^{*})F_{1}[Y(x_{2}^{*}),Y(x_{2}^{*})] > 0$$
(12)

**Proof.** We prove the claim by contradiction. Suppose otherwise, namely that  $x_2^* \ge x_1^*$ . From (11) we have

$$Y'(x_1^*) - C'(x_1^*) = 0 (13)$$

Since Y''(x) - C''(x) < 0 then from (13) and  $x_2^* \ge x_1^*$  we have

$$Y'(x_2^*) - C'(x_2^*) \le 0 (14)$$

Thus, we have that

$$Y'(x_{2}^{*}) - p'(x_{2}^{*})F[Y(x_{2}^{*}), Z] - p(x_{2}^{*})Y'(x_{2}^{*})F_{1}[Y(x_{2}^{*}), Z]$$

$$-[1 - p(x_{2}^{*})]Y'(x_{2}^{*})F_{1}[Y(x_{2}^{*}), Y(x_{2}^{*})] - C'(x_{2}^{*})$$

$$= [Y'(x_{2}^{*}) - C'(x_{2}^{*})] - \{p'(x_{2}^{*})F[Y(x_{2}^{*}), Z] + p(x_{2}^{*})Y'(x_{2}^{*})F_{1}[Y(x_{2}^{*}), Z]$$

$$+[1 - p(x_{2}^{*})]Y'(x_{2}^{*})F_{1}[Y(x_{2}^{*}), Y(x_{2}^{*})]\}$$

$$< 0$$
(15)

which contradicts (9). Thus, we have proved the proposition.

We can rewrite (12) as

$$p'(x_2^*)F[Y(x_2^*), Z] > -\{p(x_2^*)F_1[Y(x_2^*), Z] + [1 - p(x_2^*)]F_1[Y(x_2^*), Y(x_2^*)]\}Y'(x_2^*)$$
(16)

Clearly, the larger  $p'(x_2^*)$  and  $F[Y(x_2^*), Z]$ , the smaller the absolute values of  $F_1[Y(x_2^*), Z]$  and  $F_1[Y(x_2^*), Y(x_2^*)]$ , and the smaller  $Y'(x_2^*)$ , the more likely will inequality (16) (and hence inequality (12)) be satisfied.

Note that the left-hand side of (16) represents the marginal (dis)utility cost, due to an increase in x, that arises from the sensing of relative deprivation upon a comparison with the natives, whereas the right-hand side of (16) represents the marginal utility benefit, due to an increase in x, of increasing a migrant's standing among other migrants and of narrowing the income gap between him and the natives. Thus, inequality (16) (and hence inequality (12)) is more likely to be satisfied if more intensive assimilation results in a relatively high cost - from a migrant's comparing himself more with the richer natives - and a relatively low benefit - from his increasing his standing among fellow migrants. Hence, under the stated condition, the proposition implies that the choice of social proximity to reference groups and interpersonal comparisons entails migrants' having a weak incentive to accumulate the skills that would enhance their productivity.

Our analysis yields interesting empirical implications. For example, it is observed that migrants' segregation in the United States has increased since 1970, and it has been suggested that the increased segregation is due to greater racial dissimilarity with the American majority population (Cutler, Glaeser, and Vigdor, 2005). An explanation of the said segregation trend is that "Greater linguistic differences between immigrants' native tongues and English has created a greater demand for enclave communities that offer opportunities to reduce communication costs" (Cutler, Glaeser, and Vigdor, 2005, p.29). But why is it that the linguistic differences were not narrowed by means of an assimilation effort (language acquisition)? Our analysis suggests that it is the rising income divide between the native population and the migrants that could *account* for the growing reluctance to assimilate and *consequently* for the increased segregation.

This analysis is also related to Akerlof and Kranton (2000), who inquire how identity, that is, a person's sense of self, affects economic outcomes. In particular, they propose a utility function in which identity is associated with different social categories, and they proceed to analyze how people in these categories behave. The analysis in our paper examines how an important dimension of an individual's identity can be determined endogenously: we investigate a key aspect of social interactions viz., interpersonal comparisons. Thus, our analysis complements the analysis of Akerlof and Kranton.

### 3 Conclusion

The pursuit of migration is an extreme example of the severing of ties with, or a distancing from, one's friends and home. The "failure" of migrants to assimilate cannot plausibly be attributed merely to an urge to stay close to their friends, or they might not have migrated to begin with. Non-assimilation arises from a fear of enhanced relative deprivation if they reduce their distance from the natives as a reference group. Fundamentally, migration is a change of those with whom people associate. But it would be wrong to infer that a change of associates crowds out a change of behavior, given the associates. Through their actions, migrants can elect to associate more with some groups, less with others. However, when actions to keep in check the weight accorded to the rich natives as a reference group are not viable, the very choice of migration destination could be affected in an unexpected way: a country that is not so rich could be preferable to a country that is rich; migrants will protect themselves from an unfavorable comparison by not migrating to where the comparison, when unavoidable, would be highly unfavorable. Relatedly, the variance in the assimilation effort of migrants across host countries could arise from the variance in the income distance with the natives: the richer the natives, the weaker the effort to assimilate, other things held the same.

There is a fast growing literature documenting the importance of intra-group comparisons in the determination of happiness (cf. the selection in Bruni and Porta, 2005). Inter alia, the evidence suggests that very often people tend to be quite happy, except when they live in situations or settings in which they are brought, or made to compare themselves with a group that is much better off. The new literature is somewhat shy of analyzing the actions people can take in order to shield themselves from depressing exposure. We have sought to help fill this void.

### References

- Agarwal, Bina and Vercelli, Alessandro (eds.) (2005): *Psychology, Rationality and Economic Behavior*. Houndmills: Palgrave Macmillan.
- Akerlof, George A. (1997): Social Distance and Social Decisions. *Econometrica* 65(5): 1005-1027.
- Akerlof, George A. and Kranton, Rachel E. (2000): Economics and Identity. *Quarterly Journal of Economics* 115(3): 715-753.
- Austen-Smith, David and Fryer, Roland G. Jr. (2005): An Economic Analysis of 'Acting White'. *Quarterly Journal of Economics* 120(2): 551-583.
- Borjas, George J. (1995): Assimilation and Changes in Cohort Quality Revisited: What Happened to Immigrant Earnings in the 1980s? *Journal of Labor Economics* 13(2): 201-45.
- Borjas, George J., Bronars, Stephen G., and Trejo, Stephen J. (1992): Assimilation and the Earnings of Young Internal Migrants. *The Review of Economics and Statistics* 74(1): 170-75.
- Bruni, Luigino and Porta, Pier Luigi (eds.) (2005): *Economics and Happiness: Framing the Analysis*. Oxford: Oxford University Press.
- Chiswick, Barry R. (2005): *The Economics of Immigration: Selected Papers of Barry R. Chiswick.* Cheltenham, U.K.: Elgar.
- Cutler, David M., Glaeser, Edward L. and Vigdor, Jacob L. (2005): Is the Melting Pot Still Hot? Explaining the Resurgence of Immigrant Segregation. Harvard University, Cambridge MA: Harvard Institute of Economic Research, Discussion Paper No. 2071.
- Eibner, Christine and Evans, William N. (2005): Relative Deprivation, Poor Health Habits, and Mortality. *Journal of Human Resources* 40(3): 591-620.
- Friedman, Jonathan and Randeria, Shalini (eds.) (2004): Worlds on the Move: Globalization, Migration and Cultural Security. London: I.B. Tauris.
- Lazear, Edward P. (1999): Culture and Language. *Journal of Political Economy* 107 (6): S95-S126.
- Luttmer, Erzo F. P. (2005): Neighbors as Negatives: Relative Earnings and Well-Being. *Quarterly Journal of Economics* 120(3): 963-1002.
- Stark, Oded (1993): The Migration of Labor. Oxford and Cambridge, MA: Blackwell.

- Stark, Oded and Wang, You Qiang (2005): Towards a Theory of Self-Segregation as a Response to Relative Deprivation: Steady-State Outcomes and Social Welfare. In: Bruni, Luigino and Porta, Pier Luigi (eds.): *Economics and Happiness: Framing the Analysis*. Oxford: Oxford University Press, 223-242.
- Veblen, Thorstein (1924): *The Theory of the Leisure Class: An Economic Study of Institutions*. London: Allen & Unwin.
- Walker, Iain and Smith, Heather J. (2002): *Relative Deprivation: Specification, Development, and Integration*. Cambridge: Cambridge University Press.
- Yitzhaki, Shlomo (1979): Relative Deprivation and the Gini Coefficient. *Quarterly Journal of Economics* 93(2): 321-24.

# The following papers have been published so far:

No. 1	Ulrike Grote, Arnab Basu, Diana Weinhold	Child Labor and the International Policy Debate Zentrum für Entwicklungsforschung (ZEF), Bonn, September 1998, pp. 47.
No. 2	Patrick Webb, Maria Iskandarani	Water Insecurity and the Poor: Issues and Research Needs Zentrum für Entwicklungsforschung (ZEF), Bonn, Oktober 1998, pp. 66.
No. 3	Matin Qaim, Joachim von Braun	Crop Biotechnology in Developing Countries: A Conceptual Framework for Ex Ante Economic Analyses Zentrum für Entwicklungsforschung (ZEF), Bonn, November 1998, pp. 24.
No. 4	Sabine Seibel, Romeo Bertolini, Dietrich Müller-Falcke	Informations- und Kommunikationstechnologien in Entwicklungsländern Zentrum für Entwicklungsforschung (ZEF), Bonn, January 1999, pp. 50.
No. 5	Jean-Jacques Dethier	Governance and Economic Performance: A Survey Zentrum für Entwicklungsforschung (ZEF), Bonn, April 1999, pp. 62.
No. 6	Mingzhi Sheng	Lebensmittelhandel und Kosumtrends in China Zentrum für Entwicklungsforschung (ZEF), Bonn, May 1999, pp. 57.
No. 7	Arjun Bedi	The Role of Information and Communication Technologies in Economic Development – A Partial Survey Zentrum für Entwicklungsforschung (ZEF), Bonn, May 1999, pp. 42.
No. 8	Abdul Bayes, Joachim von Braun, Rasheda Akhter	Village Pay Phones and Poverty Reduction: Insights from a Grameen Bank Initiative in Bangladesh Zentrum für Entwicklungsforschung (ZEF), Bonn, June 1999, pp. 47.
No. 9	Johannes Jütting	Strengthening Social Security Systems in Rural Areas of Developing Countries Zentrum für Entwicklungsforschung (ZEF), Bonn, June 1999, pp. 44.
No. 10	Mamdouh Nasr	Assessing Desertification and Water Harvesting in the Middle East and North Africa: Policy Implications Zentrum für Entwicklungsforschung (ZEF), Bonn, July 1999, pp. 59.
No. 11	Oded Stark, Yong Wang	Externalities, Human Capital Formation and Corrective Migration Policy Zentrum für Entwicklungsforschung (ZEF), Bonn, August 1999, pp. 17.

No. 12	John Msuya	Nutrition Improvement Projects in Tanzania: Appropriate Choice of Institutions Matters Zentrum für Entwicklungsforschung (ZEF), Bonn, August 1999, pp. 36.
No. 13	Liu Junhai	Legal Reforms in China Zentrum für Entwicklungsforschung (ZEF), Bonn, August 1999, pp. 90.
No. 14	Lukas Menkhoff	Bad Banking in Thailand? An Empirical Analysis of Macro Indicators Zentrum für Entwicklungsforschung (ZEF), Bonn, August 1999, pp. 38.
No. 15	Kaushalesh Lal	Information Technology and Exports: A Case Study of Indian Garments Manufacturing Enterprises Zentrum für Entwicklungsforschung (ZEF), Bonn, August 1999, pp. 24.
No. 16	Detlef Virchow	Spending on Conservation of Plant Genetic Resources for Food and Agriculture: How much and how efficient? Zentrum für Entwicklungsforschung (ZEF), Bonn, September 1999, pp. 37.
No. 17	Arnulf Heuermann	Die Bedeutung von Telekommunikationsdiensten für wirtschaftliches Wachstum Zentrum für Entwicklungsforschung (ZEF), Bonn, September 1999, pp. 33.
No. 18	Ulrike Grote, Arnab Basu, Nancy Chau	The International Debate and Economic Consequences of Eco-Labeling Zentrum für Entwicklungsforschung (ZEF), Bonn, September 1999, pp. 37.
No. 19	Manfred Zeller	Towards Enhancing the Role of Microfinance for Safety Nets of the Poor Zentrum für Entwicklungsforschung (ZEF), Bonn, October 1999, pp. 30.
No. 20	Ajay Mahal, Vivek Srivastava, Deepak Sanan	Decentralization and Public Sector Delivery of Health and Education Services: The Indian Experience Zentrum für Entwicklungsforschung (ZEF), Bonn, January 2000, pp. 77.
No. 21	M. Andreini, N. van de Giesen, A. van Edig, M. Fosu, W. Andah	Volta Basin Water Balance Zentrum für Entwicklungsforschung (ZEF), Bonn, March 2000, pp. 29.
No. 22	Susanna Wolf, Dominik Spoden	Allocation of EU Aid towards ACP-Countries Zentrum für Entwicklungsforschung (ZEF), Bonn, March 2000, pp. 59.

No. 23	Uta Schultze	Insights from Physics into Development Processes: Are Fat Tails Interesting for Development Research? Zentrum für Entwicklungsforschung (ZEF), Bonn, March 2000, pp. 21.
No. 24	Joachim von Braun, Ulrike Grote, Johannes Jütting	Zukunft der Entwicklungszusammenarbeit Zentrum für Entwicklungsforschung (ZEF), Bonn, March 2000, pp. 25.
No. 25	Oded Stark, You Qiang Wang	A Theory of Migration as a Response to Relative Deprivation Zentrum für Entwicklungsforschung (ZEF), Bonn, March 2000, pp. 16.
No. 26	Doris Wiesmann, Joachim von Braun, Torsten Feldbrügge	An International Nutrition Index – Successes and Failures in Addressing Hunger and Malnutrition Zentrum für Entwicklungsforschung (ZEF), Bonn, April 2000, pp. 56.
No. 27	Maximo Torero	The Access and Welfare Impacts of Telecommunications Technology in Peru Zentrum für Entwicklungsforschung (ZEF), Bonn, June 2000, pp. 30.
No. 28	Thomas Hartmann- Wendels Lukas Menkhoff	Could Tighter Prudential Regulation Have Saved Thailand's Banks? Zentrum für Entwicklungsforschung (ZEF), Bonn, July 2000, pp. 40.
No. 29	Mahendra Dev	Economic Liberalisation and Employment in South Asia Zentrum für Entwicklungsforschung (ZEF), Bonn, August 2000, pp. 82.
No. 30	Noha El-Mikawy, Amr Hashem, Maye Kassem, Ali El-Sawi, Abdel Hafez El-Sawy, Mohamed Showman	Institutional Reform of Economic Legislation in Egypt Zentrum für Entwicklungsforschung (ZEF), Bonn, August 2000, pp. 72.
No. 31	Kakoli Roy, Susanne Ziemek	On the Economics of Volunteering Zentrum für Entwicklungsforschung (ZEF), Bonn, August 2000, pp. 47.
No. 32	Assefa Admassie	The Incidence of Child Labour in Africa with Empirical Evidence from Rural Ethiopia Zentrum für Entwicklungsforschung (ZEF), Bonn, October 2000, pp. 61.
No. 33	Jagdish C. Katyal, Paul L.G. Vlek	Desertification - Concept, Causes and Amelioration Zentrum für Entwicklungsforschung (ZEF), Bonn, October 2000, pp. 65.

No. 34	Oded Stark	On a Variation in the Economic Performance of Migrants by their Home Country's Wage Zentrum für Entwicklungsforschung (ZEF), Bonn, October 2000, pp. 10.
No. 35	Ramón Lopéz	Growth, Poverty and Asset Allocation: The Role of the State Zentrum für Entwicklungsforschung (ZEF), Bonn, March 2001, pp. 35.
No. 36	Kazuki Taketoshi	Environmental Pollution and Policies in China's Township and Village Industrial Enterprises Zentrum für Entwicklungsforschung (ZEF), Bonn, March 2001, pp. 37.
No. 37	Noel Gaston, Douglas Nelson	Multinational Location Decisions and the Impact on Labour Markets Zentrum für Entwicklungsforschung (ZEF), Bonn, May 2001, pp. 26.
No. 38	Claudia Ringler	Optimal Water Allocation in the Mekong River Basin Zentrum für Entwicklungsforschung (ZEF), Bonn, May 2001, pp. 50.
No. 39	Ulrike Grote, Stefanie Kirchhoff	Environmental and Food Safety Standards in the Context of Trade Liberalization: Issues and Options Zentrum für Entwicklungsforschung (ZEF), Bonn, June 2001, pp. 43.
No. 40	Renate Schubert, Simon Dietz	Environmental Kuznets Curve, Biodiversity and Sustainability Zentrum für Entwicklungsforschung (ZEF), Bonn, October 2001, pp. 30.
No. 41	Stefanie Kirchhoff, Ana Maria Ibañez	Displacement due to Violence in Colombia: Determinants and Consequences at the Household Level Zentrum für Entwicklungsforschung (ZEF), Bonn, October 2001, pp. 45.
No. 42	Francis Matambalya, Susanna Wolf	The Role of ICT for the Performance of SMEs in East Africa  – Empirical Evidence from Kenya and Tanzania Zentrum für Entwicklungsforschung (ZEF), Bonn, December 2001, pp. 30.
No. 43	Oded Stark, Ita Falk	Dynasties and Destiny: On the Roles of Altruism and Impatience in the Evolution of Consumption and Bequests Zentrum für Entwicklungsforschung (ZEF), Bonn, December 2001, pp. 20.
No. 44	Assefa Admassie	Allocation of Children's Time Endowment between Schooling and Work in Rural Ethiopia Zentrum für Entwicklungsforschung (ZEF), Bonn, February 2002, pp. 75.

No. 45	Andreas Wimmer, Conrad Schetter	Staatsbildung zuerst. Empfehlungen zum Wiederaufbau und zur Befriedung Afghanistans. (German Version) State-Formation First. Recommendations for Reconstruction and Peace-Making in Afghanistan. (English Version) Zentrum für Entwicklungsforschung (ZEF), Bonn, April 2002, pp. 27.
No. 46	Torsten Feldbrügge, Joachim von Braun	Is the World Becoming A More Risky Place? - Trends in Disasters and Vulnerability to Them – Zentrum für Entwicklungsforschung (ZEF), Bonn, May 2002, pp. 42
No. 47	Joachim von Braun, Peter Wobst, Ulrike Grote	"Development Box" and Special and Differential Treatment for Food Security of Developing Countries: Potentials, Limitations and Implementation Issues Zentrum für Entwicklungsforschung (ZEF), Bonn, May 2002, pp. 28
No. 48	Shyamal Chowdhury	Attaining Universal Access: Public-Private Partnership and Business-NGO Partnership Zentrum für Entwicklungsforschung (ZEF), Bonn, June 2002, pp. 37
No. 49	L. Adele Jinadu	Ethnic Conflict & Federalism in Nigeria Zentrum für Entwicklungsforschung (ZEF), Bonn, September 2002, pp. 45
No. 50	Oded Stark, Yong Wang	Overlapping Zentrum für Entwicklungsforschung (ZEF), Bonn, August 2002, pp. 17
No. 51	Roukayatou Zimmermann, Matin Qaim	Projecting the Benefits of Golden Rice in the Philippines Zentrum für Entwicklungsforschung (ZEF), Bonn, September 2002, pp. 33
No. 52	Gautam Hazarika, Arjun S. Bedi	Schooling Costs and Child Labour in Rural Pakistan Zentrum für Entwicklungsforschung (ZEF), Bonn October 2002, pp. 34
No. 53	Margit Bussmann, Indra de Soysa, John R. Oneal	The Effect of Foreign Investment on Economic Development and Income Inequality Zentrum für Entwicklungsforschung (ZEF), Bonn, October 2002, pp. 35
No. 54	Maximo Torero, Shyamal K. Chowdhury, Virgilio Galdo	Willingness to Pay for the Rural Telephone Service in Bangladesh and Peru Zentrum für Entwicklungsforschung (ZEF), Bonn, October 2002, pp. 39
No. 55	Hans-Dieter Evers, Thomas Menkhoff	Selling Expert Knowledge: The Role of Consultants in Singapore's New Economy Zentrum für Entwicklungsforschung (ZEF), Bonn, October 2002, pp. 29

No. 56	Qiuxia Zhu Stefanie Elbern	Economic Institutional Evolution and Further Needs for Adjustments: Township Village Enterprises in China Zentrum für Entwicklungsforschung (ZEF), Bonn, November 2002, pp. 41
No. 57	Ana Devic	Prospects of Multicultural Regionalism As a Democratic Barrier Against Ethnonationalism: The Case of Vojvodina, Serbia's "Multiethnic Haven" Zentrum für Entwicklungsforschung (ZEF), Bonn, December 2002, pp. 29
No. 58	Heidi Wittmer Thomas Berger	Clean Development Mechanism: Neue Potenziale für regenerative Energien? Möglichkeiten und Grenzen einer verstärkten Nutzung von Bioenergieträgern in Entwicklungsländern Zentrum für Entwicklungsforschung (ZEF), Bonn, December 2002, pp. 81
No. 59	Oded Stark	Cooperation and Wealth Zentrum für Entwicklungsforschung (ZEF), Bonn, January 2003, pp. 13
No. 60	Rick Auty	Towards a Resource-Driven Model of Governance: Application to Lower-Income Transition Economies Zentrum für Entwicklungsforschung (ZEF), Bonn, February 2003, pp. 24
No. 61	Andreas Wimmer Indra de Soysa Christian Wagner	Political Science Tools for Assessing Feasibility and Sustainability of Reforms Zentrum für Entwicklungsforschung (ZEF), Bonn, February 2003, pp. 34
No. 62	Peter Wehrheim Doris Wiesmann	Food Security in Transition Countries: Conceptual Issues and Cross-Country Analyses Zentrum für Entwicklungsforschung (ZEF), Bonn, February 2003, pp. 45
No. 63	Rajeev Ahuja Johannes Jütting	Design of Incentives in Community Based Health Insurance Schemes Zentrum für Entwicklungsforschung (ZEF), Bonn, March 2003, pp. 27
No. 64	Sudip Mitra Reiner Wassmann Paul L.G. Vlek	Global Inventory of Wetlands and their Role in the Carbon Cycle Zentrum für Entwicklungsforschung (ZEF), Bonn, March 2003, pp. 44
No. 65	Simon Reich	Power, Institutions and Moral Entrepreneurs Zentrum für Entwicklungsforschung (ZEF), Bonn, March 2003, pp. 46
No. 66	Lukas Menkhoff Chodechai Suwanaporn	The Rationale of Bank Lending in Pre-Crisis Thailand Zentrum für Entwicklungsforschung (ZEF), Bonn, April 2003, pp. 37

No. 67	Ross E. Burkhart Indra de Soysa	Open Borders, Open Regimes? Testing Causal Direction between Globalization and Democracy, 1970-2000 Zentrum für Entwicklungsforschung (ZEF), Bonn, April 2003, pp. 24
No. 68	Arnab K. Basu Nancy H. Chau Ulrike Grote	On Export Rivalry and the Greening of Agriculture – The Role of Eco-labels Zentrum für Entwicklungsforschung (ZEF), Bonn, April 2003, pp. 38
No. 69	Gerd R. Rücker Soojin Park Henry Ssali John Pender	Strategic Targeting of Development Policies to a Complex Region: A GIS-Based Stratification Applied to Uganda Zentrum für Entwicklungsforschung (ZEF), Bonn, May 2003, pp. 41
No. 70	Susanna Wolf	Private Sector Development and Competitiveness in Ghana Zentrum für Entwicklungsforschung (ZEF), Bonn, May 2003, pp. 29
No. 71	Oded Stark	Rethinking the Brain Drain Zentrum für Entwicklungsforschung (ZEF), Bonn, June 2003, pp. 17
No. 72	Andreas Wimmer	Democracy and Ethno-Religious Conflict in Iraq Zentrum für Entwicklungsforschung (ZEF), Bonn, June 2003, pp. 17
No. 73	Oded Stark	Tales of Migration without Wage Differentials: Individual, Family, and Community Contexts Zentrum für Entwicklungsforschung (ZEF), Bonn, September 2003, pp. 15
No. 74	Holger Seebens Peter Wobst	The Impact of Increased School Enrollment on Economic Growth in Tanzania Zentrum für Entwicklungsforschung (ZEF), Bonn, October 2003, pp. 25
No. 75	Benedikt Korf	Ethnicized Entitlements? Property Rights and Civil War in Sri Lanka Zentrum für Entwicklungsforschung (ZEF), Bonn, November 2003, pp. 26
No. 76	Wolfgang Werner	Toasted Forests – Evergreen Rain Forests of Tropical Asia under Drought Stress Zentrum für Entwicklungsforschung (ZEF), Bonn, December 2003, pp. 46
No. 77	Appukuttannair Damodaran Stefanie Engel	Joint Forest Management in India: Assessment of Performance and Evaluation of Impacts Zentrum für Entwicklungsforschung (ZEF), Bonn, October 2003, pp. 44

No. 78	Eric T. Craswell Ulrike Grote Julio Henao Paul L.G. Vlek	Nutrient Flows in Agricultural Production and International Trade: Ecology and Policy Issues Zentrum für Entwicklungsforschung (ZEF), Bonn, January 2004, pp. 62
No. 79	Richard Pomfret	Resource Abundance, Governance and Economic Performance in Turkmenistan and Uzbekistan Zentrum für Entwicklungsforschung (ZEF), Bonn, January 2004, pp. 20
No. 80	Anil Markandya	Gains of Regional Cooperation: Environmental Problems and Solutions Zentrum für Entwicklungsforschung (ZEF), Bonn, January 2004, pp. 24
No. 81	Akram Esanov, Martin Raiser, Willem Buiter	Gains of Nature's Blessing or Nature's Curse: The Political Economy of Transition in Resource-Based Economies Zentrum für Entwicklungsforschung (ZEF), Bonn, January 2004, pp. 22
No. 82	John M. Msuya Johannes P. Jütting Abay Asfaw	Impacts of Community Health Insurance Schemes on Health Care Provision in Rural Tanzania Zentrum für Entwicklungsforschung (ZEF), Bonn, January 2004, pp. 26
No. 83	Bernardina Algieri	The Effects of the Dutch Disease in Russia Zentrum für Entwicklungsforschung (ZEF), Bonn, January 2004, pp. 41
No. 84	Oded Stark	On the Economics of Refugee Flows Zentrum für Entwicklungsforschung (ZEF), Bonn, February 2004, pp. 8
No. 85	Shyamal K. Chowdhury	Do Democracy and Press Freedom Reduce Corruption? Evidence from a Cross Country Study Zentrum für Entwicklungsforschung (ZEF), Bonn, March2004, pp. 33
No. 86	Qiuxia Zhu	The Impact of Rural Enterprises on Household Savings in China Zentrum für Entwicklungsforschung (ZEF), Bonn, May 2004, pp. 51
No. 87	Abay Asfaw Klaus Frohberg K.S.James Johannes Jütting	Modeling the Impact of Fiscal Decentralization on Health Outcomes: Empirical Evidence from India Zentrum für Entwicklungsforschung (ZEF), Bonn, June 2004, pp. 29
No. 88	Maja B. Micevska Arnab K. Hazra	The Problem of Court Congestion: Evidence from Indian Lower Courts Zentrum für Entwicklungsforschung (ZEF), Bonn, July 2004, pp. 31

No. 89	Donald Cox Oded Stark	On the Demand for Grandchildren: Tied Transfers and the Demonstration Effect Zentrum für Entwicklungsforschung (ZEF), Bonn, September 2004, pp. 44
No. 90	Stefanie Engel Ramón López	Exploiting Common Resources with Capital-Intensive Technologies: The Role of External Forces Zentrum für Entwicklungsforschung (ZEF), Bonn, November 2004, pp. 32
No. 91	Hartmut Ihne	Heuristic Considerations on the Typology of Groups and Minorities Zentrum für Entwicklungsforschung (ZEF), Bonn, December 2004, pp. 24
No. 92	Johannes Sauer Klaus Frohberg Heinrich Hockmann	Black-Box Frontiers and Implications for Development Policy – Theoretical Considerations Zentrum für Entwicklungsforschung (ZEF), Bonn, December 2004, pp. 38
No. 93	Hoa Ngyuen Ulrike Grote	Agricultural Policies in Vietnam: Producer Support Estimates, 1986-2002 Zentrum für Entwicklungsforschung (ZEF), Bonn, December 2004, pp. 79
No. 94	Oded Stark You Qiang Wang	Towards a Theory of Self-Segregation as a Response to Relative Deprivation: Steady-State Outcomes and Social Welfare Zentrum für Entwicklungsforschung (ZEF), Bonn, December 2004, pp. 25
No. 95	Oded Stark	Status Aspirations, Wealth Inequality, and Economic Growth Zentrum für Entwicklungsforschung (ZEF), Bonn, February 2005, pp. 9
No. 96	John K. Mduma Peter Wobst	Village Level Labor Market Development in Tanzania: Evidence from Spatial Econometrics Zentrum für Entwicklungsforschung (ZEF), Bonn, January 2005, pp. 42
No. 97	Ramon Lopez Edward B. Barbier	Debt and Growth Zentrum für Entwicklungsforschung (ZEF), Bonn March 2005, pp. 30
No. 98	Hardwick Tchale Johannes Sauer Peter Wobst	Impact of Alternative Soil Fertility Management Options on Maize Productivity in Malawi's Smallholder Farming System Zentrum für Entwicklungsforschung (ZEF), Bonn August 2005, pp. 29

No. 99	Steve Boucher Oded Stark J. Edward Taylor	A Gain with a Drain? Evidence from Rural Mexico on the New Economics of the Brain Drain Zentrum für Entwicklungsforschung (ZEF), Bonn October 2005, pp. 26
No. 100	Jumanne Abdallah Johannes Sauer	Efficiency and Biodiversity – Empirical Evidence from Tanzania Zentrum für Entwicklungsforschung (ZEF), Bonn November 2005, pp. 34
No. 101	Tobias Debiel	Dealing with Fragile States – Entry Points and Approaches for Development Cooperation Zentrum für Entwicklungsforschung (ZEF), Bonn December 2005, pp. 38
No. 102	Sayan Chakrabarty Ulrike Grote Guido Lüchters	The Trade-Off Between Child Labor and Schooling: Influence of Social Labeling NGOs in Nepal Zentrum für Entwicklungsforschung (ZEF), Bonn February 2006, pp. 35
No. 103	Bhagirath Behera Stefanie Engel	Who Forms Local Institutions? Levels of Household Participation in India's Joint Forest Management Program Zentrum für Entwicklungsforschung (ZEF), Bonn February 2006, pp. 37
No. 104	Roukayatou Zimmermann Faruk Ahmed	Rice Biotechnology and Its Potential to Combat Vitamin A Deficiency: A Case Study of Golden Rice in Bangladesh Zentrum für Entwicklungsforschung (ZEF), Bonn March 2006, pp. 31
No. 105	Adama Konseiga	Household Migration Decisions as Survival Strategy: The Case of Burkina Faso Zentrum für Entwicklungsforschung (ZEF), Bonn April 2006, pp. 36
No. 106	Ulrike Grote Stefanie Engel Benjamin Schraven	Migration due to the Tsunami in Sri Lanka – Analyzing Vulnerability and Migration at the Household Level Zentrum für Entwicklungsforschung (ZEF), Bonn April 2006, pp. 37
No. 107	Stefan Blum	East Africa: Cycles of Violence, and the Paradox of Peace Zentrum für Entwicklungsforschung (ZEF), Bonn April 2006, pp. 42
No. 108	Ahmed Farouk Ghoneim Ulrike Grote	Impact of Labor Standards on Egyptian Exports with Special Emphasis on Child Labor Zentrum für Entwicklungsforschung (ZEF), Bonn April 2006, pp. 50

No. 109	Oded Stark	Work Effort, Moderation in Expulsion, and Illegal Migration Zentrum für Entwicklungsforschung (ZEF), Bonn May 2006, pp. 11
No. 110	Oded Stark C. Simon Fan	International Migration and "Educated Unemployment" Zentrum für Entwicklungsforschung (ZEF), Bonn June 2006, pp. 19
No. 111	Oded Stark C. Simon Fan	A Reluctance to Assimilate Zentrum für Entwicklungsforschung (ZEF), Bonn October 2006, pp. 12

ISSN: 1436-9931

Printed copies of ZEF Discussion Papers on Development Policy up to No.91 can be ordered free of charge from:

Zentrum für Entwicklungsforschung (ZEF)
Center for Development Research
Walter-Flex-Str. 3
D – 53113 Bonn, Germany
Phone: +49-228-73-1861
Fax: +49-228-73-1869
E-Mail: zef@uni-bonn.de
http://www.zef.de

The issues as from No.92 are only available as pdf-download at ZEF Website.