

Impoverishment and social exclusion: A dynamic perspective on income and relative deprivation in Belgium and the Netherlands

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1 Introduction

In various studies conducted for the European Commission's Observatory on National Policies to Combat Social Exclusion (Dirven 1990; Dirven and Jehoel-Gijsbers 1990; Dirven et al. 1992; Kemperman 1994), reviews were made of the conceptualization of social exclusion, poverty, (social) disadvantage, (relative) deprivation and marginalization in the political and scientific debates in the Netherlands. These reviews showed that, in the political debate at the beginning of the decade, the concepts of social exclusion, poverty, (relative) deprivation and marginalization were very uncommon. The concept of (social) disadvantage, on the other hand, was used rather frequently. Within the Dutch scientific community, the concept of income poverty was clearly preferred to other concepts. However, it is widely acknowledged that no definition exists which is capable of taking into account all aspects of the phenomenon of poverty. As a consequence, a large number of poverty definitions and operationalizations are used, often within the same study.

In 1995, with the publication of the Dutch government's report on poverty and social exclusion (Ministry of Social Affairs and Employment 1995, 1997), both concepts have found their way in the political debate. Nevertheless, in the Netherlands, there is no consensus about the concepts of poverty and social exclusion and their relationships with other concepts, such as (relative) deprivation, marginalization and (social) disadvantage. In this contribution, a conceptual framework is used which distinguishes between the concepts of income poverty, relative deprivation, impoverishment and social exclusion (Berghman 1995). This framework is, first of all, based on the distinction

between income poverty (i.e., lack of income) and relative deprivation (i.e., bad living conditions). Secondly, it differentiates between static and dynamic perspectives. Starting from this conceptual framework and using data for Belgium and the Netherlands, empirical results are presented on (the dynamics of) income poverty and relative deprivation as well as the interrelationship between impoverishment and social exclusion.

2 The conceptualization of poverty

According to Ringen (1988), poverty can be defined and measured in two ways: directly and indirectly.^[1] A direct definition of poverty is one in terms of relative deprivation; poverty is viewed as having a low level of consumption. Such a definition is termed *direct* because it focuses on the actual living conditions of individuals. Measuring poverty using an income poverty line is an indirect method; poverty is determined on the basis of the disposable income of the household. Such a method of measurement is termed *indirect* because it is not the actual living conditions which are being measured but only one of the determinants of those conditions.

The indirect definition of poverty may be termed the *subsistence definition*. According to this definition, people are poor if they do not have at their disposal the minimum amount of resources which is considered necessary in order to achieve a certain level of consumption. This minimum amount of resources is called the subsistence minimum or the income poverty line.

The direct definition of poverty, the *deprivation definition*, states that individuals are poor if their level of consumption (broadly defined) lags behind what is considered as being sufficient within the society. The direct definition is therefore based on a person's actual living conditions, whereas the indirect definition is based on the determinants of these conditions. Research for the Netherlands (Dirven and Berghman 1991) indicates that income poverty is not the sole determinant of relative deprivation; other economic resources, as well as social and cultural resources, appear to have an independent impact as well.

Poverty definitions may thus be classified into (indirect) definitions of income poverty and (direct) definitions of relative deprivation. While the former are based on a one-dimensional perspective on poverty in terms of a lack of income, the latter take a multi-dimensional perspective in terms of people's actual living conditions. Both concepts are used in a static sense, referring to the situation of individuals at a specific point in time. According to Berghman (1995), a distinction should be made between concepts referring to

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situations and concepts referring to processes. Table 1 displays the four possible combinations of direct and indirect definitions of poverty on the one hand, and static and dynamic definitions on the other hand. The concept of impoverishment may be used to denote the process leading to income poverty, while the concept of social exclusion can be used to refer to a process bringing about a situation called relative deprivation.

Table 1
The conceptualization of poverty

	Dynamic	Static
Indirect	<i>Impoverishment</i>	<i>Income poverty</i>
Direct	<i>Social exclusion</i>	<i>Relative deprivation</i>

Source: Berghman (1995: 21)

As processes, impoverishment and social exclusion refer to chains of events causing people's income and living conditions to deteriorate to the extent that a situation of income poverty or relative deprivation occurs. Both processes may be triggered by changes in people's employment status as well as changes in family composition and may be affected by structural features of the labour market and the system of social protection (e.g., (minimum) wage regulations, implicit tax rates and benefit levels). Moreover, due to stigmatization and discouragement effects, previous situations of income poverty and relative deprivation may contribute to the processes of impoverishment and social exclusion.^[2]

While the analysis of dynamic aspects of income poverty has seen a growing interest in recent years, the dynamics of relative deprivation have largely been neglected. This contribution takes a dynamic perspective on both income poverty and relative deprivation to study the processes of impoverishment and social exclusion. It should be noted that the analysis presented here is restricted to the extent to which current situations of income poverty and relative deprivation depend on previous situations and should therefore be considered a first step towards a fuller understanding of these processes. Nonetheless, in the remainder, the dynamics of income poverty and relative deprivation are referred to as the processes of impoverishment and social exclusion, respectively.

Impoverishment and social exclusion are not studied in isolation, for there are reasons to expect them to be mutually reinforcing. Due to the availability of

longitudinal data on people's incomes and living conditions, it is possible to analyze the strength of the (supposed) relationship between impoverishment and social exclusion. A vicious circle of poverty may exist, in which income poverty increases relative deprivation and relative deprivation contributes to a situation of income poverty.

3 Research questions and hypotheses

This contribution takes a dynamic perspective on income poverty and relative deprivation and seeks to answer the following research questions:

- Q.1 What are the dynamics of income poverty and relative deprivation?
- Q.2 To what extent are the dynamics of income poverty and relative deprivation interrelated?
- Q.3 To what extent are Belgium and the Netherlands different in terms of the dynamics of income poverty and relative deprivation?

The first research question deals with the extent to which people are caught in a situation of income poverty or relative deprivation. It addresses the issues of the persistence of poverty and relative deprivation, transitions into and out of such situations and the permeability of the dividing line between the poor and the non-poor as well as between the deprived and the non-deprived.^[3] High rates of mobility would imply little poverty persistence and few barriers to the improvement of one's living conditions (as well as, by the way, little protection against a deterioration). This could be taken as an indication of a high degree of social openness or social fluidity, which was defined by Erikson et al. (1982), in terms of *relative* mobility chances, as the outcome of a competition between persons from different origins for different destinations.^[4] Low mobility rates are then indicative of social closure and the formation of an underclass.

While changes in income level and income poverty status are likely to change people's living conditions, it is expected that other resources are brought into action in order to mitigate the negative consequences of income loss. E.g., savings may be withdrawn, social relationships may be used to get (financial) support, courses may be taken in order to increase human capital and, consequently, labour market opportunities, home production may be increased, etc.. Since many other factors besides income provide resources, it is possible to maintain one's living conditions even in case of income loss (see the chapter by Kangas and Ritakallio). Therefore, it is expected that:

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H.1 Situations of relative deprivation are more stable than situations of income poverty.

The second research question is about the extent to which the processes of impoverishment and social exclusion are mutually reinforcing. This question deals with the extent to which future risks of income poverty are determined by current living conditions as well as about the extent to which the latter are affected by a (prolonged) lack of income. In this contribution, the mutual reinforcement of income poverty and relative deprivation is seen as a vicious circle of poverty. This view would be supported, if the following hypothesis would be confirmed:

H.2 While situations of relative deprivation increase the risks of becoming income poor, situations of income poverty increase the risks of becoming relatively deprived.

Hypotheses 1 and 2 are tested for Belgium and the Netherlands. The availability of comparable data for these countries enables us to test whether Esping-Andersen's (1990) characterization of Belgium and the Netherlands as belonging to the same world of welfare capitalism, i.e., the social-democratic welfare regime, is reflected in the dynamics of income poverty and relative deprivation. It may be assumed that people's living conditions in social-democratic welfare regimes are more stable compared to liberal and conservative/corporatist welfare regimes, where the impact of the market is stronger (Fritzell 1990; Dirven 1996). Since Belgium and the Netherlands have identical scores on Esping-Andersen's de-commodification index, the observed differences in the dynamics of income poverty and relative deprivation in the two countries should be insignificant:

H.3 In terms of the dynamics of income poverty and relative deprivation, Belgium and the Netherlands are not significantly different.

4 Data, instruments, and methodology

4.1 Data

For the purpose of this contribution, two data sets were used, covering representative samples of the Belgian and Dutch populations. The data are panel data, which means that sampled persons in the first wave are re-interviewed in subsequent waves. The availability of panel data makes it

possible to carry out an analysis of the dynamics of income poverty and relative deprivation.

The survey data used for Belgium are from the Socio-Economic Panel and were collected by the Centre for Social Policy in Antwerp. The data for the Netherlands are from the Socio-Economic Panel Survey, collected by Statistics Netherlands (SN). The years covered are 1985 and 1988. In Belgium, the available data for the first wave cover 18,324 persons and 10,757 persons in the second wave; 10,250 persons participated in both waves. The 1985 Dutch data cover 11,432 persons, while 13,770 persons are covered by the 1988 wave; 8,711 persons took part in both waves.^[5]

Cross-sectional weights were used to obtain results representative for the total population at the time of interview. For longitudinal analyses, the data have been weighted with longitudinal weights to correct for selective attrition. The panel data can then be considered to be representative for that part of the population in 1985, which did not die or emigrate between 1985 and 1988.

4.2 Instruments for the measurement of income poverty

The notion of income poverty is generally made operational by defining an income poverty line. For our analysis, three different income poverty lines are used: The European poverty line, the subjective poverty line, and the legal poverty line.

The European poverty line is a purely statistical threshold. It is defined as 50% of a country's median (or, sometimes, mean) equivalent disposable household income. For this contribution, the median was used, because it is less sensitive to extreme values. Equivalent household income is obtained by dividing household income by the household's equivalence scale. The equivalence factors applied in this study are 1 for the first adult, 0.5 for other adults and 0.3 for each child.^[6]

The subjective poverty line (SPL) is based on the judgement of heads of households regarding the minimum acceptable level of income for their own household. This does not mean, however, that it is solely the evaluation given by the household head that determines whether the household is poor or not. From the individual judgements, an *average* judgement is derived (after taking into account a number of household characteristics). Hence, this income poverty line is an inter-subjective rather than a subjective standard. Details on the SPL-method can be found in Goedhart et al. (1977), Kapteyn et al. (1988), and Muffels et al. (1990) among others.

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While the SPL reflects the views of the population, the legal poverty line can be seen as reflecting a political (official) consensus as regards the minimum acceptable subsistence level in a given country. Although no official income poverty line exists in the Netherlands, the amounts given under the Dutch General Assistance Act can be seen as official minima. The amounts considered to be the minimum according to social security law vary by family type. Besides general assistance benefits, holiday allowances, incidental benefits, child allowances and student grants^[7] are also taken into account to determine the official minimum. The exact computation of this line can be found in Muffels et al. (1990). The Belgian legal poverty line equals the guaranteed minimum income under the legal social security system (the Minimex) plus child allowances. The line thus also varies according to family type.

4.3 Instruments for the measurement of relative deprivation

For the determination of relative deprivation, two methods are used: The majority necessity index (MNI) of Mack and Lansley (1985) and the subjective deprivation scale (SDS) of Muffels (1993). Both methods are defined in terms of actual living conditions and allow for a direct evaluation of poverty, in terms of *outcomes*.

Mack and Lansley (1985) introduced the notion of taste into the method of Townsend (1979). Their claim was that differences in consumption patterns between individuals can occur because of differences in tastes as opposed to lack of resources. By way of questionnaires, they asked respondents whether they possessed certain items and if they did not, whether it was because of free will or a lack of income. Only those items which were thought to be necessities by the majority of the population were included in the MNI. Someone was said to be deprived of one of those necessities, if s/he did not have the item for financial reasons.

The point of departure for the construction of the SDS is also a list of items or consumption events included in questionnaires. For each item, household heads are asked whether they find it definitely necessary to have (or do) it. Not having (or doing) a particular item only leads to deprivation if it is considered necessary by the household head.

From the answers to those questions, the SDS can be derived for every household. The SDS is defined as the weighted sum of the deprivation score on each item. The weights are determined by the possession and the necessity of the item in the reference group of the household head, reflecting the assumption

that the dis-utility of not having or doing a necessary item is higher if more people in the reference group have or do the item.^[8]

4.4 Methodology

The unit of analysis in this contribution is the individual. Household income and poverty status are assigned to every individual in the household. The dynamics of income poverty are analyzed according to the European poverty line, the subjective poverty line and the legal poverty line, while the dynamics of relative deprivation are analyzed using the instruments proposed by Mack and Lansley (1985) and Muffels (1993), respectively. While the results on the stability of income poverty and relative deprivation are largely based on the log-linear analysis of transition tables, structural models were used to analyze the interrelationship of impoverishment and social exclusion. In both panels, the samples included all household members. Since household income and poverty status are characteristics of the household and do not vary across household members, statistical tests are based on the number of households instead of the number of individuals.

5 Income poverty

The income concept used in this contribution is that of (real) disposable household income. Because the income data available in both panels differed slightly, a comparable income definition was applied using only those income components available in both panels.^[9] Disposable household income includes labour income, social assistance benefits, unemployment benefits, survivor and old age pensions, sickness and disability payments, child allowances, student grants, alimony and income from letting a room or a house.

Table 2 reveals that, in the Netherlands, the year-to-year poverty rate shows little variation except when based on the European poverty line. According to that line, poverty has increased between 1985 and 1988. This follows the increase in income inequality during the same period. In Belgium, poverty appears to have increased slightly according to the European poverty line, but to have diminished according to the other poverty lines. According to both the European poverty line and the SPL, the incidence of poverty is higher in Belgium than it is in the Netherlands. This result reflects the rather generous level of minimum benefits in the latter country.

Table 2
Poverty incidence according to the European poverty line (EMI),
the subjective poverty line (SPL), and the legal poverty line (LEG)
in Belgium and the Netherlands (percentages)

	1985	1988
Belgium		
- EMI	4.6	5.0
- SPL	24.8	23.8
- LEG	4.6	3.3
The Netherlands		
- EMI	1.4	3.2
- SPL	16.5	16.7
- LEG	11.4	11.0

6 Relative deprivation

The analysis of relative deprivation is based on a subset of ten common items from the lists of items included in the questionnaires of the 1985 and 1988 waves of the Belgian and Dutch socio-economic household panels. The ten items concern deprivation of home facilities, housing deprivation, recreational deprivation and dietary deprivation.^[10] All but one of the items are considered necessary by a vast majority of heads of households in both countries and both years of observation. The one exception is having a car.

In order to compare the incidence of relative deprivation in Belgium and the Netherlands, the ten items were combined into the majority necessity index (MNI) of Mack and Lansley (1985) and the subjective deprivation scale (SDS) of Muffels (1993). Since only those items which are thought to be necessities by the majority of the population should be included in the MNI, deprivation of a car is not taken into account.^[11] The SDS is based on the full set of ten items. Using the MNI and SDS, Table 3 presents data on relative deprivation in Belgium and the Netherlands in 1985 and 1988.

Using the MNI, Table 3 shows, first of all, that over 80% of both populations are not deprived of any item included in the index. Moreover, less than 2.5% is deprived of more than one item. Comparing the results between 1985 and 1988, relative deprivation appears to have decreased in the Netherlands, while it remained at a rather stable level in Belgium.^[12] In 1988,

deprivation in the Netherlands was somewhat lower than in Belgium, while it was the other way around in 1985.

Table 3
Deprivation among the Belgian (Bel) and Dutch (Nld) population
according to Mack and Lansley's (1985) and Muffels' (1993) approaches
1985-1988 (percentages)

	1985		1988	
	Bel	Nld	Bel	Nld
The household lacks:				
0 items	84.1	82.3	84.7	87.6
≥ 1 item	15.9	17.7	15.3	12.4
≥ 2 items	2.1	2.4	2.2	1.6
≥ 3 items	0.7	0.5	0.8	0.4
≥ 4 items	0.3	0.1	0.2	0.2
Subjective deprivation (mean value of SDS)	-0.0423	-0.0625	-0.0356	-0.0628

The results according to the SDS do not correspond to those found according to the MNI. Since high values on the SDS imply high levels of deprivation, the results indicate that, in both years, deprivation is lower, on average, in the Netherlands compared to Belgium. Moreover, deprivation appears to have increased in Belgium, while it remained at a rather stable level in the Netherlands.

7 Impoverishment

Table 4 presents data on the dynamics of income poverty between 1985 and 1988 for Belgium and the Netherlands according to the European poverty line, the SPL and the legal poverty line, respectively. In both countries, according to the European poverty line, more than 90% of the population was secure in terms of subsistence in 1985 and 1988. On the other hand, it appears that 1.1% of all Belgians were poor in both years compared to only 0.3% in the Netherlands. Mobility into and out of poverty appears to be more likely in Belgium than in the Netherlands. In Belgium, the odds of being non-poor rather

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than poor in 1988 for the non-poor in 1985 were 24 : 1, while for the 1985 poor the odds were 3.5 : 1. In the Netherlands, the corresponding odds equalled 46.1 : 1 and 2.3 : 1. The ratio of these odds was equal to 7.0 in Belgium and 19.8 in the Netherlands, suggesting more unequal mobility chances in the Netherlands compared to Belgium.

Similar differences can be observed from the results obtained with the other income poverty lines. According to the SPL, the odds ratios were 10.1 and 20.2 for Belgium and the Netherlands, respectively, while, according to the legal poverty line, the corresponding values were 6.5 and 14.1. Despite these results, the differences proved to be statistically significant in the case of the SPL only. Therefore, it can not be concluded that the degree of social openness of Belgian society is higher than that of Dutch society.

Table 4
The dynamics of income poverty in Belgium and the Netherlands
according to the European poverty line, the subjective poverty line
and the legal poverty line (percentages)

		Belgium 1988			The Netherlands 1988		
		non-poor	poor	Total	non-poor	poor	Total
1985	European poverty line						
	non-poor	91.3	3.8	95.1	96.9	2.1	99.0
	poor	3.8	1.1	4.9	0.7	0.3	1.0
	Total	95.1	4.9	100.0	97.6	2.4	100.0
1985	Subjective poverty line						
	non-poor	66.0	9.8	75.8	78.1	5.3	83.4
	poor	9.7	14.5	24.2	7.0	9.6	16.6
	Total	75.7	24.3	100.0	85.1	14.9	100.0
1985	Legal poverty line						
	non-poor	93.4	2.7	96.2	83.8	4.8	88.6
	poor	3.2	0.6	3.8	6.3	5.1	11.4
	Total	96.6	3.4	100.0	90.1	9.9	100.0

Division of the level of disposable household income by the level of the poverty line gives a measure of household income relative to its needs. Such income-to-needs ratios can be ranked and divided into quintiles (5 groups of equal size). Cross-tabulating the quintile position in 1985 and the position in 1988 gives another picture on poverty dynamics between the two years. The transition rates

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of the income-to-needs ratios for Belgium and the Netherlands based on the European poverty line are presented in Table 5.^[13] Similar tables were made using the SPL and the legal poverty line.

Across all income-to-needs mobility tables, it is found that the percentages on the main diagonal are always higher than any other percentage. The highest percentages are found for immobility in the lowest and highest quintiles.

Table 5
The dynamics of income-to-needs
according to the European poverty line (percentages)

Quintile position on the income-to- needs ratio	Belgium 1988							The Netherlands 1988						
	1st	2nd	3rd	4th	5th	Total	1st	2nd	3rd	4th	5th	Total		
1st	10.6	4.4	2.6	1.4	1.3	20.4	9.5	6.0	2.6	1.4	0.2	19.8		
2nd	4.5	7.6	4.2	1.9	1.2	19.4	4.3	8.5	5.6	2.0	0.6	21.0		
1985 3rd	2.5	4.9	6.2	4.4	1.9	20.0	1.5	4.6	8.0	5.0	1.5	20.7		
4th	1.1	2.2	4.4	7.3	4.4	19.4	1.0	1.6	3.6	8.5	4.7	19.3		
5th	1.4	1.2	2.7	4.7	10.8	20.8	1.0	0.9	1.7	4.0	11.5	19.1		
Total	20.0	20.4	20.2	19.6	19.7	100.0	17.3	21.6	21.6	21.0	18.5	100.0		

Moreover, these percentages are, on the whole, higher for the Netherlands than for Belgium. This can be interpreted as meaning that immobility, and in particular immobility for those with a low or a high income-to-needs ratio, is more common in the Netherlands than in Belgium. In both countries, the highest rate of immobility is found for the income-to-needs ratio computed on the SPL.^[14] Besides, small changes in the income-to-needs are more likely than large changes.

While in Belgium, the percentage of downwardly mobile persons is higher than the percentage of upwardly mobile people (though only very slightly), the reverse situation holds for the Netherlands, whatever the poverty line used for the computation of the income-to-needs ratios. Furthermore, upward transitions in terms of income-to-needs are more common in the Netherlands than in Belgium. Downward mobility is, however, more common in Belgium than in the Netherlands.

A number of log-linear models for transition tables (Hout 1983; Agresti 1990) were fitted to the data in the income-to-needs mobility tables.^[15] The best

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fitting model proved to be a log-multiplicative full interaction model originally proposed by Xie (1992). Equality restrictions were imposed on the association parameters across poverty lines, while these were allowed to vary by country.^[16] The estimated parameters of the model are presented in Table 6. Two remarks can be made. First of all, the saddle-shaped pattern found in the income-to-needs mobility tables is reflected by the association parameters. Secondly, the log-multiplicative comparison parameter for the Netherlands indicates that income positions in the Netherlands are more stable than in Belgium.

Table 6
Estimated parameters of the log-multiplicative full interaction model for impoverishment in Belgium and the Netherlands

		Belgium				
		1988				
	Quintile	1st	2nd	3rd	4th	5th
1985	1st	1.46	0.47	-0.31	-0.71	-0.91
	2nd	0.34	0.80	0.20	-0.48	-0.85
	3rd	-0.37	0.17	0.43	0.17	-0.40
	4th	-0.77	-0.56	0.01	0.70	0.61
	5th	-0.66	-0.88	-0.33	0.32	1.55

Note: Log-multiplicative comparison parameter for impoverishment in the Netherlands = 1.23

8 Social exclusion

In this contribution, the concept of social exclusion is used to refer to the process leading to a situation of relative deprivation. A first step towards understanding this process is the analysis of the dynamics of relative deprivation. Such an analysis may reveal the extent to which people's living conditions change over time. It may thus give an indication of the persistence of relative deprivation and the opportunities for people to escape such a situation.

Using the majority necessity index (MNI) of Mack and Lansley (1985), Table 7 cross-classifies, for each person in the longitudinal sample and separately for Belgium and the Netherlands, the number of necessary items lacking due to financial reasons in 1985 with the corresponding number in

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1988. The results indicate, first of all, that the great majority of the population (76.2% in Belgium and 80.4% in the Netherlands) did not undergo a change in the extent of deprivation between 1985 and 1988. Moreover, while the proportion of the population experiencing an improvement was about the same in both countries (12.2% in Belgium and 12.9% in the Netherlands), increased deprivation appeared to be more common in Belgium (11.5%) than in the Netherlands (6.6%).

Table 7
The dynamics of relative deprivation in Belgium and the Netherlands
using Mack & Lansley's (1985) majority necessity index (percentages)

Number of necessary items lacking due to financial reasons	Belgium 1988					The Netherlands 1988				
	0	1	2	≥ 3	Total	0	1	2	≥ 3	Total
0	73.1	7.8	1.5	1.0	83.4	76.2	4.8	0.6	0.2	81.8
1	8.9	2.2	0.6	0.5	12.2	9.4	3.6	0.7	0.2	14.0
2	1.4	0.6	0.3	0.1	2.5	0.8	1.4	0.3	0.1	2.6
≥ 3	0.9	0.3	0.1	0.6	1.9	0.5	0.7	0.1	0.3	1.5
Total	84.3	10.9	2.5	2.3	100.0	86.9	10.5	1.8	0.8	100.0

The latter result may be the consequence of the overall reduction in the incidence of deprivation observed for the Netherlands in Table 3 as well as in the marginal distributions of Table 7. Naturally, whenever these distributions change, there must be some mobility. In order to arrive at conclusions about the degree of social openness or social fluidity, it is customary in mobility research to control for mobility caused by such marginal changes (structural mobility). Log-linear models may be used to analyze the dynamics of relative deprivation after taking into account changes in the overall distribution of relative deprivation between 1985 and 1988. Moreover, these models can be used to test the differences between Belgium and the Netherlands.

A large number of log-linear and log-multiplicative models were fitted to the data in Table 7. The best fitting model with the fewest parameters appeared to be a log-multiplicative quasi-independence model (Xie 1992) in which the parameters for the cells on the main diagonal were allowed to vary (log-multiplicatively) by country.^[17] This model implies that there is a tendency to be immobile, which varies by the number of necessary items lacking due to

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financial reasons as well as by country, and that, if a change occurs, origin and destination status are independent.

The parameters for the cells on the main diagonal indicate a tendency for immobility which appeared to be highest for those without any item lacking as well as for those with three or more items lacking. The two countries appeared to be different in this respect: In Belgium, tendencies to be immobile were weaker than in the Netherlands. This result implies that, in the Netherlands, situations without deprivation (i.e., no items lacking) as well as with high levels of deprivation (i.e., three or more items lacking) are more stable than in Belgium. Apparently, the degree of social openness is lower in the Netherlands.

The dynamics of relative deprivation was analyzed on the basis of the SDS as well. For that purpose, all sample members were ranked according their score on the SDS in a given year. This was done separately for Belgium and the Netherlands. After making quintiles (20%-groups), a person's position in 1985 was cross-classified with his/her position in 1988. The results are displayed in Table 8. It should be noted that persons in the lowest quintile are the least deprived, whereas persons in the highest quintile are the most deprived. Moreover, the results are affected by structural mobility, because the quintiles were based on the cross-sectional samples. For that reason, and because the observed percentages may be affected by sampling fluctuations and measurement error, log-linear and log-multiplicative models were fitted to the data.

Table 8
The dynamics of relative deprivation in Belgium and the Netherlands
using Muffels' (1993) subjective deprivation scale (percentages)

Quintile position on the SDS	Belgium 1988							The Netherlands 1988						
	1st	2nd	3rd	4th	5th	Total	1st	2nd	3rd	4th	5th	Total		
1985 1st	7.1	4.1	3.6	2.9	2.4	20.1	8.1	4.3	3.5	2.6	1.8	20.3		
2nd	4.0	6.4	4.6	3.0	2.1	20.1	4.1	7.3	5.2	2.3	1.8	20.6		
3rd	3.2	3.8	5.4	4.2	3.1	19.7	2.6	4.0	6.1	4.7	2.9	20.3		
4th	3.5	3.3	4.0	4.9	4.2	19.9	3.6	2.4	2.4	5.5	3.6	17.6		
5th	2.2	2.4	2.5	4.8	8.3	20.2	1.7	2.4	2.3	4.8	9.9	21.2		
Total	20.0	19.9	20.2	19.7	20.1	100.0	20.3	20.4	19.5	19.9	20.0	100.0		

The fixed distance model (Haberman 1979) with specific parameters for the main diagonal of the transition tables appeared to be the best fitting model.^[18] According to the fixed distance parameter, large changes in living conditions

are less likely than small changes. Moreover, the parameters for the main diagonal cells indicate that immobility is higher in the lower quintiles compared to the higher quintiles. Apparently, the living conditions of the most deprived are more volatile than those of the lesser deprived. Since the differences between Belgium and the Netherlands proved to be insignificant, the degree of social openness in the two countries may be considered equal in this respect.

9 Impoverishment and social exclusion

This section provides a test of the hypotheses on impoverishment and social exclusion advanced in Section 3. First of all, in Subsection 9.1, a comparison is made of the stability of income poverty and relative deprivation. It is expected that situations of relative deprivation are more stable than situations of income poverty. Secondly, in Subsection 9.2, an assessment is made of the extent to which the processes of impoverishment and social exclusion are mutually reinforcing. The hypothesis was that situations of relative deprivation increase the risks of becoming income poor, while situations of income poverty increase the risks of becoming relatively deprived. Thirdly, in both subsections, it is tested whether the differences between Belgium and the Netherlands are indeed insignificant.

9.1 The stability of income poverty and relative deprivation

To compare the stability of income poverty and relative deprivation, log-linear and log-multiplicative models were fitted to the income-to-needs mobility tables and Table 8 on the dynamics of relative deprivation using the SDS.^[19] The log-multiplicative full interaction model appeared to give the best fit to the observed mobility patterns. While it was assumed that the parameters for the various combinations of quintile positions on the income-to-needs ratios varied (log-multiplicatively) by country, the parameters for the dynamics of relative deprivation were constrained to be equal in Belgium and the Netherlands. Equality restrictions were also imposed on the parameters of the transition tables referring to impoverishment, reflecting the assumption that the dynamics of income-to-needs did not vary by income poverty line. The model fit proved to be acceptable given the large number of cases and compared to a range of other models.^[20] Table 9 displays the parameter estimates of the preferred model.

Table 9
Estimated parameters of the log-multiplicative full interaction model
for impoverishment and social exclusion in Belgium and the Netherlands

		Belgium 1988				
Quintile		1st	2nd	3rd	4th	5th
1985	1st	1.51	0.47	-0.34	-0.71	-0.93
	2nd	0.32	0.76	0.14	-0.51	-0.72
	3rd	-0.35	0.17	0.45	0.16	-0.43
	4th	-0.80	-0.57	0.06	0.74	0.56
	5th	-0.68	-0.83	-0.31	0.31	1.51

Notes: Log-multiplicative comparison parameters: impoverishment in the Netherlands = 1.23, social exclusion in Belgium and the Netherlands = 0.56

The parameter estimates reflect the familiar saddle-shaped patterns of income mobility and deprivation dynamics. More interesting, however, are the log-multiplicative comparison parameters presented in the bottom row of Table 9. These parameters, first of all, confirm the earlier result that changes in income position were less likely in the Netherlands compared to Belgium. Apparently, Dutch society is less fluid in terms of income mobility. Secondly, it appears, rather unexpectedly, that changes in deprivation status are more likely than changes in income position.

At least two explanations may be put forward for the observed high level of change in relative deprivation. First of all, it may be explained from the subjective dimension of the deprivation scale. While the SDS incorporates an objective dimension (i.e., (not) having or doing specific items), subjective feelings of deprivation are incorporated through the construction of a weighting scheme. From the calculation of Pearson rank correlations, it appears that the correlation between the objective dimensions was 0.51 for Belgium and 0.59 for the Netherlands.^[21] Implementation of the weighting scheme implied a reduction of these correlations to 0.33 for Belgium and 0.43 for the Netherlands. Apparently, the subjective dimension of deprivation is less stable than the objective dimension.

Secondly, due to unreliability of measurement, high levels of change may be observed while the true deprivation status is rather stable (Hagenaars 1991; Rendtel et al. 1991). Indeed, according to conventional criteria, the reliability of the SDS used in this contribution is modest.^[22] If income-to-needs are measured

more reliably than deprivation status, the observed level of stability of the former may be higher, while the unobserved or 'true' level of stability is lower.

9.2 *The interrelationship of impoverishment and social exclusion*

To analyze the extent to which the processes of impoverishment and social exclusion are interrelated, a path analysis (Wright 1934) was made of the correlations between income-to-needs and level of deprivation in 1985 and 1988. In the analysis, both the majority necessity index (MNI) and the subjective deprivation scale (SDS) were used.

Table 10
Impoverishment and social exclusion:
Stability and lagged cross-effects, standardized regression parameters,
income-to-needs, and the majority necessity index (MNI)

	Stability				Lagged cross-effects			
	Income-to-needs		Deprivation		Income-to-needs in 1985 → deprivation in 1988		Deprivation in 1985 → income-to-needs in 1988	
	Bel	Nld	Bel	Nld	Bel	Nld	Bel	Nld
European poverty line	0.473	0.600	0.258	0.408	-0.099	-0.074	-0.099	-0.074
Subjective poverty line	0.485	0.626	0.257	0.415	-0.101	-0.065	-0.101	-0.065
Legal poverty line	0.488	0.619	0.257	0.402	-0.096	-0.074	-0.096	-0.074

The preferred model has two dependent variables: income-to-needs and level of deprivation in 1988. While both appeared to depend on income-to-needs and level of deprivation in 1985, it did not prove to be necessary to include an interaction term between the two. The analyses were done separately for Belgium and the Netherlands as well as for the three income-to-needs ratios and the two deprivation indices. Equality restrictions could be imposed on the lagged cross-effects. All models were fitted with LISREL (Jöreskog and Sörbom 1989a, 1989b). While Table 10 displays the results on the MNI, Table 11 presents the results on the SDS.

The results in Tables 10 and 11 indicate that income-to-needs are more stable than levels of deprivation, irrespective of the income poverty line and the

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relative deprivation index. Also, the stability of income-to-needs and relative deprivation is higher in the Netherlands compared to Belgium, if the lagged cross-effects are taken into account. The latter are statistically significant in both countries. However, they tend to be somewhat stronger in Belgium.

Table 11
Impoverishment and social exclusion:
Stability and lagged cross-effects, standardized regression parameters,
income-to-needs, and the subjective deprivation scale (SDS)

	Stability				Lagged cross-effects			
	Income-to-needs		Deprivation		Income-to-needs in 1985 – – deprivation in 1988		Deprivation in 1985 – – income-to-needs in 1988	
	Bel	Nld	Bel	Nld	Bel	Nld	Bel	Nld
European poverty line	0.469	0.573	0.327	0.416	-0.072	-0.052	-0.072	-0.052
Subjective poverty line	0.484	0.608	0.328	0.413	-0.069	-0.045	-0.069	-0.045
Legal poverty line	0.488	0.586	0.328	0.412	-0.068	-0.061	-0.068	-0.061

These results thus show that low levels of deprivation contribute to a decrease in income-to-needs, while low levels of income-to-needs contribute to an increase in level of deprivation. Apparently, the path analyses support the hypothesis on the interrelationship of impoverishment and social exclusion. The two processes are mutually reinforcing.

10 Conclusions

Starting from a conceptual framework distinguishing between direct and indirect definitions of poverty on the one hand and static and dynamic definitions of poverty on the other hand, this contribution presented results on situations of income poverty and relative deprivation as well as on processes of impoverishment and social exclusion in Belgium and the Netherlands. The main research questions were about the dynamics of income poverty and relative deprivation, about the extent to which the processes of impoverishment and social exclusion are mutually reinforcing and about differences between Belgium and the Netherlands in these respects. It was hypothesized that situations of relative deprivation are more stable than situations of income

poverty, that situations of relative deprivation increase the risks of becoming income poor, while situations of income poverty increase the risks of becoming relatively deprived and that Belgium and the Netherlands would not be significantly different.

Unexpectedly, situations of relative deprivation appeared to be less stable than situations of income poverty. Two tentative explanations were suggested for this result. The first explanation was concerned with the definition of relative deprivation. Usually, such definitions include an objective dimension referring to the possession of certain items as well as a subjective dimension referring to feelings of disadvantage. The results in this contribution suggest that the subjective dimension is less stable than the objective dimension. This may be one of the reasons for the rather low level of stability of relative deprivation.

The second explanation was concerned with the measurement of relative deprivation. If measures of relative deprivation are less reliable than measures of income poverty, the observed level of stability of the former may be lower, even if the 'true' level of stability is higher. The majority necessity index and the subjective deprivation scale applied in this contribution have modest reliabilities. This may have produced an underestimation of the 'true' level of stability of people's deprivation status. Clearly, this would call for an improvement of the instrument designed to measure the concept of relative deprivation.

The second hypothesis on the interrelationship between the processes of impoverishment and social exclusion was supported by the data. Significant cross-effects were found of income poverty on the dynamics of deprivation as well as cross-effects of relative deprivation on the dynamics of income. Apparently, the processes of impoverishment and social exclusion are mutually reinforcing, causing a vicious circle of poverty in which income poverty increases relative deprivation and relative deprivation contributes to a situation of income poverty.

The cross-effects of income poverty and deprivation may be explained as follows. On the one hand, income poverty may have a *direct* impact on relative deprivation due to the necessity of financial resources to maintain a standard of living. On the other hand, the impact of income poverty may be *indirect*, through the erosion of other economic resources (e.g., savings) as well as social, cultural and physical resources. Similarly, the impact of relative deprivation on income poverty may be mediated by such resources since these are likely to be affected by unfavourable living conditions and to have an impact on the process of income attainment.

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The third hypothesis on the lack of differences between Belgium and the Netherlands in the dynamics of income poverty and relative deprivation was only partially supported by the data. While cross-national differences in the overall stability of relative deprivation appeared to depend on the measuring instrument, the volatility of income-to-needs was consistently found to be higher in Belgium. The latter result may be due to a number of factors. First of all, while Belgium has a lower level of income inequality compared to the Netherlands (Atkinson et al. 1995), changes in income have, on average, similar absolute values (Fouarge and Dirven 1995). As a consequence, Belgium is expected to have higher levels of income mobility (Dirven 1996).

Secondly, although married women's labour market participation has been increasing in the Netherlands, more people live in two-earner households in Belgium.^[23] Since two-earner households are more likely to experience labour market events (e.g., unemployment, reduced working hours and/or wage decrease), it can be expected that household incomes are less stable in Belgium. Thirdly, the data used in this contribution indicate that the labour market as well as the marriage market are less stable in Belgium in terms of number of hours worked and marital status, respectively. Given the impact of changes in labour market status and household composition on household income, Belgium is expected to have higher levels of income instability as well. Concerning Esping-Andersen's classification of Belgium and the Netherlands as social-democratic welfare regimes, it may be concluded that, even within the same world of welfare capitalism, people's living conditions may be more stable in some countries than in others.

Notes

- [1] Related distinctions were made by Sen (1979) between the direct method and the income method and by Atkinson (1987) between the right to a minimum level of resources and the attainment of a minimum standard of living.
- [2] Some authors define (social) exclusion in terms of (social) rights. This approach is not used here for the following reasons. Firstly, definitions such as those proposed by Room (1991) and Gamson (1995) appear to combine processes as well as situations. Secondly, people with similar rights may be exposed to different life events and have different living conditions, while people with different rights may be jeopardized by the same events and live in similar circumstances. Admittedly, both authors do refer to relevant variables operating in the process of social exclusion as defined here. However, (social) rights, or the extent to which these are secured, fall beyond the scope of this contribution.

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- [3] Permeability refers to mobility across the income/deprivation poverty line taking into account the extent of mobility due to changes in the (marginal) distributions of income poverty/deprivation.
- [4] Ultee and Luijkx (1986) argue that relative *intergenerational* standard-of-living mobility rates are indicative of social openness or social fluidity. Here, it is maintained that relative *intragenerational* mobility rates into and out of income poverty and relative deprivation can be used for the same purpose.
- [5] On various occasions, additional samples were drawn by SN causing an increase of the sample size between 1985 and 1988.
- [6] Children aged 14 or more get a weight of 0.5. The European poverty line as defined here is a slightly modified version of the poverty line used by O'Higgins and Jenkins (1990).
- [7] Dutch students living on their own are considered to be a household separate from their parents. Usually, they are not entitled to assistance benefits, but to student grants at a lower level of benefit.
- [8] From the SDS, a subjective deprivation poverty line (SDL; Muffels 1993) can be derived. For doing so, use is made of the life resource evaluation question (LREQ). However, because the Belgian questionnaires do not include the LREQ, the SDL could not be derived for Belgium.
- [9] While the European poverty line was based on the comparable income definition, this could not be done for the SPL because of conceptual reasons. To compute the SPL, it is assumed that respondents know about all their income components but that they misperceive their needs. Correction for misperception occurs on the basis of all available income components in the panels. Therefore, it makes sense to include an income definition based on all income components in the regression model for the SPL rather than the less extensive comparable income definition. Because the legal poverty line is based on the level of guaranteed minimum income, it makes no difference for the computation of the poverty line which income definition is used, but it does make a difference for the results obtained.
- [10] The following items were used: A telephone, a separate bedroom for children over ten of different sexes, a refrigerator, a damp-free dwelling, exclusive use of indoor WC, a meal with meat, poultry or fish every two days, a washing machine, a car, a week's annual holiday away from home and leisure equipment for the children.
- [11] In the 1988 wave of the Belgian panel, the reason for lacking an item was only asked if it was considered a necessity by the head of household. In order to be able to compare the results, the same restriction was applied to the 1985 data as well as to the Dutch data. It should be noted that this restriction was not used by Mack and Lansley (1985), who consider a household to be deprived of an item, even if it does not consider it to be a necessity.
- [12] A slight reduction of deprivation was found for Belgium, if the full set of items from the Belgian Socio-Economic Panel was used.
- [13] Note that quintiles were computed on the cross-sectional distributions. This explains why the marginal percentages in Table 5 do not equal 20%.

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- [14] According to the European poverty line, 42.5% of all persons did not change quintile position between 1985 and 1988 in Belgium against 46% in the Netherlands. According to the SPL, these percentages were 44.8 and 50.0 for Belgium and the Netherlands, respectively, while the corresponding percentages for the legal poverty line were 42.2 and 48.5.
- [15] All models were fitted with IEM (Vermunt 1993). Given the large numbers of observations, the model selection was based on the Bayesian Information Coefficient (Raftery 1986).
- [16] The model's L^2 was 82.7 with 79 degrees of freedom (N=6,268).
- [17] The model's L^2 was 23.8 with df=13 (N=6,622).
- [18] The model's L^2 was 86.7 with df=26 (N=5,940).
- [19] The MNI could not be used for that purpose, because over 80% was not deprived of any item and, consequently, calculating quintiles would not have made much sense.
- [20] The model's L^2 was 154.8 with df=110 (N=9,243).
- [21] These correlations are comparable in size to the correlations between income-to-needs in 1985 and income-to-needs in 1988 (irrespective of the income poverty line).
- [22] Cronbach's α for the SDS based on the set of common items ranged from about 0.5 to 0.6, implying a correlation of about 0.75 between the observed/manifest deprivation status and the unobserved/latent ('true') deprivation status.
- [23] For Belgium, the proportions of people in two-earner households were 0.35 and 0.36 in 1985 and 1988, respectively, while the corresponding figures for the Netherlands were 0.23 and 0.29.

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Acknowledgements

The authors wish to thank Jos Berghman for his helpful comments and suggestions.

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22-12-2009 8:13:48

Materiaal : Aax PPN : 162477198
 Titel : Empirical poverty research in a comparative perspective
 :
 Auteur : Andre, Hans-Jurgen (ed.)
 Deel / Supplem. :
 Corporatie : Externe Database :
 Jaar / Editie : 1998 Extern Nummer :
 Uitgave : Aldershot [etc.] Ashgate
 Serie / Sectie :
 Pag-ISSN / ISBN : 1-85972-688-7

162477198 ; 295 N 14 ; ; ~eH31960819~eV~c

Jaar	:	Datum Indienen	:	21-12-2009 13:54
Volume	:	Datum Plaatsing	:	21-12-2009 13:54
Aflevering	:	Datum Rappel	:	18-01-2010
Leenvorm	:	Particulier	:	N
Leveringswijze	:	Geplaatst bij	:	0008
Cooperatiecode	:	Indiener	:	0036/9999
Aanvrager	:	Eindgebruiker	:	UM01
Aanvragerident.	:	Aanvraagident.	:	
Auteur	:		:	
Artikel	:		:	
Bladzijden	:		:	257-281
Bron	:		:	
Opmerking	:		:	svp niet verkleinen

Indiener	:	0036/9999	Stuur rekening	:	N
Aanvrager	:	0036/4099	Eindgebruiker	:	UM01
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Aantal eenheden : 25
 Aanvraagnummer : A091766575