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Political Democracy: A Cross-National Quantitative Analysis of Modernization and Dependency Theories

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Daniël Heinsius MA Thesis Award 1996

The Daniël Heinsius MA Thesis Award has been conferred in 1997 by the Board of Editors of *Acta Politica* for the sixth time. The award was instituted in 1990 to gain a wider audience for the results of high quality research performed by MA students, which usually only gained recognition within a small circle of supervisors. As the Board of Editors phrased it in 1990: the award is given to a student whose MA thesis has proved to meet the highest standards of research in political science. The actual reward for the prize-winning student is publication of the thesis, as an article, in *Acta Politica*.

This MA Thesis Award is named after Daniël Heinsius, who can be considered the first professor of political science in Europe. Daniël Heinsius was appointed to a professorship of Politices at the University of Leiden in 1612. His courses were greeted with such enthusiasm that Heinsius was called the *lumen academiae*. By instituting the Daniël Heinsius MA Thesis Award, the Board of Editors of *Acta Politica* wanted to encourage graduating students to find a wider audience for the results of their research.

The Award has been given on five other occasions. Since the 1994 Award was presented *ex aequo* to two graduate students, in sum seven MA theses have now been honoured. These theses dealt with such diverse subjects as: the level of political knowledge among the Dutch electorate; student protests during the "velvet revolution" of 1989 in the former Czechoslovakia; extreme right-wing parties in Scandinavia; the justifiability of Dutch disability insurance; the development of individualism and its political consequences in the Netherlands; and the empirical applicability of the so-called voting paradox.

The selection of a candidate for the Daniël Heinsius MA Thesis Award has proved to be difficult time and again. This year was no exception. The standard of the theses that were brought to the attention of the Board of Editors was once again very high. The choice of subject matter and methodological approaches differed considerably. The decision-making process in the Board of Editors eventually resulted in the unanimous nomination of Renske Doorenspleet for the MA thesis *Ontwikkeling, afhankelijkheid en democratie* (*Development, dependence and democracy*), which she wrote to complete her degree in political science at the University of Leiden.

Renske Doorenspleet's thesis deals with the problem whether the different levels of democracy in countries can be explained best by internal or external factors. In order to assess the explanatory power of these factors she has set up two explanatory models, derived from the modernization approach (internal) and the dependency theory (external). The models are tested by applying path analysis. The modernization approach, which is dealt with on the basis of Seymour Martin Lipset's classic article "Some Social Requisites of Democracy" and the research that has been inspired by Lipset's work, argues that democracy is a feature of "modernization". Dependency theory, which has been used by scholars such as Kenneth Bollen, aims to explain differences in the level of democracy on the basis of the position that countries have in the so-called world system. Bollen's research has led to the conclusion that countries in the "core" of the world system have a higher level of democracy than countries in the "semiperiphery" or the "periphery", even when differences in the level of economic development are controlled for.

Renske Doorenspleet's MA thesis impressed the Board of Editors because of its transparency and the consistent and rigorous application of research techniques. The careful way in which ms. Doorenspleet tested whether the characteristics of the data conform to the requirements of the research techniques deserves a separate mention. The results of her thesis clearly show that a combination of the two aforementioned models offers the most satisfactory explanation for the differences in the level of democracy among countries. By explicitly building on two important macro-political research traditions, Renske Doorenspleet shows that the predictions of two research programmes that seem to be diametrically opposed, when combined into one model, jointly offer explanations that are superior to separate explanations. She has formulated a "combination model", in which the hypotheses of the modernization approach and the dependency theories have been integrated, and has demonstrated, for the period between 1965 and 1990 and for three decades in that period (1965-75, 1970-80 and 1980-90), that a satisfactory explanation can be given for the level of democracy (with R^2 s ranging between .48 and .54) using four variables: the level of socio-economic development, international dependency, the size of the middle class, and income inequality.

Daniël Heinsius MA Thesis Award Winner 1996

Political Democracy: A Cross-National Quantitative Analysis of Modernization and Dependency Theories¹

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Abstract

The purpose of this article is to indicate to what extent a combination model based on the modernization and dependency approaches may explain the difference in the level of democracy among countries in different regions of the world. A quantitative empirical research design was set up and applied to data for 87 developing and developed countries over four time periods (1965-1975, 1970-1980, 1980-1990 and 1965-1990). A measure of the size of the middle class, an important theoretical intervening variable, was developed. To estimate a causal model, path analysis, a multiple regression technique, was used. The main conclusion of this study is that the investigated combination model is empirically supported. The core modernization and dependency hypotheses were confirmed in the empirical analysis.

1 Introduction

Although democracy is now spreading to more and more corners of the globe, contrasts still remain in terms of the capacity to develop democratic structures and in the level of democracy attained. Explaining these differences, both now and in the past, has always formed a central theme within political science, and this paper now returns to this question in an attempt to integrate different theories within a single generalized model.

An explanation of the difference in the level of democracy between industrialized countries and the less developed countries of the Third World was first offered by modernization theories (cf. Lerner 1958; Lipset 1959).² This approach argues that socio-economic development (measured by the gross national product per capita, urbanization and industrialization, etc.) would be conducive to a transformation of society; this "new" society, in its turn, would induce political changes, resulting in a higher level of democracy. According to this approach, each less developed country will follow the same path already traversed by the now developed and democratic countries. If less

developed countries are not able to undergo this political modernization process, this is, according to the modernization theory, due to socio-economic domestic factors.

As a reaction and alternative to the modernization approach, the dependency theories, emerging in the early 1970s, provided another explanation (cf. Wallerstein 1974).³ This approach states that knowing a country's position in the international division of labour is essential for understanding its social and political developments. According to this approach, a world system has been developed, and it is the asymmetrical exchange relations and international division of labour within this system that generates inequality between the countries. The position of a country in the world system, located in either the dominant rich core or impoverished subordinate periphery, is an important determinant of democracy. Dependency theory argues that if a country is not able to become more democratic this is due to external, international rather than internal, domestic factors.

Modernization versus dependency theories, internal versus external factors: is there a stalemate? Or could a synthesis of the two theories explain democracy? I think it is possible, and even important, to synthesize these theories: such a combination would be able to determine the relative direct and indirect influences of internal and external factors. The extent to which central variables of the modernization and dependency theories influence the level of political democracy of countries is the topic of this article.

To assess the influence of these factors on the level of political democracy, a quantitative-empirical research design was set up and applied to data for 87 developing and developed countries over four time periods (1965-1975, 1970-1980, 1980-1990 and 1965-1990). To estimate a causal model, path analysis, a multiple regression technique, was used. This method offers the possibility to analyse the relationships in a complex model. The path coefficients indicate the relative strengths of the influences and the direction of the association.

Section 2 is a discussion of the effects of several "modernization factors" and "dependency factors" on the level of political democracy. This discussion will result in the specification of a theoretical model which contains modernization and dependency variables. In Section 3, the research design is described. Section 4 gives the results of the quantitative analysis of the model. The conclusions of the analysis are formulated in Section 5.

2 Political democracy: modernization and dependency theories

2.1 Modernization theories

A central tenet of modernization theories is that socio-economic development exerts a positive influence on the level of democracy in a country. Seymour Martin Lipset's article in the *American Political Science Review* of 1959 can be seen as the starting point of all future work on the relationship between development and democracy. Lipset argued simply that "the more well-to-do a nation, the greater the chances that it will sustain democracy" (Lipset 1959: 75). Since the publication of Lipset's article, many quantitative studies have examined its argument. All of them have found a positive relationship (Cutright 1963; McCrone and Cnudde 1967; Neubauer 1967; Olsen 1968; Jackman 1973; Bollen 1979; Bollen 1980; Bollen 1983; Bollen and Jackman 1985; Muller 1988; Inglehart 1988; Bollen and Jackman 1989; Bollen 1991; Muller and Seligson 1994; Muller 1995; Bollen and Jackman 1995). The evidence produced by all these authors suggests that Lipset's argument is very durable.

I suspect, however, that the form of the association between all dimensions of socio-economic development and the level of democracy is not simply a linear one, as suggested by Lipset (Lipset 1959: 80), but a non-linear one. A few years after Lipset's publication in 1959, Deutsch hypothesized that social mobilization (i.e. socio-economic development) will only influence democracy if indicators of socio-economic development (e.g. urbanization, literacy, media, income per capita etc.) have crossed a certain threshold. Deutsch, however, finds no empirical support for his argument (Deutsch 1961). Later, Neubauer also criticized the assumption of a linear relationship between socio-economic development and democracy. Unlike Deutsch, he argues that the influence of socio-economic development on the level of democracy will decrease, once a country has crossed a certain threshold: "Certain levels of 'basic' socio-economic development appear to be necessary to elevate countries to a level at which they can begin to support complex, nationwide patterns of political interaction, one of which may be democracy. Once above this threshold, however, the degree to which a country will 'maximize' certain forms of democratic practice is no longer a function of continued socio-economic development" (Neubauer 1967: 1007).

Jackman has compared linear with curvilinear models of the effects of economic development (energy consumption per capita) on his index of democracy (which doesn't contain stability!⁴) and concludes that "theoretical considerations along with the results of the analysis lead us to the conclusion that the data are much more consistent with Neubauer's argument for curvilinear effects than they are with the linear developmental hypothesis suggested

by Lipset" (Jackman 1973: 621). Jackman's results suggest that a strong positive non-linear influence of socio-economic development on democracy can be expected.

According to modernization theorists, the explanation for the positive effect of socio-economic development on the level of political democracy in a country is to be found in the presence of two interrelated intervening variables: middle class and income inequality.⁵ Socio-economic development changes the degree of social stratification: in the beginning the social structure resembles a pyramid (the majority of the population is poor and lower class), but changes gradually into a diamond shape as a consequence of socio-economic development (the majority of the population is middle class and relatively rich). Social transformation will result in more democracy because: "a large middle class plays a mitigating role in moderating conflict since it is able to reward moderate and democratic parties and penalize extremist groups" (Lipset 1959: 83). According to Lipset, the middle class is an important pro-democratic force for modernization theorists and this class grows in size with socio-economic development.

Modernization theorists argue that socio-economic development is closely related to the level of democracy through a decline of income inequality. Only societies that have a relatively small number of poor people are expected to have a population that is interested in political participation and the promotion of democracy. Societies with a large subordinate mass and a dominant wealthy elite (high level of income inequality) may generate oligarchy or tyranny. In chapter six of his famous book *Polyarchy*, Dahl suggests that extreme inequalities in the distribution of goods will produce hegemonic regimes (Dahl 1971). He points out two causes. First, economic resources can be translated into political resources. A concentration of economic resources could allow the advantaged people to prevent reforms and the granting of political rights to the poorer people. The rich people own the economic resources, and they are able to control and manipulate the mass media and to suppress the population by force. Second, income inequality might undermine democracy because of the political resentment generated by this inequality. Dahl argues that political democracies ("polyarchies") are more vulnerable than other regimes because they require legitimacy.

In contrast to Dahl, proponents of the "logic of industrialization thesis" argue that the process of technological development not only influences the distribution of material goods, but also the political regime of a country (Kerr 1962). These authors stress that the relationship between income inequality and democracy is spurious. This implies that the relationship between income inequality and democracy is theoretically unclear.

Empirical studies contradict each other: they either find a negative association (Muller 1988) or no relationship (Bollen and Jackman 1985;

Bollen and Jackman 1989). Muller's research (1995) is an interesting step towards stimulating a debate about the relationship between income inequality and democracy. He hypothesizes that income inequality is an economic determinant of a positive or negative change in the level of democracy (democratization).⁶ Moreover, Muller argues that the negative effect of income inequality on democratization can counteract the positive influence of economic development on democratization. He stresses that the process of economic development initially leads to an increase of income inequality and only later to a decrease (inverted U-curve).⁷ This finding may explain the decline in the level of democracy in moderately developed countries (Muller 1995a: 966-967).

Muller argues that two conclusions can be drawn on the basis of the results of his multivariate analysis. First, income inequality indeed hinders democratization, and this negative influence explains the paradoxical trend among countries at intermediate levels of economic development for democracy to decrease instead of increase. Second, economic development has the expected positive influence on democratization when there is a control for the negative effect of income inequality on the change in level of democracy. According to Muller, a properly specified model of the relationship between economic development and democratization *requires* that income inequality be taken into account (Muller 1995a: 975, 979-981).

Bollen and Jackman criticize Muller's substantive argument. According to them, Muller's claim that higher inequality generated a decline in the level of democracy from 1965 to 1980 neglects the fact that the decline was followed by restorations of democracy after 1980 in many cases, even though there were no major changes in the level of income inequality. Furthermore, they argue that more analyses are needed of the structural factors that may mediate the relationship between socio-economic development and democracy. Although Muller discusses how changes in the class system (measured as a proportion of the working class, middle class) affect democratization, and considers this intermediate influence essential (Muller 1995a: 966-969), his empirical analysis does not include any measures of class structure. This omission may have created problems in interpreting the strength of the variables. As Bollen and Jackman write: "The omitted variables are probably correlated with both income inequality and political democracy, so the coefficient estimate for income inequality is biased. For example, countries with a large bourgeoisie should have more income inequality", (Bollen and Jackman 1995: 983-984). The main lesson of this critique is that analyses have to include the period after 1980 and the size of the middle class in a country as intervening variables. In this study these comments will be taken into account.

2.2 Dependency theories

Dependency theories hold that the world system is divided into a rich dominant core and an impoverished subordinate periphery. Economic dependency is highest in the periphery and least in the core. Whether the potential for democratization becomes manifest will depend on mechanisms generated by the process of "peripheralization", that is, external factors. The international hierarchy caused by asymmetrical exchange relations has important consequences for the internal situation of peripheral countries; this distorts the positive influence of socio-economic development on the level of democracy. The middle class is a very weak power in the periphery, because the core supports and favours the traditional elite over other groups. The peripheral middle class is too small in size to generate a higher level of democracy. Moreover, dependency theorists argue that income inequality is very high in peripheral countries. The majority of the population remains poor, while only a small elite benefits from the unequal international division of labour. This situation hinders democratization in the countries of the periphery. According to dependency theories, the influence of international dependency on the level of democracy may be direct and negative, but income inequality and middle class are essential intervening variables.

At first sight, the argument of dependency theory – that the level of democracy in the core is higher than in peripheral countries – seems very plausible. Not many attempts have been made to test this assertion empirically, despite the existence of much empirical literature concerning the factors influencing democracy. Empirical dependency studies have mainly focused on the explanation of economic growth and on discrepancies in growth levels between core and peripheral countries.

As far as I know, Bollen's study (1983) is the only research that focuses on the direct influence of dependency on democracy. The results of his study indicate that a country's position in the world system influences its level of democracy, even when the level of economic development remains constant; nevertheless, the positive influence of economic development on democracy is still significant (Bollen 1983: 468-479).

Bollen argues that subsequent research should take some of his findings into account. One finding of his analysis is that Snyder and Kick's world system measure contains classification errors. This measurement error underlines the need for theoretical and empirical studies to develop new world system measures. Moreover, Bollen points out the possibility of "indirect effects of semiperipheral or peripheral position (or dependency) on political democracy" (Bollen 1983: 477).

To my knowledge, Bollen's study has not (yet) been followed by quantitative empirical studies on the indirect influence of dependency on democracy via

middle class and income inequality (two important intervening variables). Fortunately, much quantitative empirical research has been done concerning the influence of dependency on income inequality.

Most studies report a positive association between dependency and income inequality (Chase-Dunn 1975; Kaufman, Chernotsky and Geller 1975; Rubinson 1976; Rubinson and Quinlan 1977; Bornschier, Chase-Dunn and Rubinson 1978; Evans and Timberlake 1980). According to many authors, this result is evidence of the fact that the core has a relatively large middle class, as dependency theory predicts. However, this argument has never been investigated, even though such a study would be desirable. As long ago as 1978, Bornschier, Chase-Dunn and Rubinson pointed out the importance of research on the intervening influence of the middle class: "The effect of dependence on income inequality is most likely due to its effects on the class structure of the country and the translation of this class structure into political power. These hypotheses are promising areas for future research" (Bornschier, Chase-Dunn and Rubinson 1978: 665).

Yet, many scholars have criticized such results. For example, Weede points out that any researcher who wants to determine the influence of dependency on inequality controlling for development has to take into account the U-relation between economic development and income inequality (Weede 1980). Weede, like Bollen and Jackman (1985), finds no significant association between dependency and income inequality, while he controls for the square of economic development. Nolan (1983), however, concludes that there is an influence of dependency on income inequality and that it is not caused by an incorrect control for economic development.

There is no consensus among these researchers.⁸ In spite of this controversy in empirical quantitative studies, I expect, mainly on the ground of theoretical arguments, that the influence of dependency on income inequality is positive. I will test this hypothesis, taking into account the indirect influence of dependency on income inequality via the middle class.

2.3 Hypotheses and model

In short, modernization theory asserts that socio-economic development causes a social transformation, which is a good basis to increase the level of democracy. From Section 2.1, which dealt with modernization theory, the following hypotheses can be deduced. The first hypothesis involves the direct influence on democracy:

H1: The influence of socio-economic development on the level of democracy is positive and non-linear.

The second set of hypotheses involves indirect influences: socio-economic development is indirectly related to the level of democracy via the size of the middle class and via income inequality.

H2: The influence of socio-economic development on the level of democracy via income inequality is positive and indirect. Income inequality is an inverted U-function of socio-economic development and a linear negative function of the size of the middle class; the influence of income inequality on the level of democracy is negative and linear.

H3: The influence of socio-economic development on the level of democracy via the size of the middle class is positive and indirect. Socio-economic development leads to an increase of the size of the middle class; and the growth of the middle class, in its turn, causes a higher level of democracy.

In Section 2.2 I discussed the critique of the dependency theory on the modernization theory and previous quantitative empirical research. This critique gives rise to the following hypotheses:

H4: The influence of dependency on the level of democracy is direct and negative.

H5: The influence of dependency on the level of democracy via the size of the middle class is negative and indirect.

H6: The influence of dependency on the level of democracy via income inequality is negative and indirect.

In Figure 1 the "combination model" (a combination of the modernization and dependency models) is shown. The direction of the arrows indicates the expected direction of the causal relationship. The plus or minus sign represents a positive or negative influence.

There are five reasons why the approach that is adopted in this paper may be important and why this analysis may be an improvement on former studies.

First, research concerning the relationship between socio-economic development, middle class and democracy is clearly needed. In a recent article Bollen and Jackman called for such studies: "Further analyses of the structural factors that may mediate the relationship between industrialization and democratization are needed. The impact of the changes in the class structure have not been evaluated. Do such changes mediate the effects of industrialization on democratization?" (Bollen and Jackman 1995: 988). Such research (in which a more accurate operationalization of middle class and democracy has to be

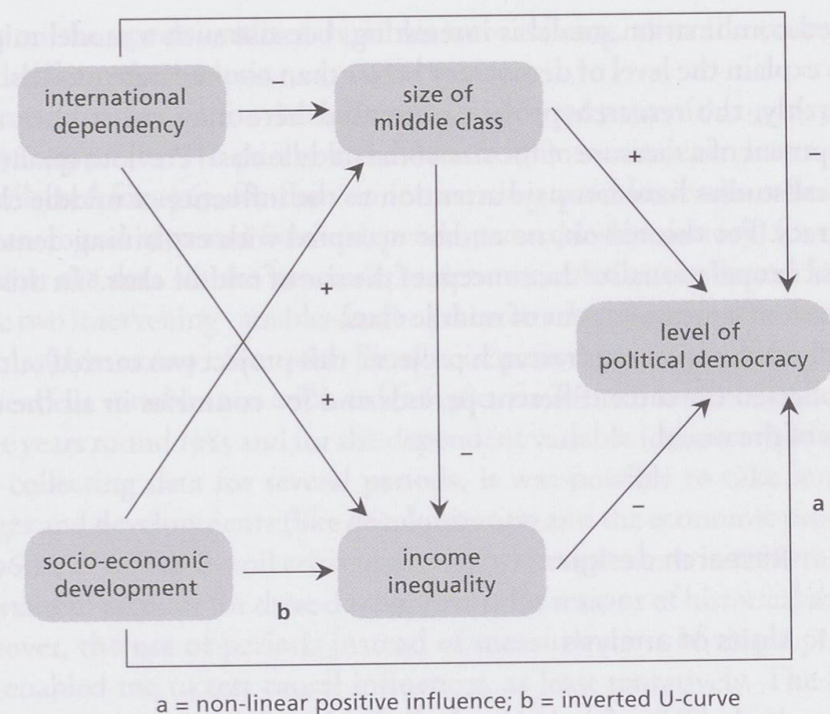


Figure 1 The combination model

developed) is interesting and essential: this is the only possible way to establish whether the insufficiently investigated variable of middle class does not only influence the level of democracy, but also income inequality. The influence of income inequality on democracy may prove to be spurious when the size of middle class is explicitly entered as a variable. This study will look at the influence of two crucial intervening variables, middle class and income inequality.

Secondly, quantitative empirical research on democracy has nearly always ignored the insights that are to be gained from dependency theory. Although researchers have used the level of dependency as a control variable, they have not considered what consequences their results may have for dependency theory. Moreover, the inclusion of dependency factors in a model is important for a proper investigation of the relationship between income inequality and democracy; if dependency not only influences democracy but also income inequality, then the relationship between income inequality and democracy is probably spurious.

Thirdly, authors have not (yet) tried to create a quantitative empirical model on the basis of a combination of the two theories. Such a combination seems to be important, if only because both theories contain the same intervening variables to connect structural factors with democracy. A combination model offers the possibility to draw more meaningful conclusions concerning the influence of factors that were inherent in the theories. Moreover, a test of the

so-called combination model is interesting, because such a model might be able to explain the level of democracy better than two separate models.

Fourthly, the research project presented here may contribute to the development of a measure of the size of the middle class. Previous quantitative empirical studies have not paid attention to the influence of middle class on democracy. For this reason, no author occupied with explaining democracy has tried to operationalize the concept of the size of middle class.⁹ In this study I will present a measurement of middle class.

Finally, unlike previous research projects, this project was carried out using data collected for three different periods and for countries in all the major regions of the world.

3 Research design

3.1 Units of analysis

In this study, the units of analysis are both developed and developing countries. One reason for this choice is that modernization theory has been criticized as being too euro-centric. This approach posits a universal process of national development: it is assumed that developing countries need to follow in the footsteps of Western countries to achieve a higher level of development and democracy. To test this assumption, it is necessary to analyse both developing and developed countries. This study endeavours to determine whether modernization in developing countries provides the possibility of a higher level of democracy, just as the modernization of the developed countries did. Most quantitative modernization studies have chosen both developing and developed countries as units of analysis (cf. Lipset 1959; Cutright 1963; Olsen 1968). Dependency theory has focused mainly on developing countries, in reaction to the modernization approach (compare Chase-Dunn 1975; Kaufman, Chernotsky and Geller 1975; Bornschie, Chase-Dunn and Rubinson 1978; Evans and Timberlake 1980; Jackman 1982). Studies on both theories consider all or most countries for which data are available (cf. Bollen 1983; Simpson 1990; Boswell and Dixon 1990; Moaddel 1994).¹⁰ Therefore, the decision to take both developing and developed states as units of analysis is justified.

For this study data was collected for as many countries as possible. I decided to exclude countries with less than one million inhabitants, as data for these countries is incomplete. Moreover, such countries are generally extremely dependent on neighbouring countries; one could even argue that such small countries are not really independent units. The research population is 87 countries. For some countries a lot of data is missing. If more than 40 % of

values on the operationalized variables were missing, then the country was excluded from the analysis.

Data was collected for three "base periods": 1965-1975 (I), 1970-1980 (II) and 1980-1990 (III). In period I, the data for the two independent variables was collected for 1965, for the two intervening variables it was collected for the years round 1970 and for the dependent variable (democracy) for 1975. In period II, the data for the two independent variables was collected for 1970, for the two intervening variables for the years round 1975 and for the dependent variable (democracy) for 1980. Finally, in period III, the data for the two independent variables was collected for 1980, for the two intervening variables for the years round 1985 and for the dependent variable (democracy) for 1990.

By collecting data for several periods, it was possible to take long-term changes and developments (like decolonization and the economic progress in the 1960s, as well as the oil crisis of the 1970s) into account in this study. It is important to account for these developments for reasons of historical accuracy. Moreover, the use of periods instead of measurements of single points in time enabled me to test causal influences, at least tentatively. The level of democracy is the central variable that had to be explained. The other variables had to be measured earlier in time, because it is assumed that these (independent) variables influence the level of democracy. For practical reasons, I set a period at ten years.¹¹

3.2 Variables

Economic development was measured as the natural logarithm of gross national product (GNP) per capita, in constant prices, and was calculated for 1966, 1970 and 1980 on the basis of the World Bank's *World Tables* (World Bank 1988). The logarithm of GNP is used because there is empirical evidence that the relationship between development and democracy is curvilinear and can best be captured by a log transformation of GNP (cf. Jackman 1973: 611-621; Bollen 1979: 572-587; Bollen 1983: 468-479; Bollen and Jackman 1985: 438-458). Moreover, my own analyses indicate the existence of curvilinear associations between GNP and other variables in the model. Curvilinear associations are transformed into linear relationships by logarithmic transformation (Stevens 1992: 96-100). The logarithmic variant is easy to interpret: higher levels of socio-economic development need larger differences in the level of development to achieve the same effect on dependent variables.

To measure international dependency, I used Smith and White's core, semiperipheral, and peripheral codings for the years 1965, 1970 and 1980 (Smith and White 1992: 857-893). In my opinion, this data is an improvement on the data used in previous studies. Snyder and Kick's study has been

profoundly criticized because of its methodology (Jackman 1980), the misclassification of countries (Bollen 1983) and the inadequate operationalization of essential elements of dependency theories (Nemeth and Smith 1985). Snyder and Kick (1979) have not been able to explain theoretically the empirical classification of their countries into ten groups. For example, the authors put New Zealand in the same group as Iceland, Jamaica and the Mongolian Republic, without explaining this questionable result. Smith and White's result does not appear to contain such misclassifications. Because it contains data for three points in time, Smith and White's study has an additional advantage over that of Snyder and Kick. Unfortunately, however, Smith and White's data is only available for 63 countries.

In discussions concerning the explanation for the level of democracy, theories stress the importance of the influence of the size of a country's middle class, but empirical quantitative analyses have not (yet) taken this factor into account.¹² This is why authors who focus on democracy have not yet tried to operationalize the concept of middle class.¹³ In order to measure the size of the middle class I have to go back to the theory and determine what is the meaning of the concept.

What is the middle class? Marxist sociological theorists have provided the most prominent answers to this question. Essential among recent books about social classes is *Wright's Classes* (Wright 1985). This study critically discusses Wright's former classification of different social classes, develops a new theory and proposes a new classification on the basis of the American and Swedish populations. Wright's classification is based on "ownership", "organizational assets", and "skill assets". The middle class can be distinguished from the working class by its organizational and professional potential. The similarity between the two classes is found in their relation to "ownership" (both classes do not own productive resources), and this sets them apart from the bourgeoisie. Generally speaking, Wright considers that "professionals, experts and managers" belong to the middle class (cf. Wright 1989: 269-348).

Although Wright's middle class data cannot be applied here (the data was only collected for the United States and Sweden), his classification offers a theoretical background for the operationalization of the variable middle class. Like Wright, I consider the middle class to be a social segment of people with intellectual and/or organizational skills, yet without control over the means of production. Professional, technical, administrative, executive, managerial and clerical workers all belong to the middle class. The International Labour Organization has collected much data that can be used to measure the concept of middle class: every year this organization publishes data on the proportion of the economically active population classified by occupation (type of work performed) (ILO 1969). To measure the middle class, I have calculated what percentage of the economically active population

(= 100 %) are professional, technical, administrative, executive, managerial and clerical workers.

In recent studies the most widely used measure of income inequality is the percentage share of the national income received by the upper quintile of the national income distribution (Muller 1995; Bosswell and Dixon 1990; Muller and Seligson 1987; Bollen and Jackman 1985). Existent datasets are very diverse, and analyses generate incomparable results. According to Menard the root of this problem is "the extent of coverage, time span, and type of income receiving unit" (Menard 1986: 778-793). To increase the validity of the data, it has to be measured at the national level, be over a limited period and be based on comparable units (thus the income per household, or per person).

I used Hoover's data on income inequality to test the combination model at the first time point, because Hoover has taken Menard's requirements into account (Hoover 1989: 1008-1026). For the second and third time point Moaddel's dataset was used (Moaddel 1994: 285, 297-299). Since Moaddel's dataset only meets the first requirement, the results of the analysis on income inequality in the second and third period should be interpreted with caution.

Gastil's data was used to measure political democracy. Gastil has collected data on the two main components of a democratic system: political rights and civil liberties. Using a 25-point checklist, Gastil has constructed a 7-point scale concerning political rights and a 7-point scale concerning civil liberties for all sovereign states for the period since 1973.¹⁴ The two scales appear to correlate to a high degree (0.90 and more).¹⁵ Inkeles argues that one combined scale, containing both political rights and civil liberties, is a reliable indicator of the extent of democracy. "In this statistical sense democracy, properly measured, is clearly a decidedly unidimensional phenomenon" (Inkeles 1991:X). To measure political democracy I used the sum of the scores on Gastil's two scales.

Gastil's data offers the additional advantage that it expresses the level of democracy. Moreover, his operationalization of political rights and civil freedoms contains no indicators which measure stability, social and economic democracy or political participation (Gastil 1991: 21-38). Finally, it is remarkable that Gastil is the only researcher who has collected internationally comparable data concerning the nature of political democracy on a yearly basis (political rights and civil liberties). The data is published in *Freedom at Issue* and in the yearbooks *Freedom in the World: Political rights and civil liberties*. I have used the data for the years 1975, 1980 and 1988 (Gastil 1986; Gastil 1991).¹⁶

3.3 Method of analysis

To test the combination model, path analysis with regression equations was used. This method of analysis offers the possibility to analyse relationships in

a more complex model. Causality among the variables was assumed and the regression method used. By calculating the path coefficients (beta scores), the relative strength of the influences can be measured. Beta scores give a standardized indication of the strength of the relationships and indicate whether the influence is positive or negative. Moreover, the strength of indirect and direct effects can be measured.

In order to infer accurately the true population values from the sample values, the following assumptions were tested. The first assumption, absence of specification error, is essential. It asserts that the functional forms of the relationships are straight lines. In order to meet this assumption, a logarithmic transformation has to be applied to the level of economic development. Moreover, there is a multicollinearity problem; one of the independent variables (dependency) is too highly correlated with another independent variable (middle class). The influence of dependency on middle class is difficult to estimate because it produces large variances for the path coefficients and, consequently, large standard errors.

The second assumption, no measurement error, is met. Only the measure of income inequality is not very accurate (Section 3.2), so the estimates of income inequality may be biased.

The third set of assumptions involve the error term. There is homoscedasticity; that is, the variance of the error term is constant for all values of X. Moreover, autocorrelation is absent, so the error terms are uncorrelated, and the independent variable is uncorrelated with the error term. Histograms and "cumulative normal probability plots" of the residuals indicate that the error terms are normally distributed and that for each observation the expected value of the error term is zero.

Finally, it is important to test for outliers in regression. "Cook's distance", which measures the joint combined influence of the case being an outlier on the dependent variable and on the set of predictors, indicates that there are no influential outliers.

4 Analysis

The combination model in Figure 1 can be represented by the following equations:

$$X_3 = P_{31}X_1 + P_{32}X_2 + U_3$$

$$X_4 = P_{41}X_1 + P_{42}X_2 + P_{43}X_3 + U_4$$

$$X_5 = P_{51}X_1 + P_{52}X_2 + P_{53}X_3 + P_{54}X_4 + U_5$$

in which:

X_1 = socio-economic development

X_2 = international dependency

X_3 = size of middle class

X_4 = income inequality

P_{ij} = path coefficients

X_5 = political democracy

U_i = residuals

Countries for which more than 40 % of values on the variables are missing have not been included in the analysis. If values were still missing, these values were substituted with the mean (zero when a variable is standardized). Table 1 shows the path coefficients and the proportion of explained variance (R^2) concerning the three investigated periods. Moreover, the last column contains estimations of the relationships over the whole period from 1965 to 1990.

The results summarized in Table 1 indicate that most of the path coefficients correspond with the expectations laid down in the conceptual model (Figure 1).

Table 1 Expected and estimated path coefficients and proportions of explained variance (R^2)

relationship	expected	1965-1975	1970-1980	1980-1990	1965-1990
P_{31}	+	+0.79**	+0.93**	+0.80**	+0.78**
P_{32}	-	***	***	***	***
P_{41}	-	-0.03	-0.52**	-0.50**	0.00
P_{42}	+	+0.17	+0.24	+0.18	+0.27**
P_{43}	-	-0.56**	-0.15	-0.19	-0.33**
P_{51}	+	+0.41**	+0.35*	+0.70**	+0.24*
P_{52}	-	-0.39**	-0.40**	-0.08	-0.35**
P_{53}	+	+0.18	+0.14	+0.13	+0.20*
P_{54}	-	-0.08	-0.06	-0.15	-0.08
R^2 of X_3		0.63	0.64	0.64	0.60
R^2 of X_4		0.31	0.27	0.25	0.29
R^2 of X_5		0.54	0.48	0.49	0.50

* significant with $p < 0.05$

** significant with $p < 0.01$

*** estimation not possible because of multicollinearity

The first hypothesis that was formulated above concerned the influence of socio-economic development on the level of democracy. From Table 1 it is clear that the influence is significantly positive: the estimated path coefficients

are +0.41 and +0.35 and, in the third period, even +0.70, and all are significant at the .05 level. This result confirms previous quantitative studies (compare Lipset 1959; Cutright 1963; McCrone and Cnudde 1967; Olsen 1968; Bollen 1979; Bollen 1983; Bollen and Jackman 1985). Moreover, this study indicates that the influence of socio-economic development on the level of democracy is non-linear (curvilinear). This finding is also consistent with previous studies (compare Jackman 1973; Bollen 1979; Bollen 1983; Bollen and Jackman 1985).

This means that this study appears to corroborate Lipset's central argument (socio-economic development has a positive influence on democracy). In general, countries with a higher level of development will have a higher level of democracy. The form of the association between socio-economic development and democracy is not simply linear, as Lipset suggested (Lipset 1959: 80), but non-linear. The findings of this study support Neubauer's 1967 hypothesis about a curvilinear association between development and democracy (Neubauer 1967). Although the level of a country's socio-economic development appears to have a substantially positive influence on democracy at the beginning of its trajectory of economical development, this influence decreases when a country has achieved a higher level of socio-economic development.

The second hypothesis of this study concerned the indirect influence of socio-economic development on the level of democracy through income inequality. It was expected that income inequality would be an inverted U-function of socio-economic development and a negative linear function of middle class. Furthermore, the influence of income inequality on the level of democracy was expected to be negative and linear. From the analyses in this study it becomes evident that income inequality is not an inverted U-function of socio-economic development, although the influence is clearly negative in the second and third period (Table 1). These findings do not correspond with Muller's most recent study of 1995. The size of the middle class has a clear negative linear influence on income inequality, as expected. The influence of income inequality on the level of democracy is, as expected, negative and linear; yet it is a very weak influence which indicates that the relationship between income inequality and democracy is spurious. There is hardly any evidence of a direct relationship between income inequality and democracy, while economic development clearly influences both income inequality and democracy.

These results confirm the findings of Bollen and Jackman (1985) and contradict those of Muller (1988; 1995a). In Section 2.1 I indicated that Muller expected income inequality to be an economic determinant of a positive or negative change in the level of democracy (democratization). Furthermore, Muller argued that this negative effect of income inequality may neutralize the positive effect of economic development on democratization. He argued that the process of economic development initially results in an increase of

income inequality and only later in a decrease (inverted U-curve)¹⁷, and that this pattern may explain the decline in the level of democracy of moderately developed countries (Muller 1995a: 966-967). Bollen and Jackman criticize Muller's study mainly because Muller has not taken into account the intervening influence of middle class; this omission can have consequences for the interpretation of the influences (Bollen and Jackman 1995: 983-984). Indeed, the results of this study, which has considered not only the intervening influence of income inequality but also of middle class, indicate that the relationship between income inequality and democracy appears to be spurious.

Thus, the argument that socio-economic development has an indirect influence on the level of democracy via income inequality is called into question by the results of this study. While it appears to be true that countries with a lower level of socio-economic development tend to have a generally higher level of income inequality and that a bigger middle class is associated with less income inequality, the results do not seem to indicate that a country with a higher level of income inequality is less democratic than a country in which income is distributed more equally. These findings confirm the argument of proponents of the "logic of industrialization thesis" that the process of economic development does not only influence the distribution of material resources (income inequality), but also the type of political regime in a country (democracy), while there is no clear association between income inequality and democracy (Kerr 1962).

The third hypothesis concerned the supposedly indirect positive influence of socio-economic development on the level of democracy through the size of the middle class. From Table 1 it is evident that the influence of socio-economic development on the size of the middle class is significantly positive: the estimated path coefficients are +0.79, +0.93, +0.80 and +0.78, all significant at the 0.01 level. Moreover, the size of the middle class appears to have a positive influence on the level of democracy, although this influence is only significant ($p < 0.05$) during the 1965-1990 period. The hypothesis that socio-economic development leads to an increase of the size of the middle class and that middle class size has a positive influence on the level of democracy, is supported by the data.

The fourth hypothesis in this study, that the influence of dependency on the level of democracy is direct and negative, is also corroborated. The estimated path coefficients are significant at the 0.01 level during three periods: the betascore is -0.39 in the period 1965-1975, -0.40 in the period 1970-1980 and -0.35 in the period 1965-1990.¹⁸ In general, countries of the "core" will have a higher level of democracy than countries of the "periphery". This result confirms previous quantitative studies (Bollen 1983) and indicates that it is necessary to include a "dependency variable" in a model which tries to explain the level of democracy. From this study it becomes clear that not only socio-economic

development (a "modernization variable"), but also dependency is important in order to explain democracy.

The test of the fifth hypothesis, that the influence of dependency on the level of democracy is negative and indirect via the middle class, is made impossible by severe problems of multicollinearity. The correlation between the two independent variables appears to be too high.

The sixth hypothesis concerned the negative indirect influence of dependency on the level of democracy via income inequality. My analyses indicate that dependency appears to have a positive influence on income inequality. This influence is significant in the period 1965-1990 at the 0.01 level. Moreover, middle class appears to have a clear negative linear influence on income inequality. The association between income inequality and democracy appears to be spurious.

These results confirm the findings of many studies that have indicated a positive association between dependency and income inequality (compare Chase-Dunn 1975; Rubinson 1976; Rubinson and Quinlan 1977; Evans and Timberlake 1980; Nolan 1983). The results of this study contradict Weede's findings (Weede 1980). In Section 2.2 I mentioned that Weede argues that dependency has no influence on income inequality, if the U-relationship between economic development and income inequality is taken into account. In this study, however, no such U-function between economic development and income inequality was found, although a positive influence of dependency on income inequality has been demonstrated (this relationship is significant only in the period 1965-1990 with $p < 0.01$).

The argument that dependency has an indirect influence on the level of democracy via income inequality is thus not confirmed by this study. Although it is true that countries in the "periphery" will generally have a higher level of income inequality and that an increase of the size of the middle class decreases the level of income inequality, a country with more income inequality is not necessarily less democratic than a country where income is distributed more equally.

Once the path coefficients have been estimated and the hypotheses tested, it is important to determine whether the equations have a more general applicability. By comparing the R^2 and the "adjusted" R^2 s, the validity of the model can be determined. The percentages of explained variance in middle class size in the investigated periods are 63, 64, 64 and 60 per cent respectively. These percentages are high. The "adjusted" R^2 s are 0.63, 0.63, 0.64 and 0.60, which indicate that the estimated "shrinkage" is very small, namely less than 2 %. The percentages of explained variance in income inequality in the investigated periods are 31, 27, 25 and 29 per cent respectively. These percentages are considerably lower than the ones pertaining to middle class size. The four "adjusted" R^2 s are 0.30, 0.26, 0.23 and 0.28, which indicate a

very small estimated "shrinkage", i.e. (with the exception of the third period) less than 4 %. The "cross validity power" of the model is less in the third period, because the "shrinkage" is 8 %. The percentages of explained variance in political democracy are 54, 48, 49 and 50 per cent respectively in the different periods. These percentages are fairly high. The four "adjusted" R^2 s amount to 0.53, 0.46, 0.48 and 0.50, thereby indicating that the expected amount of "shrinkage" is very small, namely less than 4 %. The validity of the model that was the starting point for the present analysis appears to be large.

5 Conclusion and discussion

The purpose of this article was to indicate to what extent a combination model based on the modernization and dependency approaches may explain the difference in the level of democracy among countries in different regions of the world.

The main conclusion of this study is that the investigated combination model, which tried to explain cross-national differences in the level of democracy, is empirically supported. The core modernization hypothesis, which holds that socio-economic development has a direct positive influence on the level of democracy, has been confirmed in the empirical analysis. Moreover, the association between development and democracy appeared to be non-linear: when a country achieves a higher level of development, the influence of socio-economic development on the level of democracy will decrease. The core dependency hypothesis, that international dependency has a direct negative influence on the level of democracy, has also found support in the data. In my opinion, these results stress the necessity to include a "dependency variable" in a model that tries to explain the level of democracy. In the analysis presented here both socio-economic development (a "modernization variable"), and international dependency (a "dependency variable") appear to be important for explaining democracy.

The results of this study also indicate that the size of a country's middle class is an important variable. This importance has been acknowledged theoretically, but to date quantitative empirical studies have not (yet) confirmed this relation. This study supports the theoretical idea that a country with a higher level of socio-economic development generates a bigger middle class. Moreover, this analysis indicates that growth of the middle class has a positive influence on the level of democracy in a country. In my opinion, future quantitative empirical research should take into account the influence of this intervening variable.

An essential theoretical problem for the dependency approach concerns the relationship between income inequality and democracy. Although it is evident that countries in the "periphery" in general have a higher level of

income inequality and that a larger middle class generates less income inequality, there appears to be no clear relationship between income inequality and the level of democracy. The association between income inequality and democracy appears to be spurious, and this contradicts the expectations of the dependency theories.¹⁹

The predictive power of the combination model appears to be great. The percentages of the explained variance in political democracy are 54, 48, 49 and 50 per cent respectively in the investigated periods. Taking into account the possibility of chance fluctuations, this result is satisfactory. For this reason, it is possible to conclude that, generally speaking, this combination model can explain the differences in the level of democracy among countries to a satisfactory extent.

Some limitations of the present study have to be pointed out, however. First, causal analysis only applies to the conceptual model that has been analysed and quantitative studies can do no more than indicate correlation; their value depends on the theoretical context provided by qualitative studies. I would like to press for a closer cooperation between quantitative cross-national and qualitative historical researchers to explain the level of democracy.

Second, the conclusions that have been drawn concern a general, global pattern. It is plausible, however, that regional differences exist. Such regional differences cannot be encompassed in this empirical analysis, because the potential research population is too small.

Third, the reliability and comparability of the data of income inequality leaves much to be desired, especially in the second and third periods. Results concerning income inequality for these periods should be treated with caution. Better data on income inequality for different points of time would greatly enhance the quality of estimations. If this is not possible, "inequality" must be measured in another way, e.g. as "land inequality" or "social inequality" (cf. Hout and Meijerink 1996: 55, 67-68).

Fourth, future researchers will need to analyse the strength of the influence of socio-economic development on the level of political democracy, with alternative indicators for the independent variable. Socio-economic development could alternatively be measured by the "physical quality of life index" (PQLI) (cf. Diamond 1992: 107-109).

Finally, about 50 per cent of the variance for the level of democracy can be explained by the combination model. I can only guess what factors might be responsible for the rest. It could be a matter of specific circumstances. Besides structural factors, such as socio-economic development and international dependency, individual actors could be important. The political leadership of Léopold Senghor, David Ben-Gurion or Kwame Nkruma, for example, may have had considerable effects. This implies that more (qualitative) research is needed to discover both structural and specific factors to explain the level

of democracy. Qualitative studies might suggest new theoretical ideas. Many recent theorists indicate that the development of a "civil society" may be crucial for the growth of democracy in a country (cf. Hyden 1983; Bratton 1990; Fowler 1991). It would be very interesting to use quantitative empirical techniques to assess these recent theories.

To sum up, this study represents a few achievements. It not only covers diverse geographical regions and four periods but, more importantly, it confronts both the modernization theory and the dependency theory. In this article, it has been argued that a so-called combination model containing elements of both theories is a useful approach for explaining democratization. Nevertheless, a lot of work has to be done before a convincing quantitative empirical explanation of the level of democracy can be given. Hopefully, future qualitative and quantitative researchers will join hands to determine which variables explain why one country is more democratic than another.

Notes

1. This article was the winner of the International Studies Association's 1997 *Carl Beck Award*. It is a revised version of a paper presented at the ECPR Joint Sessions of Workshops, March 1997, Bern, Switzerland.

2. It should be remembered that there is not a single modernization theory. Nevertheless, one approach within this "modernization tradition" focuses on the explanation of democracy. Lipset's article "Some Social Requisites of Democracy: Economic Development and Political Legitimacy" in the *American Political Science Review* of 1959 can be seen as paradigmatic for this tradition.

3. It should be remembered that dependency theorists do not speak with a single voice. Moreover, dependency researchers have focused mainly on the explanation of economic growth and income inequality. In this article, however, I will argue that dependency theories seem to provide (alternative) explanations for the differences in the level of democracy among countries in different regions of the world; it will be stated that the dependency approach argues that "peripheralization" within the international division of labour will inhibit democratization through related changes in a country's class structure.

4. In many studies political democracy indices contain a stability component (Lipset 1959; Cutright 1963; Cutright and Wiley 1969; Muller 1988). Olsen (1968: 700), Jackman (1973: 612) and Bollen (1980 and 1991) argue that combining measures of stability with measures of political democracy causes several conceptual and methodological difficulties. One practical problem is that of studying changes in political democracy: a stability/democracy measure may "average-out" many important changes in political democracy that occur. An even more serious problem of using indices that combine political stability and democracy is that stability and democracy do not have identical causes and consequences. If an association is (or is not) found, we do not know which component is responsible (Bollen 1980: 374-375 and 1991: 12-13).

5. Lipset suggests that political culture and civil society are two other variables which link socio-economic development to the level of political democracy. This will not be discussed in this article.

6. Besides, it is very confusing that Muller terms his dependent variable sometimes "stability of democracy" and sometimes "democratization". In all cases, he means the change in the level of democracy and I propose to call this concept "democratization".

7. This hypothesis appears to be well known in the relevant literature; it is argued that the highest levels of income inequality tend to occur among countries at intermediate levels of economic development. This inverted U-shaped curve (or "Kuznets-curve") between economic development and income inequality holds across a wide variety of data sets (e.g. Bollen and Jackman 1985; Muller 1988).

8. Bollen and Jackman (1985) suggest that their results could be caused by the way income inequality is measured (compare Weede and Tiefenbach 1981: 255-282). Also, Hoover notes that studies on income inequality suffer from the quality of the data on income inequality. There is too much diversity among research results, which is why Hoover has developed a new set of data "that is more comparable than any utilized thus far in sociological research on this topic" (Hoover 1989: 1020). I have used Hoover's set of data.

9. Inglehart's effort is in fact an exception (Inglehart 1988). Inglehart interprets the percentage of the labour force employed in the tertiary sector as an indicator of middle class. However, I think that his operationalization is not soundly based in theory. Even Muller's proposal to measure middle class as "urban professionals, state and private employees, merchants, craftsmen, and farmers" seems to me a better alternative (Muller 1995a: 968).

10. However, only Bollen's study, like my study, tries to explain the level of democracy. Simpson, Boswell and Moaddel focus on income inequality, political violence and political conflict, respectively.

11. The period should not be too short: a short period would cause the level of democracy to be determined by short-term influences instead of long-term effects of structural factors. Opting for a shorter period would increase the risk that the effects of dependency, level of development, middle class and income inequality (all structural factors) would be neutralized.

12. The present state of affairs in the relevant literature is that Bollen and Jackman insist on more research concerning the relationship between socio-economic development, middle class and democracy: "The impact of the changes in the class structure have not been evaluated. Do such changes mediate the effects of industrialization on democratization?" (Bollen and Jackman 1995: 988).

13. Compare footnote 9.

14. A disadvantage of such a seven-point scale, however, is that the distances between the categories have no meaning; country A's score of 6 on Gastil's democracy index does not indicate that A is twice as democratic as country B with a score of 3.

15. The correlation between political rights and civil freedoms is even 0.92 if all data from 1973 to 1994 is taken into consideration in the analysis (Jagers and Gurr 1995: 475).

16. Data for 1990 was not available.

17. See footnote 7.

18. The estimated path coefficient is exceptionally low in the third period (1980-1990). This signifies that dependency has no influence on the level of democracy in this period. Further research is needed to explain this result.

19. The argument that socio-economic development has an indirect influence on the level of democracy via income inequality is not supported by this study. Although it is true that countries with a lower level of socio-economic development have generally more income inequality and that a larger middle class generates less income inequality, a country with more income inequality is not necessarily less democratic than a country in which the incomes are distributed more equally. But, in my opinion, these results create less theoretical problems for the modernization approach than for the dependency approach. These findings confirm the argument of proponents of the "logic of industrialization thesis" which states that the process of economic development influences not only the distribution of material resources (income inequality), but also the type of political regime of a country (democracy), while no association between income inequality and democracy is expected (Kerr 1962).

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Early Cartel Legislation and Cartel Policy in the Netherlands. In Memoriam: The Economic Competition Act (1956-1997)

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Abstract

This year the Dutch Economic Competition Act of 1956 was replaced by new legislation, which is more in line with EU competition policy, and which is generally considered to be more effective. This article takes issue with current views that the old Act was flawed from the start and that "modern", vigorous competition and economic growth necessarily require new legislation. First, by offering new data on the incidence of Dutch cartels in the early 1950s, it shows that such agreements were widespread and coincided with fast economic growth. Cartels, therefore, can not automatically be associated with lack of (international) competitiveness and growth. Second, by sketching the political economy in which the old Act was subsequently implemented, it argues that well until the early 1980s, Dutch competition policy mainly concentrated on sustaining price stability and distributional justice rather than fostering domestic competitiveness.

1 Introduction

In 1997 the former Dutch Economic Competition Act passed away at the age of 41. Its birth was seen as opening an epoch of great promise. The spiritual father, Jelle Zijlstra, described his child as "the most beautiful law ever to pass through my hands" and recalled how economists of all persuasions in parliament had been amazed by its splendour. He, too, however, had to acknowledge that its career had been one of "disappointment" (Zijlstra 1992: 46). Especially during the last decade of its life a growing consensus had emerged that the Act had been a miserable failure. The influential Social Economic Council (*Sociaal-Economische Raad*, SER) suggested that competition policy, for most of the Act's existence, had lacked impact and that formal policy had been of "little significance" (*Sociaal-Economische Raad* 1994). Ex-Secretary of State for Economic Affairs Yvonne van Rooij had no doubt that a case by